



EXPEDITIONARY
LEARNING

Grade 6: Module 4: Unit 2: Overview



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Unit 2: Research: Do the Benefits of DDT Outweigh Its Harmful Consequences?

In this unit, students grapple with the question “Do the benefits of DDT outweigh its harmful consequences?” In the first half of the unit, students use a guided researcher’s notebook, research folder, and a WebQuest to research informational texts about DDT’s benefits and harmful consequences. The researcher’s notebook requires students to cite their sources, assess the credibility of each source, paraphrase the information relevant to their research question, and decide if the evidence from their research changes the focus of their inquiry. Students also analyze an author’s presentation of information and ideas, and then compare and contrast that presentation of information and ideas with the presentation by another author. Additionally, students revisit strategies they have learned throughout the year to address new vocabulary: context clues, affixes, and resource materials such as dictionaries and thesauruses. In their mid-unit assessment, students read two unfamiliar informational articles about DDT. They complete a page identical to their researcher’s notebook for one article, as well as a graphic

organizer in which they compare and contrast the presentation of ideas in these two articles. In the second half of the unit, students work toward making a claim based on the evidence of their research, a similar skill to the work of Module 2 in which students made a claim on which they built a literary argument. Students learn the important skill of sifting through all the materials they have thus far encountered, deciding what is relevant to their research question and what is not. They use a Cascading Consequences chart, visually tracking the chain reaction of a decision, and a Stakeholders chart, tracking who is affected by a decision, as integral tools in making their claim. After reviewing research, considering a particular decision’s consequences, and who it affects, students draft and revise a claim about the use of DDT. In their end of unit assessment, students are asked to orally present their final claim to an audience and include the use of multimedia components such as charts and graphs. This claim will launch students in their argument writing of Unit 3.

Guiding Questions and Big Ideas

- **How do we balance the needs of people and the condition of the natural world?**
- **Do the benefits of DDT outweigh its harmful consequences?**
- **How do I integrate ideas from multiple sources to help me make a claim?**
- *Research includes close reading of multiple sources, evaluation of those sources, and collecting relevant information.*
- *Thorough research of multiple perspectives of an issue builds toward an informed decision and claim.*



Mid-Unit 2 Assessment	<p>Comparing and Contrasting Two Texts: Simulated Research</p> <p>This assessment centers on NYSP12 ELA CCLS RI.6.9, W.6.7, W.6.8, L.6.4b, L.6.4c, and L.6.4d.</p> <p>In this assessment, students read two unfamiliar articles about the use of DDT. Students collect basic bibliographic information about each article in a research notebook page (which is identical to the one they have been using in their own research), paraphrase the information and conclusions of each author, and reflect on whether these articles affect the focus of their inquiry. Students then compare and contrast the authors' presentations of similar ideas. Finally, students identify new vocabulary presented in these articles. They use context clues, affixes, and root words to make a preliminary determination of the meanings, and then verify their definitions using reference materials.</p>
End of Unit 2 Assessment	<p>Making a Claim: Where Do You Stand on the Use of DDT?</p> <p>This assessment centers on NYSP12 ELA CCLA RI.6.9a, W.1, W.9, SL.6.4, SL.6.5, and SL.6.6. In this assessment, students will present their claim and findings, outlining their position on the use of DDT. Using both information from their reading as well as multimedia components, such as charts and graphs, students are expected to advocate persuasively, sequence their ideas logically, and use pertinent facts and details to accentuate their main ideas.</p>



Content Connections

This module is designed to address English Language Arts standards as students read literature and informational text about the use of DDT. However, the module intentionally incorporates Social Studies Practices and Themes to support potential interdisciplinary connections to this compelling content. These intentional connections are described below.

Big ideas and guiding questions are informed by the New York State Common Core K–8 Social Studies Framework:

<http://engageny.org/sites/default/files/resource/attachments/ss-framework-k-8.pdf>

Unifying Themes (pages 6–7)

- Theme 4: Geography, Humans, and the Environment: The relationship between human populations and the physical world (people, places, and environments); impact of human activities on the environment; interactions between regions, locations, places, people, and environments.
- Theme 9: Science, Technology, and Innovation: Applications of science and innovations in transportation, communication, military, technology, navigation, agriculture, and industrialization.

Social Studies Practices, Geographic Reasoning, Grades 5–8:

- Descriptor 2: Describe the relationships between people and environments and the connections between people and places (page 58).
- Descriptor 3: Identify, analyze, and evaluate the relationship between the environment and human activities, how the physical environment is modified by human activities, and how human activities are also influenced by Earth’s physical features and processes.

Social Studies Practices, Gathering, Using, and Interpreting Evidence, Grades 5-8:

- Descriptor 1: Define and frame questions about events and the world in which we live and use evidence to answer these questions.
- Descriptor 2: Identify, describe, and evaluate evidence about events from diverse sources (including written documents, works of art, photographs, charts and graphs, artifacts, oral traditions, and other primary and secondary sources).
- Descriptor 4: Describe and analyze arguments of others.
- Descriptor 6: Recognize an argument and identify evidence that supports the argument; examine arguments related to a specific social studies topic from multiple perspectives; deconstruct arguments, recognizing the perspective of the argument and identifying evidence used to support that perspective.



Central Texts

1. Jean Craighead George, *Frightful's Mountain* (New York: Dutton Children's, 1999), ISBN: 978-0-141-31235-4.
2. Robert W. Peterson, "Rachel Carson: Sounding the Alarm on Pollution," in *Boy's Life* (Vol. 84, Issue 8), Aug. 1994, 38.
3. Kathy Wilmore, "Rachel Carson: Environmentalist and Writer," in *Scholastic Junior Magazine*, 2013, as found at <http://www.scholastic.com/browse/article.jsp?id=4964>.
4. Adam Allie, "Malaria Carrying Mosquito Crash Lands Due to His Insecticide," ScienceHeroes.com, as found at http://www.scienceheroes.com/index.php?option=com_content&view=article&id=71:mueller-ddt&catid=55:paul-muller&Itemid.
5. Gil Valo, "How DDT Harmed Hawks and Eagles," Helium.com, July 26, 2007, as found at <http://www.helium.com/items/2203587-how-ddt-harmed-hawks-and-eagles>.
6. Utah Education Network, "Biological Energy—Here, Let Me Fix It!", as found at <http://www.uen.org/core/science/sciber/sciber8/stand-2/humanimp.shtml>.
7. Donald Roberts, "A New Home for DDT," *The New York Times*, Aug. 27, 2007, as found at http://www.nytimes.com/2007/08/20/opinion/20roberts.html?_r=0.



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

Lesson	Lesson Title	Long-Term Targets	Supporting Targets	Ongoing Assessment	Anchor Charts & Protocols
Lesson 1	Getting the Gist and Paraphrasing: “Rachel Carson: Environmentalist and Writer”	<ul style="list-style-type: none"> • I can conduct short research projects to answer a question. (W.6.7) • I can quote or paraphrase what others say about my topic while avoiding plagiarism. (W.6.8) • I can gather relevant information from a variety of sources. (W.6.8) 	<ul style="list-style-type: none"> • I can set a purpose to guide me in my research. • I can get the gist of the informational article “Rachel Carson: Environmentalist and Writer.” • I can paraphrase information from my reading to answer a question. 	<ul style="list-style-type: none"> • Learning from Frightful’s Perspective: Chapter 12 (from homework) • Researcher’s notebook • Exit Ticket: Paraphrasing Information from “Rachel Carson: Environmentalist and Writer” 	<ul style="list-style-type: none"> • Peregrine Falcon Facts
Lesson 2	Applying Research Skills: “Rachel Carson: Environmentalist and Writer”	<ul style="list-style-type: none"> • I can compare how different authors portray the same idea or event. (RI.6.9) • I can provide a list of sources I used to gather information in a bibliography. (W.6.8) • I can assess the credibility of each source I use. (W.6.8) 	<ul style="list-style-type: none"> • I can record bibliographic information for the sources I read in my research. • I can assess the credibility of the article “Rachel Carson: Environmentalist and Writer.” • I can analyze the author’s presentation of information and ideas in “Rachel Carson: Environmentalist and Writer.” 	<ul style="list-style-type: none"> • Learning from Frightful’s Perspective: Chapter 13 (from homework) • Researcher’s notebook • Comparing and Contrasting Authors’ Presentation graphic organizer 	<ul style="list-style-type: none"> • Peregrine Falcon Facts



Lesson	Lesson Title	Long-Term Targets	Supporting Targets	Ongoing Assessment	Anchor Charts & Protocols
Lesson 3	Comparing an Author's Presentation of Ideas: "Rachel Carson: Sounding the Alarm on Pollution"	<ul style="list-style-type: none"> I can compare how different authors portray the same idea or event. (RI.6.9) 	<ul style="list-style-type: none"> I can analyze the author's presentation of ideas in "Rachel Carson: Sounding the Alarm on Pollution." I can compare and contrast the authors' presentation of ideas for "Rachel Carson: Environmentalist and Writer" and "Rachel Carson: Sounding the Alarm on Pollution." 	<ul style="list-style-type: none"> Learning from Frightful's Perspective: Chapter 14 (from homework) Comparing and Contrasting Authors' Presentation graphic organizer 	<ul style="list-style-type: none"> Authors' Presentation of Ideas Peregrine Falcon Facts
Lesson 4	Research Tasks: New Words, Relevant Information, Revision	<ul style="list-style-type: none"> I can use common Greek and Latin affixes (prefixes and suffixes) and roots as clues to help me determine the meaning of a word (e.g., audience, auditory, audible). (L.6.4b) I can conduct short research projects to answer a question. (W.6.7) I can use several sources in my research. (W.6.7) I can refocus or refine my question when appropriate. (W.6.7) I can gather relevant information from a variety of sources. (W.6.8) I can assess the credibility of each source I use. (W.6.8) I can quote or paraphrase what others say about my topic while avoiding plagiarism. (W.6.8) I can provide a list of sources I used to gather information in a bibliography. (W.6.8) 	<ul style="list-style-type: none"> I can use affixes to help me determine the meaning of unfamiliar words. I can gather relevant information from my research materials. I can revise my research question if necessary. 	<ul style="list-style-type: none"> Learning from Frightful's Perspective: Chapter 15 (from homework) Research vocabulary Researcher's notebook, Source 2 	<ul style="list-style-type: none"> Things Close Readers Do



Lesson	Lesson Title	Long-Term Targets	Supporting Targets	Ongoing Assessment	Anchor Charts & Protocols
Lesson 5	Resource Materials and Gathering Information: Reading Another “Choice” Text from the Research Folder	<ul style="list-style-type: none"> I can use resource material (glossaries, dictionaries, thesauruses) to help me determine or clarify the pronunciation, meaning of key words and phrases, and parts of speech. (L.6.4c) I can conduct short research projects to answer a question. (W.6.7) I can use several sources in my research. (W.6.7) I can refocus or refine my question when appropriate. (W.6.7) I can gather relevant information from a variety of sources. (W.6.8) I can assess the credibility of each source I use. (W.6.8) I can quote or paraphrase what others say about my topic while avoiding plagiarism. (W.6.8) I can provide a list of sources I used to gather information in a bibliography. (W.6.8) 	<ul style="list-style-type: none"> I can use resource materials to determine the meaning of unfamiliar words. I can gather relevant information from my research 	<ul style="list-style-type: none"> Learning from Frightful’s Perspective: Chapter 16 (from homework) Researcher’s notebook 	<ul style="list-style-type: none"> Peregrine Falcon Facts
Lesson 6	Presentation of Events: Comparing Two Authors	<ul style="list-style-type: none"> I can use context (e.g., the overall meaning of a sentence or paragraph: a word’s position or function in a sentence) to determine meaning of a word or phrase. (L.6.4a) I can compare and contrast one author’s presentation of events with that of another (e.g., a memoir written by and a biography on the same person). (RI.6.9) 	<ul style="list-style-type: none"> I can use context clues to determine the meaning of unfamiliar words. I can compare and contrast two authors’ presentation of events. 	<ul style="list-style-type: none"> Learning from Frightful’s Perspective: Chapter 17 (from homework) Research Vocabulary using context clues Comparing and Contrasting Authors’ Presentation 	<ul style="list-style-type: none"> Authors’ Presentation of Ideas Authors’ Presentation of Events



Lesson	Lesson Title	Long-Term Targets	Supporting Targets	Ongoing Assessment	Anchor Charts & Protocols
Lesson 7	Researching Digital Sources, Part 1: Guided WebQuest	<ul style="list-style-type: none"> I can conduct short research projects to answer a question. (W.6.7) I can use several sources in my research. (W.6.7) I can refocus or refine my question when appropriate. (W.6.7) I can gather relevant information from a variety of sources. (W.6.8) I can quote or paraphrase what others say about my topic while avoiding plagiarism. (W.6.8) I can provide a list of sources I used to gather information in a bibliography. (W.6.8) 	<ul style="list-style-type: none"> I can choose digital resources that will help me answer my research question. I can gather relevant information from digital resources about my research question. 	<ul style="list-style-type: none"> Learning from Frightful's Perspective: Chapter 18 (from homework) Researcher's notebooks Exit Ticket: Using Digital Resources 	
Lesson 8	Researching Digital Sources, Part 2: Guided WebQuest	<ul style="list-style-type: none"> I can conduct short research projects to answer a question. (W.6.7) I can use several sources in my research. (W.6.7) I can refocus or refine my question when appropriate. (W.6.7) I can gather relevant information from a variety of sources. (W.6.8) I can quote or paraphrase what others say about my topic while avoiding plagiarism. (W.6.8) I can provide a list of sources I used to gather information in a bibliography. (W.6.8) 	<ul style="list-style-type: none"> I can choose digital resources that will help me answer my research question. I can gather relevant information from digital resources about my research question. 	<ul style="list-style-type: none"> Learning from Frightful's Perspective: Chapter 19 (from homework) Researcher's notebook 	



Lesson	Lesson Title	Long-Term Targets	Supporting Targets	Ongoing Assessment	Anchor Charts & Protocols
Lesson 9	Mid-Unit Assessment Comparing and Contrasting Two Texts: Simulated Research	<ul style="list-style-type: none"> I can compare how different authors present the same idea or event. (RI.6.9) I can conduct short research projects to answer a question. (W.6.7) I can use several sources in my research. (W.6.7) I can refocus or refine my question when appropriate. (W.6.7) I can gather relevant information from a variety of sources. (W.6.8) I can assess the credibility of each source I use. (W.6.8) I can quote or paraphrase what others say about my topic while avoiding plagiarism. (W.6.8) I can provide a list of sources I used to gather information in a bibliography. (W.6.8) I can use a variety of strategies to determine the meaning of unknown words and phrases. (L.6.4) I can use context to determine the meaning of a word or phrase. I can use common Greek and Latin affixes (prefixes) and roots as clues to help me determine the meaning of a word. I can use resource materials (glossaries, dictionaries, thesauruses) to help me determine or clarify the pronunciation, meaning of key words and phrases, and parts of speech. I can check the accuracy of my guess about the meaning of a word or phrase by using resource materials. 	<ul style="list-style-type: none"> I can gather relevant information from research materials. I can assess the credibility of the article “DDT Spray Scares Mosquitoes Away, Study Finds.” I can compare and contrast the authors’ presentation of ideas for “DDT Spray Scares Mosquitoes Away, Study Finds” and “You Think You Have It Tough?” I can use multiple strategies help me determine the meaning of a word. 	<ul style="list-style-type: none"> Mid-Unit 2 Assessment: Comparing and Contrasting Two Texts: Simulated Research 	



Lesson	Lesson Title	Long-Term Targets	Supporting Targets	Ongoing Assessment	Anchor Charts & Protocols
Lesson 10	Forming a Research-Based Claim: Cascading Consequences Chart	<ul style="list-style-type: none"> I can use my experience and knowledge of language and logic, as well as culture, to think analytically, address problems creatively, and advocate persuasively. (RI.6.9a) 	<ul style="list-style-type: none"> I can think analytically about my research in order to determine what evidence is important to me. I can use evidence from my research to add to my Cascading Consequences chart. 	<ul style="list-style-type: none"> Researcher's notebook Harmful Consequences Cascading Consequences chart Benefits of DDT Cascading Consequences chart Exit Ticket: Reflecting on My Beliefs about DDT 	
Lesson 11	Forming a Research-Based Claim: Creating Stakeholders Charts	<ul style="list-style-type: none"> I can use my experience and knowledge of language and logic, as well as culture, to think analytically, address problems creatively, and advocate persuasively. (RI.6.9a) I can use evidence from a variety of grade-appropriate texts to support analysis, reflection, and research. (W.6.9) I can present claims and findings in a logical order. (SL.6.4) I can support my main points with description, facts, and details. (SL.6.4) 	<ul style="list-style-type: none"> I can describe the criteria on which I will be assessed for the end of unit assessment. I can create a Stakeholders Impacts chart using evidence from my research. I can explain my position on DDT to my peers using evidence from my research. 	<ul style="list-style-type: none"> Goldilocks Rule for Choosing Books Who Are Stakeholders? Stakeholders Impacts chart Exit Ticket: Four Corners note card 	
Lesson 12	Forming a Research-Based Claim: Cascading Consequences Chart	<ul style="list-style-type: none"> I can present claims and findings in a logical order. (SL.6.4) I can support my main points with descriptions, facts, and details. (SL.6.4) 	<ul style="list-style-type: none"> I can draft a claim based on my research of DDT. I can choose evidence from my research that supports my claim. I can revise my claim based on evidence from my research. 	<ul style="list-style-type: none"> Forming Evidence-Based Claims graphic organizer 	<ul style="list-style-type: none"> Types of Claims and Evidence



Lesson	Lesson Title	Long-Term Targets	Supporting Targets	Ongoing Assessment	Anchor Charts & Protocols
Lesson 13	Presenting a Research-Based Claim: Effective Speaking Techniques	<ul style="list-style-type: none"> I can use effective speaking techniques (appropriate eye contact, adequate volume, and clear pronunciation). (SL.6.4) I can present claims and findings in a logical order. (SL.6.4) I can support my main points with description, facts, and details. (SL.6.4) I can include multimedia components and visual displays in a presentation to clarify information. (SL.6.5) 	<ul style="list-style-type: none"> I can choose a visual aid that supports my claim and findings. I can identify the qualities of good speaking. I can use feedback from my teacher and peers to revise my claim and findings. 	<ul style="list-style-type: none"> Visual Aid selected to support personal claim Claim and Findings revision Video Critique 	
Lesson 14	Presenting a Research-Based Claim Visual Aid and Peer Critique	<ul style="list-style-type: none"> I can include multimedia components and visual displays in a presentation to clarify information. (SL.6.5) I can use effective speaking techniques (appropriate eye contact, adequate volume, and clear pronunciation). (SL.6.4) 	<ul style="list-style-type: none"> I can create a visual that clarifies information in my presentation. I can participate in a peer critique of my presentation. 	<ul style="list-style-type: none"> Visual aid for presentation Presentation notecards Presenting a Claim and Findings Peer Critique form 	
Lesson 15	End of Unit 2 Assessment: A Hosted Gallery Walk	<ul style="list-style-type: none"> I can use my experience and knowledge of language and logic, as well as culture, to think analytically, address problems creatively and advocate persuasively. (RI.6.9a) I can present claims and findings in a logical order. (SL.6.4) I can support my main points with descriptions, facts, and details. (SL.6.4) I can use effective speaking techniques (appropriate eye contact, adequate volume, and clear pronunciation). (SL.6.4) I can include multimedia components and visual displays in a presentation to clarify information (SL.6.5) I can adapt my speech for a variety of contexts and tasks, using formal English when indicated or appropriate. (SL.6.6) 	<ul style="list-style-type: none"> I can advocate persuasively my position on the use of DDT to an audience. I can use my visual to clarify my presentation. 	<ul style="list-style-type: none"> Presentation Checklist for the Gallery Walk End of Unit 2 Assessment: Presenting a Claim and Findings 	



Optional: Experts, Fieldwork, and Service

Experts:

- Invite a research librarian in to teach students about best practices in the field of research, including evaluating sources for credibility, finding the most current information on a topic, and contacting experts in the field.
- Invite a guest speaker from a country affected by the ban on DDT.
- Invite a local environmentalist to talk about Rachel Carson or the use of pesticides in their local area.

Fieldwork:

- Arrange for a visit to a local research library for students to have hands on experience in an authentic research setting.

Service:

- Collaborate with local environmental agencies to educate the community about the risks of pesticides or the need to protect wildlife.
- Organize a service project to support countries where malaria continues to be a public health challenge.

Optional: Extensions

- Some students may benefit from a more independent research process in which they search for sources relevant to their own lingering questions about the use of DDT.
- A study of other pesticides and their advantages and disadvantages. .
- A study of a particular species of animal that has been affected by the use of DDT.



Preparation and Materials

This unit includes a number of routines, some of which involve stand-alone documents.

In this unit, students are engaged in research in which they dig deeper into the guiding question: “Do the benefits of DDT outweigh its harmful consequences?” In order to guide students through the research process, while still instilling a degree of independence, this unit relies on multiple structures of organization and note-taking. In the first half of this unit, students continue to read the novel *Frightful’s Mountain*, primarily as homework and then as a basis for discussion at the beginning of lessons.

1. Guided Research

This unit is designed as a guided research project for students. The inquiry question regarding the benefits and consequences of DDT springs from students’ reading of *Frightful’s Mountain*. Note that the novel was used as a high-interest entry point for students into this issue. By Unit 2, the novel moves into the “background” of students’ reading, and their research (using short informational texts) becomes the foreground.

- Note that this research is intentionally guided, with quite a bit of scaffolding from the teacher. This meets the sixth-grade demands for W.7: students “conduct short research projects, drawing on several sources” (W.6.7). This guided research also serves as a scaffold to move students toward the more rigorous seventh-grade standard, which requires that students not only conduct short research projects drawing on several sources, but also generate additional related, focused questions for further research and investigation” (W.7.7). Seventh grade is when the CCLS explicitly expects students to conduct their own additional research.
- During their research, students use a “Credibility Checklist” as they learn to check the credibility of sources. For additional ideas about how to approach this important skill with students, see also the sample checklists for evaluating a website: <http://kathyschrock.net/abceval/5ws.pdf> or <http://www.library.illinois.edu/ugl/howdoi/webeval.html>.
- Because the texts used for students’ guided research are authentic, not all of them have complete citations. Help students find all the information they can on the source information handouts, but know that for certain sources, the original document did not include all the categories on this handout.

2. Research Folder

The Research Folder is a tool used to help keep students organized. This research folder should be prepared prior to Lesson 1 with several research articles as well as the Researcher’s Notebook. All the articles students are provided for this unit are found as supporting materials in Lesson 1.

Create the Research Folder prior to Lesson 1 so it is ready for students to use during this lesson. The Research Folder should contain:

- All the articles found as supporting materials in Lesson 1 of this unit as well as any articles students have from Unit 1
- The Researcher’s Notebook (see Lesson 1 supporting materials)
- The Credibility Checklist (see Lesson 1 supporting materials)
- Assessing Sources (see Lesson 1 supporting materials)



3. Researcher's Notebook

The Researcher's Notebook (see Lesson 1 supporting materials) is a tool students use to collect bibliographical information and evidence from the several articles they read throughout this unit.

Each day students add a new source to the Researcher's Notebook.

The evidence they collect in this resource should be specific to the questions they refine throughout the course of their research.

4. Research Texts

- The texts for students' guided research were chosen based on the accuracy of the information, the reliability of the source, and the accessibility of the text for sixth-graders. Note that as with all science in society topics, research is ongoing, which often results in changes in viewpoints and then changes in policies.
- Encourage your students to do additional independent research on this topic.
- Collaborate with your school librarian or media specialist to reinforce proper research skills and support additional research on any late-breaking studies on this topic.

5. Reading Calendar

- Students read *Frightful's Mountain* daily during the first half of this unit.
- Each night, they read a new chapter and complete the **Learning from Frightful's Perspective graphic organizer**.
- Consider providing a reading calendar to help students, teachers, and families understand what is due and when.
- See stand-alone document.



The calendar below shows what is due on each day.

Teachers can modify this document to include dates instead of lessons.

Due at Lesson	Read chapters Complete Learning From Frightful's Perspective for these chapters
2	Chapter 13, "Sam Takes Charge"
3	Chapter 14, "Sam Battles Bird Instincts"
4	Chapter 15, "A Pal Finds a Pal"
5	Chapter 16, "Frightful and Oksi Run the Show"
6	Chapter 17, "Frightful Feels the Call to the Sky"
7	Chapter 18, "The Earth Calls Frightful"
8	Chapter 19, "Destiny is on the Wing"



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Grade 6: Module 4: Unit 2: Lesson 1

Getting the Gist and Paraphrasing: “Rachel Carson: Environmentalist and Writer”



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

I can conduct short research projects to answer a question. (W.6.7)
I can quote or paraphrase what others say about my topic while avoiding plagiarism. (W.6.8)
I can gather relevant information from a variety of sources. (W.6.8)

Supporting Learning Targets

- I can set a purpose to guide me in my research.
- I can get the gist of the informational article “Rachel Carson: Environmentalist and Writer.”
- I can paraphrase information from my reading to answer a question.

Ongoing Assessment

- Learning from Frightful’s Perspective: Chapter 12 (from homework)
- Researcher’s notebook
- Exit Ticket: Paraphrasing Information from “Rachel Carson: Environmentalist and Writer”



Agenda	Teaching Notes
<ol style="list-style-type: none"> 1. Opening <ol style="list-style-type: none"> A. Learning from Frightful’s Perspective: Chapter 12 (8 minutes) B. Unpacking Learning Targets (2 minutes) 2. Work Time <ol style="list-style-type: none"> A. Introducing the Research Folder (10 minutes) B. Read-aloud and Getting the Gist of an Excerpt from “Rachel Carson: Environmentalist and Writer” article (10 minutes) C. Using Paraphrasing to Respond to Text-Dependent Questions about “Rachel Carson: Environmentalist and Writer” (10 minutes) 3. Closing and Assessment <ol style="list-style-type: none"> A. Exit Ticket: Paraphrasing Information from “Rachel Carson: Environmentalist and Writer” (5 minutes) 4. Homework <ol style="list-style-type: none"> A. Read Chapter 13, “Sam Takes Charge” and complete Learning from Frightful’s Perspective: Chapter 13. 	<ul style="list-style-type: none"> • As students launch Unit 2, their work with the novel <i>Frightful’s Mountain</i> becomes increasingly independent. This follows a similar pattern to students’ work in Module 1 (with <i>The Lightning Thief</i>), Module 2A (with <i>Bud, Not Buddy</i>), and Module 3A (with <i>Dragonwings</i>). <i>Frightful’s Mountain</i> is used both to reinforce students’ previous work with literature, and as an entry point into their deeper research of the benefits and consequences of DDT. In Unit 2, the novel moves to the background while students’ guided research becomes the central focus of instruction. • In Unit 1, students built background knowledge about the benefits of DDT and its harmful consequences by reading several articles, viewing two videos, and analyzing charts and graphs. This unit builds on that background knowledge as students do further research. Students are given a research folder. See the Unit 2 overview “Preparation and Materials” for details. • Note this research is intentionally guided with scaffolding from the teacher. This meets the sixth-grade demands for W.7: students “conduct short research projects, drawing on several sources” (W.6.7). This guided research also moves students toward the more rigorous seventh-grade standard, which requires that students not only conduct short research projects, drawing on several sources, but also “generate additional related, focused questions for further research and investigation” (W.7.7). The CCLS explicitly expects students to conduct their own additional research in seventh grade. • While researching, students use a Credibility Checklist as they learn to check the credibility of sources. For additional ideas about how to approach this important skill with students, sample the checklists for evaluating a Web site: http://www.schrockguide.net/uploads/3/9/2/2/392267/weval.pdf or http://www.library.illinois.edu/ugl/howdoi/webeval.html. • Because the texts used for students’ guided research are authentic, not all of them have complete citations. Help students with the source information handouts, but know that for certain sources, the original document did not include all the categories on this handout. • Throughout this unit, students encounter a variety of articles in the range of credibility written by experts in public health and also concerned citizens, as well as sources ranging from well-known periodicals to unfamiliar Web sites. This intentionally allows students to evaluate the credibility of sources. Discuss this variety of credibility in the sources contained within students’ research folders so that they can develop the skills to independently evaluate credible sources in their future research.



Agenda	Teaching Notes
	<ul style="list-style-type: none">• Six specific articles are provided in the supporting materials of this lesson; prepare this for students’ research folders before the lesson. Please note that the article “DDT use should be last resort in malaria-plagued areas, scientists say,” by Marla Cone, is provided as a “stretch” text for stronger students. It likely will be too challenging for some students to read closely in its entirety. We strongly recommend that you mark paragraphs 1-11, 18-20, and 31-33 for students to read and use in their research, or consider excerpting this article to include these paragraphs only in students’ research folders.• In today’s lesson, students are introduced to page 1 of the researcher’s notebook, which focuses on setting a purpose for their research. Students complete page 1 of the notebook and define key vocabulary in the research question. They also reflect on their learning about the benefits of DDT and its harmful consequences from Unit 1. On this page, students write what they still wonder about DDT. After a discussion, students write a paragraph describing a purpose for their research.• Students will use the researcher’s notebook in Lessons 2, 4, 5, 7, and 8. Remind students at the end of an activity to place the notebook in the research folder.• In advance: Consider forming partnerships; prepare the research folder with resources (see above).• Post: Learning targets.



Lesson Vocabulary	Materials
purpose, research, paraphrase, benefit, harmful consequence; environmentalist, revolutionary	<ul style="list-style-type: none">• <i>Frightful’s Mountain</i> (book; one per student)• Peregrine Falcon Facts anchor chart (from Unit 1)• Research Folder (with articles and other materials) (one per student)• Credibility Checklist (five copies per student; for research folder)• Assessing Sources (five copies per student; for research folder)• “Sounding the Alarm on Pollution” (one per student; for research folder)• “Rachel Carson: Environmentalist and Writer” article (one per student; for research folder)• “Malaria Carrying Mosquito Crash Lands Due to His Insecticide” (one per student; for research folder)• “How DDT Harmed Hawks and Eagles” (one per student; for research folder)• “Biological Energy—Here, Let Me Fix It!” (one per student; for research folder)• “A New Home for DDT” excerpt (one per student; for research folder)• “DDT use should be last resort in malaria-plagued areas, scientists say” excerpts (one per student; for research folder)• Researcher’s notebook (one per student)• Document camera• Exit Ticket: “Rachel Carson: Environmentalist and Writer,” Paraphrasing an Excerpt from the Text (one per student)• Learning from Frightful’s Perspective: Chapter 13 (one per student)



Opening	Meeting Students’ Needs
<p>A. Learning from Frightful’s Perspective: Chapter 12 (8 minutes)</p> <ul style="list-style-type: none"> As students enter, invite them to sit in their <i>Frightful’s Mountain</i> triad groups. Be sure students have their text, <i>Frightful’s Mountain</i>. Remind them to discuss the focus question from Learning from Frightful’s Perspective: Chapter 12 and add notes to their graphic organizer. The focus question asks students to recall what Molly sees in the bag when Flip Pearson and Dr. Werner open it. Direct students to share their unfamiliar words with group members. If the group is unsure of the word’s meaning, members should refer to the page number in the novel and read the sentence containing the word to find meaning using context clues. If this sentence is not helpful, ask students to read a sentence before and after to help them determine meaning. Circulate as students discuss. Provide support to select students needing help with finding meaning using context clues. If students are not able to determine meaning, give them the meaning and ask them to write it on their graphic organizer. Invite students to volunteer facts to add to the Peregrine Falcon Facts anchor chart. Compliment triads that are working cooperatively adding notes in their response to the focus question and adding meanings to their unfamiliar words. 	
<p>B. Unpacking Learning Targets (2 minutes)</p> <ul style="list-style-type: none"> Ask for two volunteers to lead the class in reading the learning targets. Invite the rest of the class to read along with them: <ul style="list-style-type: none"> * “I can set a purpose to guide me in my research.” * “I can get the gist of the informational article ‘Rachel Carson: Environmentalist and Writer.’” * “I can paraphrase information from my reading to answer a question.” As students read the learning targets, underline the words <i>purpose</i>, <i>research</i>, and <i>paraphrase</i>. Invite them to Think-Pair-Share in their triads: <ul style="list-style-type: none"> * “Given these learning targets, what do you think we are going to be doing in this lesson?” Cold call students to share their thoughts with the class. Listen for students to explain that they are going to determine a purpose for research and learn to paraphrase information in articles. 	<ul style="list-style-type: none"> Learning targets are a researched-based strategy that helps all students, especially challenged learners. Discussing and clarifying the language of learning targets helps build academic vocabulary.



Work Time	Meeting Students’ Needs
<p>A. Introducing the Research Folder (10 minutes)</p> <ul style="list-style-type: none"> Tell students today they will begin to set a <i>purpose</i>, or goal, for their <i>research</i> to answer the research question: “Do the benefits of DDT outweigh the harmful consequences?” Explain in today’s lesson and in upcoming lessons, they will <i>research</i>, or study, DDT to learn more about this topic. Tell students they will also learn how to <i>paraphrase</i> or restate an author’s text to avoid plagiarism. Ask: <ul style="list-style-type: none"> * “What does it mean to plagiarize?” Select a volunteer to share the meaning of this word. If needed, tell students that to plagiarize means to “take the work of someone else and pass it off as your own.” Therefore, plagiarism is “the act of copying someone else’s work and taking credit for it.” Remind students that it is always important to give people credit for their hard work and thoughts. Distribute the research folder. Tell students the contents inside the folder will be used throughout Unit 2. Ask them to keep the folder neat and intact. Encourage students to quickly look over the resources in their folder: <ul style="list-style-type: none"> – Credibility Checklist (five copies) – Assessing Sources (five copies) – Research texts: “Sounding the Alarm on Pollution”; “Rachel Carson: Environmentalist and Writer”; “Malaria Carrying Mosquito Crash Lands Due to His Insecticide”; “Biological Energy—Here, Let Me Fix It!”; “How DDT Harmed Hawks and Eagles”; “A New Home for DDT” excerpt; and “DDT use should be last resort in malaria-plagued areas, scientists say” excerpts. Invite students to find the researcher’s notebook. Use a document camera to display page 1 of the notebook. Tell students to record information for their research in the notebook. In today’s lesson, they will focus only on page 1, which will help them plan and set a purpose for learning more about DDT today and in future lessons. Ask students to read the research question: “Do the benefits of DDT outweigh its harmful consequences?” Tell students they will work in partners and complete page 1 of the notebook. Share partnerships with students. Give students time to regroup. Ask students to Think-Pair-Share: <ul style="list-style-type: none"> * “What is a <i>benefit</i>?” Circulate and listen for: “Something that promotes well being, an advantage, or an asset.” Cold call partners to share their thoughts with the class. 	<ul style="list-style-type: none"> Consider partnering ELLs who speak the same home language when discussing complex content. This allows them to have more meaningful discussions and clarify points in their native language. Asking students to provide feedback to their peers helps clarify their learning and develop speaking skills.



Work Time (continued)	Meeting Students' Needs
<ul style="list-style-type: none"> • Ask students to write their responses to Question 1 in the researcher’s notebook. Model writing the response using the document camera. • Ask students to Think-Pair-Share: <ul style="list-style-type: none"> * “What is a <i>harmful consequence</i>?” • Circulate and listen for: “A damaging effect or conclusion, an adverse result, a bad result.” • Cold call partners to share their thoughts with the class. • Ask students to write their responses to Question 2 in the researcher’s notebook. Model writing a response for students using the document camera. • Invite students to think about their learning from Unit 1 and discuss Question 3. Remind students about the articles they read, such as “Welcome Back,” “The Exterminator,” and “Rachel Carson: Sounding the Alarm.” Remind them of the videos they have viewed, such as the John Stossel DDT video and the video on bioaccumulation. Ask them to also think about the information gathered from analyzing charts, graphs, and maps. • Give students time to discuss and write their responses to Question 3. • Circulate to support students needing help in remembering information from these sources. Prompt them with questions like: <ul style="list-style-type: none"> * “In ‘Welcome Back,’ what did we learn about the peregrine falcon population?” * “In ‘The Exterminator,’ what did we learn about malaria, and what did we learn about DDT?” • Cold call to hear responses to the learning from Unit 1. Model writing a response to each question using the document camera. • Listen for: “The benefits of DDT include it helps fight malaria, it helps farmers control insects which cause damage to crop production; the harmful consequences would include DDT gets into the tissues of birds and can cause death, DDT can get into breast milk, DDT causes the egg shells of birds to thin and young cannot hatch, DDT can get into our water, killing fish and other organisms.” • Using the document camera, model writing these responses on page 1. • Invite students to independently answer Question 4. Pause to give time. • Ask students to turn and talk with their partner to share what they still wonder about DDT. • Invite volunteers to share their “wonders.” Model writing Question 4 responses using a document camera. 	



Work Time (continued)	Meeting Students’ Needs
<ul style="list-style-type: none">• Direct students’ attention to the next section of the graphic organizer, where they will write a short paragraph describing the purpose for their research. Ask students to incorporate the notes from the first section into a paragraph describing their goal.• Tell them to develop a topic sentence using ideas from Questions 1 and 2. Pause to give students time to write.• Circulate to support students needing sentence writing prompts. An example topic sentence could be: “DDT has both benefits and harmful consequences” or “The benefits of DDT never outweigh its harmful consequences.”• Invite students to share their topic sentences. Using a document camera, model writing several example topic sentences.• Next, tell students to read what they wrote in response to Questions 3 and 4 on page 1.• Ask them to write three to four sentences about things they want to learn about DDT and/or what they still wonder about DDT. Remind them that their last sentence of their paragraph should be a concluding statement restating the main idea of the paragraph. Pause to give students time.• Circulate to support students. If some students find this challenging, ask them to read what they wrote in Questions 3 and 4. Then invite them to write this information in a sentence form. Also, check in to see if students understand how to write a concluding sentence.• Invite students to share their paragraphs describing the purpose for their research. Model writing several details the students share using the document camera, and model an example of a concluding sentence.• Commend students for reflecting on Unit 1 learning and setting a purpose for Unit 2 and their further study of DDT	



Work Time (continued)	Meeting Students’ Needs
<p>B. Read-aloud and Getting the Gist of an Excerpt from “Rachel Carson: Environmentalist and Writer” (10 minutes)</p> <ul style="list-style-type: none"> • Ask students to find the “Rachel Carson: Environmentalist and Writer” article in their research folder. Remind students they read an article about Rachel Carson in Unit 1, and this new article will provide more background knowledge about her and the book she wrote called <i>Silent Spring</i>. Tell students not only was Rachel Carson an author, but she was also an environmentalist. • Ask students to Think-Pair-Share: <ul style="list-style-type: none"> * “What is an environmentalist?” • Invite students to share their thoughts with the class. Listen for: “An <i>environmentalist</i> is a person who cares about polluting land, air, and water or polluting our environment.” • Ask students to write the title only of this article on page 2 of the researcher’s notebook. Tell them the title should be written on the line titled “Source Title.” Explain the rest of the page will be completed in Lesson 2 when “Rachel Carson: Environmentalist and Writer” will be analyzed for claims and evidence. • Ask students to follow along as you read “Rachel Carson: Environmentalist and Writer” for the gist. Remind students about the importance of reading an article to determine what it is mostly about. Ask them to read along silently as you read the article to help them improve their fluency and comprehension. • After you finish the article, ask students to Think-Pair-Share: <ul style="list-style-type: none"> * “What is this article mostly about?” * “What is the gist of each section?” • Listen for: “The article says Rachel Carson was one of the first people to recognize that we need to take care of our world. She was a <i>revolutionary</i>, a person wanting to bring change and help create environmental awareness. As an environmentalist she states, ‘We need to come to terms with nature.’ She feels using chemicals, like DDT, should be clearly explored before using them in order to be able to make informed decisions regarding our natural world.” • Briefly have student volunteers share a gist statement for smaller sections of the article to aid comprehension. 	<ul style="list-style-type: none"> • Providing students with topic sentence starters encourages students to develop their writing skills.



Work Time (continued)	Meeting Students’ Needs
<ul style="list-style-type: none"> Next ask partners to Think-Pair-Share: <ul style="list-style-type: none"> * “What does the article say about the benefits of DDT?” Listen for: “The article does not cite any benefits.” Share with students an author may choose to present only one side of an issue or topic. As a reader, it is important to think critically about the texts one reads, and to evaluate a topic from multiple perspectives. 	
<p>C. Using Paraphrasing to Respond to Text-Dependent Questions about “Rachel Carson: Environmentalist and Writer” (10 minutes)</p> <ul style="list-style-type: none"> Tell students in the next few lessons they will read articles to gain more knowledge about their research question. They will use the researcher’s notebook to record relevant information. Explain as writers they will read articles and record information in response to their research question. Tell them they will <i>paraphrase</i> the author’s text. To <i>paraphrase</i> means to capture the idea of a text, but putting it into different words. Share they will also need to let the reader know the source of the information. Explain that if only a few words and phrases are changed and the source is not cited, it’s plagiarism. Inform them plagiarism is illegal. Tell students it’s possible to use the exact words of an author; however, they need to use quotation marks to begin and end the quote. Invite students to independently reread the last two paragraphs on page 1 of “Rachel Carson: Environmentalist and Writer.” Ask them to annotate the text as they read by underlining the main ideas and circling unfamiliar vocabulary. Remind them to write phrases or sentences in their own words summarizing these two paragraphs in the margins. Pause to give students time. Circulate to support students. Next, ask partners to discuss: <ul style="list-style-type: none"> * “Did Rachel Carson make a claim in this excerpt? If so, what was her claim?” Ask partners to share their thinking. Listen for: “Rachel Carson made a claim that pesticides had caused the death of or was hurting animals and humans.” Using a document camera, model writing the statement. Ask partners to Think-Pair-Share: <ul style="list-style-type: none"> * “Is this information paraphrased or is it the author’s exact words and therefore should it be quoted?” Invite partners to share their thoughts. Listen for: “This statement is paraphrased and would not need quotation marks.” 	<ul style="list-style-type: none"> Consider preparing more examples of paraphrasing and examples of when to use quotation marks.



Work Time (continued)	Meeting Students’ Needs
<ul style="list-style-type: none">• Next, ask partners to Think-Pair-Share:<ul style="list-style-type: none">* “Did Rachel Carson provide the reader with supporting evidence for her claim?”• Invite students to share their ideas.• Using a document camera model writing student’s responses. As each one is written, ask students to decide if quotation marks would be needed. Remind them quotation marks should be used if the writer copies the exact words of the author and also if only a few words are changed.• Using a document camera, write this example of supporting evidence with students: Sickness and death appeared everywhere: among flowers and trees, cattle and sheep, even humans.• Ask students to Think-Pair-Share:<ul style="list-style-type: none">* “Would quotation marks be needed in this example?”• Invite partners to share their thoughts. Listen for: “Quotation marks are needed because these are the exact words the author used in the article.” If students share a paraphrased example, such as “Plants, animals, and even people began to get sick,” confirm that as paraphrasing, and therefore not in need of quotation marks.• Using a document camera, write another example of supporting evidence: Chemicals had washed into streams, had gotten into the air, and were absorbed by the soil contaminating the natural world.• Ask students to Think-Pair-Share:<ul style="list-style-type: none">* “Would quotation marks be needed in this example? Why or why not?”• Listen for: “Quotation marks would not be needed. However, the source would need to be cited.” (Share as many examples as time permits. Analyze each sentence or phrase to determine if it is paraphrased or if it should have quotation marks around it.)• Invite students to turn to page 3 of the article. Ask students to follow along as you reread Paragraph 3 and 4 on this page. Remind them to keep in mind our research question: “Do the benefits of DDT outweigh the harmful consequences?”• Read the paragraph. Using the document camera, model how to paraphrase and use quotation marks when using the author’s exact words. An example could be: In the past pesticides have had ingredients that have been linked to causing cancer. Because of this finding 68 pesticide ingredients are not being used. In 1993, <i>The New York Times</i> reported farmers using pesticides are six times more likely to get certain cancers, children in homes where pesticides are used are seven times more likely to get leukemia, and wells containing drinking water have shown traces of pesticides. In fact, one in every ten wells tested showed evidence of pesticides. Rachel Carson poses this thought: “man’s way is not always best.”	



Closing and Assessment	Meeting Students’ Needs
<p>A. Exit Ticket: Paraphrasing Information from “Rachel Carson: Environmentalist and Writer” (5 minutes)</p> <ul style="list-style-type: none">• Distribute the Exit Ticket: “Rachel Carson: Environmentalist and Writer,” Paraphrasing an Excerpt from the Text. Tell students you would like them to try to paraphrase their own excerpt from the article. Ask them to read the excerpt and put the information in their own words.• Circulate to support students. If there is too much information for some students, ask them to chunk their reading. After they have read part of the text, ask them to tell you about what they read. Have them record their paraphrased sentences on the lines provided. Then, ask them to finish reading the rest of the text. Ask them to write another paraphrased sentence(s).	<ul style="list-style-type: none">• Using exit tickets allows a quick check for understanding of the learning target so that instruction can be adjusted or tailored to students’ needs before the next lesson.
Homework	Meeting Students’ Needs
<ul style="list-style-type: none">• Read Chapter 13, “Sam Takes Charge” and complete Learning from Frightful’s Perspective: Chapter 13.	



EXPEDITIONARY
LEARNING

Grade 6: Module 4: Unit 2: Lesson 1

Supporting Materials



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Credibility Checklist

Name: _____

Date: _____

Source Information	Most Credible	Fairly Credible	Least Credible
Author	Expert in the field	Educated on topic	Little or no information about author
Date	Recently published or revised	Outdated	No date listed
Source Type	Official Web sites, institutional sites, academic journals, reputable news sources	Published material	Unfamiliar Web sites
Publisher	Publisher's relationship to the topic is balanced or neutral	Publisher is sponsored by a trusted source	Clearly biased or favoring a position for a purpose

Assessing Sources

Name: _____

Date: _____

When you find a text you might use for research, assess it first by asking these questions.

1. Assess the Text's Accessibility

- ☐ Am I able to read and comprehend the text easily?
- ☐ Do I have adequate background knowledge to understand the terminology, information, and ideas in the text?

2. Assess the Text's Credibility

- ☐ Is the author an expert on the topic?
- ☐ Is the purpose to inform?
- ☐ Is the purpose to persuade?
- ☐ Is the purpose to sell?
- ☐ Is the tone convincing?
- ☐ Does the text have specific facts and details to support the ideas?

3. Assess the Text's Relevance

- ☐ Does the text have information that helps me answer my research question? Is it information that I don't have already?
- ☐ How does the information in the text relate to other sources I have found?

Informed by "Assessing Sources," designed by Odell Education



Rachel Carson: Sounding the Alarm on Pollution

GREEN GIANTS (HEROES OF THE ENVIRONMENT) RACHEL CARSON: SOUNDING THE ALARM ON POLLUTION

Rachel Carson was a small, soft-spoken scientist.

She also was one of the towering Green Giants of the 20th century.

Her Book Changed Our World

Her 1962 book, "Silent Spring," was probably the most influential work on conservation ever written. It made Americans think hard about pollution of the environment. It led to strict controls on synthetic pesticides.

Rachel Carson was a marine biologist. She already had published three excellent books about the sea and its creatures. All were best sellers. They combined sound science with good writing.

Deadly Chemicals

The purpose of "Silent Spring" was to raise public alarm about chemical pesticides, especially one called DDT, which was introduced in 1939.

In the 1940's, the chemical industry developed many related pesticides. The pesticides saved farmers and gardeners time and money because they made it easier to control insects and weeds. By the mid-1950's, half a billion pounds of pesticides were being spread over fields and gardens each year.

The trouble was that some chemicals hurt not only insects and weeds but also birds, mammals and fish. Some scientists said the chemicals hurt people too. Others had written about the danger before Rachel Carson wrote "Silent Spring," but few people paid attention.

Thousands of Dead Fish

By 1960, though, the evidence was clear. Fish had died by the tens of thousands when orchards near lakes were sprayed with pesticides. Thousands of birds had been doomed by aerial spraying of woodlands.

Rachel Carson's "Silent Spring" fairly shouted: "Whoa! Look what we're doing!" She did not oppose the use of all pesticides. But she wrote, "We have allowed these chemicals to

Eighth in a Series

Carson at a Glance

BORN:

May 27, 1907, at
Springdale, Pa.;
died April 14, 1964.

LEGACY FOR THE EARTH:

She put a spotlight
on environmental
pollution.

FOR FURTHER READING:

"Sea and Earth: The
Life of Rachel
Carson,"

by Philip Sterling;
"Rachel Carson,"
by Carol B. Gartner.



"Future historians
may well be amazed
by our distorted
sense of proportion.
How could intelligent
beings seek to
control a few unwanted
species by a method that
contaminated the entire
environment and
brought the threat
of disease and death
even to their own
kind? Yet this is
what we have
done." —Rachel
Carson's warning in
"Silent Spring."



be used with little or no advance investigation of their effect on soil, water, wildlife, and man himself."

Parts of the book began appearing in *The New Yorker* magazine in 1962. Rachel's message made for a noisy summer. It was attacked by the chemical industry, food companies, and some government agencies. They said the book was scientifically unsound. They dismissed her as a "nature nut," "food faddist," and "just a bird watcher."

Mild-Mannered but Tough

Rachel was quiet and mild-mannered, but she was also tough-minded. She stood up to all the criticism and enjoyed the praise that came from many scientists who knew about pesticides.

In following years, DDT and 11 other chemical pesticides Rachel had warned about were banned or tightly restricted. By the time of her death in 1964, her name was a household word.

A Writer at Age 10

Rachel Carson had come a long way from her childhood in a small town near Pittsburgh, Pa.

She had learned to love nature as a young girl. Her mother could not bear to kill a living thing, and so Rachel had to catch insects that got into the house and release them outside.

Rachel's first published story appeared in *St. Nicholas*, a children's magazine, when she was only 10 years old. She decided to become a writer, but in college she had to take a science course. She chose biology—and liked it. That was the start of a career that joined science with literature.

By the time she had published her third best seller on the sea, Rachel Carson was famous. People were ready to listen to her scary message in "Silent Spring." It changed how they thought about the earth—and also how they treated it.*

—Robert W. Peterson

Illustration by John Gaudin



Rachel Carson: Environmentalist and Writer

“Man’s way is not always best”

by Kathy Wilmore

When you hear the word “revolutionary,” what image comes to mind? An angry, wild-eyed man toting a machine gun, perhaps? Or do you look back in history to see someone like George Washington or Paul Revere? How about the environmentalist and writer Rachel Carson? She may not look the part, but Rachel Carson was a true revolutionary. Her work as a writer and scientist stirred people up and helped launch a new age of environmental awareness in the United States.

In 1962, Carson published *Silent Spring*, her fourth book on nature. It had an almost fairy-tale beginning: “There once was a town in the heart of America where all life seemed to live in harmony with its surroundings.”



However, something in that town went horribly wrong. Sickness and death appeared everywhere: among flowers and trees, cattle and sheep, even humans. “There was a strange stillness,” wrote Carson. “The birds, for example—where had they gone?... The few birds seen anywhere ... trembled violently and could not fly. It was a spring without voices. On the mornings that had once throbbed with the dawn chorus of ... (many) bird voices there was now no sound: only silence lay over the fields and woods and marsh.”

Carson went on to explain the cause of that eerie silence: “Pesticides” (insect-killing chemicals) had gotten into the water, air, and soil and were killing or sickening all sorts of creatures—including humans. “Can anyone believe,” she wrote, “it is possible to lay down such a barrage of poisons on the surface of the earth without making it unfit for all life? They should not be called “insecticides” [insect killers] but biocides [life killers].”

If we are not more careful with the chemicals we use, warned Carson, the nightmarish silence described in *Silent Spring* could come true.

Rachel Carson: Environmentalist and Writer

Anything but Silence

The reaction to Carson's book was anything but silence. It caused such an uproar that a *New York Times* headline declared: SILENT SPRING IS NOW NOISY SUMMER.

Chemical manufacturers were furious with Carson. They ran ads telling Americans to ignore *Silent Spring*. They questioned Carson's abilities as a scientist, calling her a hysterical fanatic. Pesticides, they said are perfectly safe—don't worry about a thing.

But Americans did worry. The White House and the Congress were flooded with letters from anxious citizens demanding that something be done. President John F. Kennedy called for a special committee of scientists to investigate Carson's claims. Congress also formed an investigation committee.

The soft-spoken Carson would rather have spent her days on the rocky coast of Maine, where she did much of her research as a marine biologist (scientist who studies sea life). But the storm of debate surrounding her book and its critics pulled her into the limelight.

Coming to Terms with Nature

In defending her research, Carson told Americans to think for themselves. Who had the most to win or lose if she turned out to be correct? "As you listen to the present controversy about pesticides," said Carson, "I recommend that you ask yourself: Who speaks? And why?"

The main thing to consider, she said, is our future. What kind of world do we want to leave our children? "I deeply believe," Carson told Congress, "that we in this generation must come to terms with nature."

Carson's ideas may not seem revolutionary today. But back in 1962, few people were familiar with such terms as pollution and ecology and environmental awareness. U.S. industries were constantly coming out with useful and exciting new products, but few people stopped to think if there could be negative side effects to any of them. Humans did what was convenient for them. Nature to most people was something that just took care of itself.

A Message to Remember

President Kennedy's commission supported Carson's warnings. So did other government studies. Armed with such new data and the public outcry, Congress began passing laws to ban or control the use of potentially dangerous pesticides. It also called for more careful testing of chemicals' side effects. In 1970, Congress established the Environmental Protection Agency (EPA) to reduce and control pollution of water, air, and soil. Rachel Carson did not live to see all of this happen. She died of cancer in 1964.



Rachel Carson: Environmentalist and Writer

What about us? Can we avoid the “silent spring” that Carson predicted? In the 31 years since *Silent Spring* first appeared, people have grown far more aware of our impact on the environment. But we still use many potentially deadly chemicals.

A 1993 *New York Times* article says that “68 pesticide ingredients [not in use] have been determined to cause cancer. One out of every 10 community drinking-water wells contains pesticides.... Farmers exposed to “herbicides” [weed killers] have a six times greater risk than others of contracting certain cancers. Children in homes using pesticides are seven time as likely to develop childhood leukemia [a form of cancer].”

“There remains, in this space-age universe,” wrote Rachel Carson, “the possibility that man’s way is not always best.” We would do well to remember her warning.

Wilmore, Kathy. “Rachel Carson: Environmentalist and Writer.” *Scholastic Junior Magazine*. 2013. <<http://www.scholastic.com/browse/article.jsp?id=4964>>.



Malaria Carrying Mosquito Crash Lands Due to His Insecticide

Paul Müller was a chemist who made a discovery that led to the rapid decrease of many dangerous insect-transmitted diseases. He did this by finding one of the most effective and controversial pesticides in history. It has been found to be effective in killing the mosquito, which spreads malaria; the louse, which spreads typhus; the flea, which spreads the plague; and the sandfly, which spreads tropical diseases. It was a main factor in complete elimination of malaria in Europe, the U.S., Japan, and Australia. This pesticide is called dichloro-diphenyl-trichloroethane, more commonly known as DDT.

Müller was an independent scientist often referred to in the labs as a “lone wolf,” or as his daughter related, an *Eigenbroter*—someone “who makes his own bread.” Two events occurred that influenced his research into insecticides. The first was a severe food shortage in Switzerland, which demonstrated the need for better insect control of crops. The second event was the Russian typhus epidemic, the largest typhus epidemic in history. Müller, with his background in chemistry and botany, found himself both motivated and prepared for the challenge.



He worked for J.R. Geigy (which eventually became today’s drug giant Novartis), developing tanning methods for protecting clothes from insects, and a safe seed disinfectant that wasn’t based on poisonous mercury compounds, as was common in his era. After these successes, he decided to pursue the perfect synthetic insecticide. He absorbed all the information possible on the subject, came up with properties such an insecticide would exhibit, and set forth on his solitary quest to find it. After four years of work and 349 failures, in September of 1939, Müller placed a compound in his fly cage. After a short while the flies dropped and died. What he had found was DDT.

Malaria Carrying Mosquito Crash Lands Due to His Insecticide

In 1948, Paul Müller was awarded the Nobel Prize in medicine, despite the fact that he was neither a doctor nor a medical researcher, but rather a chemist. Such recognition speaks volumes about the world's perception of the benefits of DDT in preventing human disease. Later, due to overuse, questions began to surface about its impact on nature. Then environmentalists rallied against it, which culminated in the U.S. Environment Protection Agency banning DDT in 1972. Soon, most other countries also banned its use. Environmentalists and public health advocates remained polarized for decades over DDT. It wasn't until September 2006 that the World Health Organization reversed its stance and admitted DDT was at times the best insecticide to prevent malaria. As the years have passed, many on both sides of the debate are coming to realize proper limited use of DDT, on the inside walls of homes, can be effective and have virtually no impact on the environment.

Author: Adam Allie (contributing writer)

Source: www.scienceheroes.com/index.php?option=com_content&view=article&id=71:mueller-ddt&catid=55:paul-muller&Itemid=

Publisher: www.scienceheroes.com

Allie, Adam. "Malaria Carrying Mosquito Crash Lands Due to His Insecticide." Scienceheroes.com.

Web.<http://www.scienceheroes.com/index.php?option=com_content&view=article&id=71:mueller-ddt&catid=55:paul-muller&Itemid=119>.

How DDT Harmed Hawks and Eagles (excerpt)

Pesticide DDT is a chemical compound that was a major factor in reducing the eagle and hawk populations around the world. Raptors were also hurt by other problems such as hunting and deforestation. The 1972 ban of DDT certainly contributed to the birds of prey's revival in the United States. It is important to understand how people have tracked and identified their progress. The modern day explosion of nesting pairs makes us realize the disastrous effects of synthetic pesticides.

The United States used DDT during the mid-1900s. During and after World War II (1939–1945), DDT was widely used as a synthetic pesticide to prevent insects from killing agricultural crops. It was popular with farmers, foresters, and domestic gardeners. The compound reached a global peak of 386 million pounds (175 million kilograms) in 1970. In 1959, the United States sprayed 79 million pounds (36 million kilograms) of DDT chemical compound.

The dangerous consequences of spraying synthetic pesticides were not realized until 1962. An American biologist, Rachel Carson, published *Silent Spring*. The public learned DDT caused cancer in people. The synthetic pesticide harmed eagles and other birds of prey populations. Bald eagles were threatened with extinction in the lower 48 states. Finally, in June 1972, the U.S. Environmental Protection Agency (EPA) banned DDT use in the United States. Recently as May 23, 2001, DDT pesticide use was limited worldwide at the Stockholm Convention.

Birds of prey species badly affected by synthetic pesticide use included: peregrine falcons, sharp-shinned hawks, Cooper's hawks, Eurasian sparrow hawks, osprey, bald eagles, white-tailed eagles, brown pelicans, and herons.

The eagle needs rich soil and its fertility. Grass cannot grow on deteriorated soil. A diminishing rabbit population hurts eagle populations. DDT contaminated many soils and plants. Mice stored the poisonous particles in their fatty tissues. Hawks consumed numerous mice, and their numbers declined because of DDT poisoning.

Bald eagle populations decreased as low as 500 nesting pairs in the lower 48 states. Some bald eagles were poisoned because their fish ingested synthetic pesticides. The 1972 DDT ban and the 1973 Endangered Species Act, helped reverse a dismal trend. The lower 48 states noticed an increase of over 5,000 nesting pairs. 70,000 bald eagles inhabit North America.



How DDT Harmed Hawks and Eagles (excerpt)

In 2007, the American bald eagle was taken off the endangered species list in Wisconsin. In 1973, the bald eagle inhabited 108 territories in the state. Those territories rose to 1,150 breeding pairs in 2010. Half of the eagle population nest on privately owned land. It makes it important for Wisconsin citizens to understand the importance of protecting eagles.

Author: Gil Valo (Interested Citizen)

Date: July 26, 2007

Source: <http://www.helium.com/items/2203587-how-ddt-harmed-hawks-and-eagles>

Publisher: www.helium.com



Biological Energy—Here, Let Me Fix It! The Effects of Humans on a Specific Food Web

A food web is all of the feeding relationships in an ecosystem. A food web is a complex and interconnected unit. This becomes clear to us when human actions have unexpected effects. An example of this is evident in the events on the Southeast Asian island of Borneo. In 1955 the World Health Organization used the pesticide DDT to kill mosquitoes that carry the disease malaria. Malaria is a disease of red blood cells. Severe fever and sweats characterize it. The DDT killed the mosquitoes and relieved the malaria, but it caused an undesirable chain reaction on the island.



First, the island homes' thatched roofs started collapsing. What could this have to do with DDT? The DDT had not only killed the mosquitoes but also wasps that ate thatch-eating caterpillars. Without the wasps, the caterpillars multiplied and devoured the thatch roofs.

Second, the DDT was killing cockroaches as well as mosquitoes and wasps. Island lizards then ate the cockroaches. The pesticide in the cockroaches damaged the lizard's nervous system. The effect was that the lizard's movement and reflexes slowed. Because they moved so slowly, most of them were caught and eaten by house cats. After they ate the lizards the cats suffered the effects of the DDT and died in great numbers.

Without cats in the village, rats from the forest moved in. The rat's fur carried fleas. The fleas were infected with the bacteria that cause the plague. Plague is a devastating disease that can cause mass mortality. Finally, officials were forced to parachute crates of healthy cats into Borneo to control the rat population and rid the island of plague.

The chain of events on Borneo occurred because the organisms on Borneo were connected to each other in a food web. When one part of the web was disturbed, other parts were affected.



Biological Energy—Here, Let Me Fix It!
The Effects of Humans on a Specific Food Web

Author: Unknown

Source: The Utah Education Network Web site.

<http://www.uen.org/core/science/sciber/sciber8/stand-2/humanimp.shtml>.

Publisher: Utah State Office of Education

“Biological Energy—Here, Let Me Fix It!” The Utah Education Network.

<<http://www.uen.org/core/science/sciber/sciber8/stand-2/humanimp.shtml>>.

A New Home for DDT (excerpt)

By Donald Roberts
Bethesda, Md.

DDT, the miracle insecticide turned environmental bogeyman, is once again playing an important role in public health. In the malaria-plagued regions of Africa, where mosquitoes are becoming resistant to other chemicals, DDT is now being used as an indoor repellent. Research that I and my colleagues recently conducted shows that DDT is the most effective pesticide for spraying on walls, because it can keep mosquitoes from even entering the room.

The news may seem surprising, as some mosquitoes worldwide are already resistant to DDT. But we've learned that even mosquitoes that have developed an immunity to being directly poisoned by DDT are still repelled by it.

Malaria accounts for nearly 90 percent of all deaths from vector-borne disease globally. And it is surging in Africa, surpassing AIDS as the biggest killer of African children under age 5.

From the 1940s onward, DDT was used to kill agricultural pests and disease-carrying insects because it was cheap and lasted longer than other insecticides. DDT helped much of the developed world, including the United States and Europe, eradicate malaria. Then in the 1970s, after the publication of Rachel Carson's *Silent Spring*, which raised concern over DDT's effects on wildlife and people, the chemical was banned in many countries. Birds, especially, were said to be vulnerable, and the chemical was blamed for reduced populations of bald eagles, falcons, and pelicans. Scientific scrutiny has failed to find conclusive evidence that DDT causes cancer or other health problems in humans.

Today, indoor DDT spraying to control malaria in Africa is supported by the World Health Organization; the Global Fund to Fight AIDS, Tuberculosis and Malaria; and the United States Agency for International Development.

It would be a mistake to think we could rely on DDT alone to fight mosquitoes in Africa. Fortunately, research aimed at developing new and better insecticides continues—thanks especially to the work of the international Innovative Vector Control Consortium. Until a suitable alternative is found, however, DDT remains the cheapest and most effective long-term malaria fighter we have.



A New Home for DDT (excerpt)

Author: Donald Roberts, professor emeritus of tropical medicine and board member of nonprofit Africa Fighting Malaria

Source: Opinion Editorial, The New York Times.

http://www.nytimes.com/2007/08/20/opinion/20roberts.html?_r=0.

Published: The New York Times, August 20, 2007.

Roberts, Donald. "OP-ED CONTRIBUTOR; A New Home for DDT." The New York Times. The New York Times, 20 Aug. 2007. Web.
http://www.nytimes.com/2007/08/20/opinion/20roberts.html?_r=1.

DDT use should be last resort in malaria-plagued areas, scientists say (excerpts)

By Marla Cone and Environmental Health News Monday, May 4, 2009

A panel of scientists recommended today that the spraying of DDT in malaria-plagued Africa and Asia should be greatly reduced because people are exposed in their homes to high levels that may cause serious health effects.

The scientists from the United States and South Africa said the insecticide, banned decades ago in most of the world, should only be used as a last resort in combating malaria.

The stance of the panel, led by a University of California epidemiologist, is likely to be controversial with public health officials. Use of DDT to fight malaria has been increasing since it was endorsed in 2006 by the World Health Organization and the President's Malaria Initiative, a U.S. aid program launched by former President Bush.

In many African countries, as well as India and North Korea, the pesticide is sprayed inside homes and buildings to kill mosquitoes that carry malaria.

Malaria is one of the world's most deadly diseases, each year killing about 880,000 people, mostly children in sub-Saharan Africa, according to the World Health Organization.

The 15 environmental health experts, who reviewed almost 500 health studies, concluded that DDT "should be used with caution, only when needed, and when no other effective, safe and affordable alternatives are locally available."

We cannot allow people to die from malaria, but we also cannot continue using DDT if we know about the health risks," said Tiaan de Jager, a member of the panel who is a professor at the School of Health Systems & Public Health at the University of Pretoria in South Africa. "Safer alternatives should be tested first and if successful, DDT should be phased out without putting people at risk."

The scientists reported that DDT may have a variety of human health effects, including reduced fertility, genital birth defects, breast cancer, diabetes and damage to developing brains. Its metabolite, DDE, can block male hormones.

"Based on recent studies, we conclude that humans are exposed to DDT and DDE, that indoor residual spraying can result in substantial exposure and that DDT may pose a risk for human populations," the scientists wrote in their consensus statement, published online today in the journal *Environmental Health Perspectives*.

"We are concerned about the health of children and adults given the persistence of DDT and its active metabolites in the environment and in the body, and we are particularly concerned about the potential effects of continued DDT use on future generations."

In 2007, at least 3,950 tons of DDT were sprayed for mosquito control in Africa and Asia, according to a report by the United Nations Environment Programme.

DDT use should be last resort in malaria-plagued areas, scientists say (excerpts)

"The volume is increasing slowly," said Hindrik Bouwman, a professor in the School of Environmental Sciences and Development at North-West University in Potchefstroom, South Africa, who also served on the panel.

In South Africa, about 60 to 80 grams is sprayed in each household per year, Bouwman said.

Brenda Eskenazi, a University of California at Berkeley School of Public Health professor and lead author of the consensus statement, is concerned because the health of people inside the homes is not being monitored.

A 2007 study on male fertility is the only published research so far. Conducted in Limpopo, South Africa by de Jager and his colleagues, the study found men in the sprayed homes had extremely high levels of DDT in their blood and that their semen volume and sperm counts were low.

"Clearly, more research is needed...but in the meantime, DDT should really be the last resort against malaria, rather than the first line of defense," Eskenazi said.

The pesticide accumulates in body tissues, particularly breast milk, and lingers in the environment for decades.

In the United States, beginning in the 1940s, large volumes of DDT were sprayed outdoors to kill mosquitoes and pests on crops. It was banned in 1972, after it built up in food chains, nearly wiping out bald eagles, pelicans and other birds.

Today's use differs greatly. In Africa, it is sprayed in much smaller quantities but people are directly exposed because it is sprayed on walls inside homes and other buildings.

Many health studies have been conducted in the United States, but on people who carry small traces of DDT in their bodies, not the high levels found in people in Africa.

"DDT is now used in countries where many of the people are malnourished, extremely poor and possibly suffering from immune-compromising diseases such as AIDS, which may increase their susceptibility to chemical exposures," said panel member Jonathan Chevrier, a University of California at Berkeley post-doctoral researcher in epidemiology and in environmental health sciences.

In 2001, more than 100 countries signed the Stockholm Convention, a United Nations treaty which sought to eliminate use of 12 persistent, toxic compounds, including DDT. Under the pact, use of the pesticide is allowed only for controlling malaria.

Since then, nine nations—Ethiopia, South Africa, India, Mauritius, Myanmar, Yemen, Uganda, Mozambique and Swaziland—notified the treaty's secretariat that they are using DDT. Five others—Zimbabwe, North Korea, Eritrea, Gambia, Namibia and Zambia--also reportedly are using it, and six others, including China, have reserved the right to begin using it, according to a January Stockholm Convention report.



DDT use should be last resort in malaria-plagued areas, scientists say (excerpts)

"This is a global issue," Eskenazi said. "We need to enforce the Stockholm Convention and to have a plan for each country to phase out DDT, and if they feel they can't, good reason why other options cannot work."

Mexico, the rest of Central America and parts of Africa have combated malaria without DDT by using alternative methods, such as controlling stagnant ponds where mosquitoes breed and using bed nets treated with pyrethroid insecticides. But such efforts have been less successful in other places, particularly South Africa.

"We have a whole host of mosquito species and more than one parasite. The biology of the vectors is different and there is therefore no one-method-fits-all strategy, as is the case in Central America," Bouwman said.

For example, he said, some types of mosquitoes in South Africa breed in running [water](#), which cannot be easily controlled.

"The area to be covered is also vast, and infrastructure in most areas is too little to allow environmental management on a sustainable basis," he said.

When a mosquito strain that had previously been eliminated returned to South Africa, it was resistant to the pyrethroid insecticides that had replaced DDT.

"The resulting increase in malaria cases and deaths was epidemic," Bouwman said. Cases soared from 4,117 in 1995 to 64,622 in 2000. "South Africa had to fall back on DDT, and still uses it in areas where other chemicals would have a risk of failure," he said.

The scientists also recommended study of possible health effects of pyrethroids and other alternatives for DDT. "The general thoughts are that if chemicals have a shorter half-life, like pyrethroids, they are less dangerous," Eskenazi said. "This may be true, but there are virtually no studies on the health effects in humans of the alternatives."

The panel convened in March, 2008, at Alma College in Michigan, near a Superfund site where DDT was produced at a chemical plant. Their goal was "to address the current and legacy implications of DDT production and use," according to their report.

Acknowledging that some areas remain dependent on DDT, they recommended monitoring of the spraying to ensure that usage guidelines are followed and improved application techniques.

"It is definitely not a matter of letting people die from malaria," de Jager said.



DDT use should be last resort in malaria-plagued areas, scientists say (excerpts)

Author: Marla Cone (Editor in Chief Environmental Health News)

Source: www.environmentalhealthnews.org/ehs/news/ddt-only-as-last-resort

Published: Environmental Health News. May 4, 2009

Cone, Marla. "DDT Use Should be Last Resort in Malaria-Plagued Areas, Scientists Say." May 4, 2009. Environmental Health News. The above work is property of <http://www.environmentalhealthnews.org/ehs/news/ddt-only-as-last-resort> Environmental Health News. License: <http://creativecommons.org/licenses/by-nc-nd/3.0/>



Researcher's Notebook

Name:

Date:

Research Question: Do the benefits of DDT outweigh its harmful consequences?

To plan for your research, think, talk, and write about the following questions:

1. *What is a benefit?*

2. *What is a harmful consequence?*

3. *What important benefits of DDT do you already know about?*

4. *What important harmful consequences of DDT do you already know about?*

5. *What do you still wonder about DDT?*

In this section, write a short, well-written paragraph describing the purpose for your research:



Researcher's Notebook

Name:

Date:

Research Question: Do the benefits of DDT outweigh its harmful consequences?

Source Information	Claims/Central Ideas (Paraphrase the Benefits or Harmful Consequences)	Details/Evidence
Source 1: Source Title:		
Author:		
Date:		
Source Type (<i>newspaper article, book, Web site, video, etc.</i>):		
Credible? Yes / No (Use your Credibility Checklist to guide you.)		
Does this source help you refocus or refine your research question in any way? How?		
What are new questions you would like answered before making your claim about DDT?		



Researcher's Notebook

Name:

Date:

Research Question: Do the benefits of DDT outweigh its harmful consequences?

Source Information	Claims/Central Ideas (Paraphrase the Benefits or Harmful Consequences)	Details/Evidence
Source 2: Source Title:		
Author:		
Date:		
Source Type (<i>newspaper article, book, Web site, video, etc.</i>):		
Credible? Yes / No (Use your Credibility Checklist to guide you.)		
Does this source help you refocus or refine your research question in any way? How?		
What are new questions you would like answered before making your claim about DDT?		



Researcher's Notebook

Name: _____

Date: _____

Research Question: Do the benefits of DDT outweigh its harmful consequences?

Source Information	Claims/Central Ideas (Paraphrase the Benefits or Harmful Consequences)	Details/Evidence
Source 3: Source Title:		
Author:		
Date:		
Source Type (<i>newspaper article, book, Web site, video, etc.</i>):		
Credible? Yes / No (Use your <i>Credibility Checklist</i> to guide you.)		
Does this source help you refocus or refine your research question in any way? How?		
What are new questions you would like answered before making your claim about DDT?		



Researcher's Notebook

Name:

Date:

Research Question: Do the benefits of DDT outweigh its harmful consequences?

Source Information	Claims/Central Ideas (Paraphrase the Benefits or Harmful Consequences)	Details/Evidence
Source 4: Source Title:		
Author:		
Date:		
Source Type (<i>newspaper article, book, Web site, video, etc.</i>):		
Credible? Yes / No (Use your Credibility Checklist to guide you.)		
Does this source help you refocus or refine your research question in any way? How?		
What are new questions you would like answered before making your claim about DDT?		



Researcher's Notebook

Name:

Date:

Research Question: Do the benefits of DDT outweigh its harmful consequences?

Source Information	Claims/Central Ideas (Paraphrase the Benefits or Harmful Consequences)	Details/Evidence
Source 5: Source Title:		
Author:		
Date:		
Source Type (<i>newspaper article, book, Web site, video, etc.</i>):		
Credible? Yes / No (Use your Credibility Checklist to guide you.)		
Does this source help you refocus or refine your research question in any way? How?		
What are new questions you would like answered before making your claim about DDT?		



Exit Ticket: “Rachel Carson: Environmentalist and Writer,”
Paraphrasing an Excerpt from the Text

Name:

Date:

Paraphrase the quote from “Rachel Carson: Environmentalist and Writer.”

“Anything but Silence”

The reaction to Carson’s book was anything but silence. It caused such an uproar that a *New York Times* headline declared: SILENT SPRING IS NOW NOISY SUMMER.

Chemical manufacturers were furious with Carson. They ran ads telling Americans to ignore *Silent Spring*. They questioned Carson’s abilities as a scientist, calling her a hysterical fanatic. Pesticides, they said are perfectly safe—don’t worry about a thing.”



Learning from Frightful's Perspective: Chapter 13

Name: _____

Date: _____

Chapter 13: "Sam Takes Charge" Words I Found Difficult: Glossary: poachers— <i>n.</i> people who kill or take wild animals (as game or fish) illegally bivouac— <i>n.</i> a temporary or casual shelter or lodging deluge— <i>n.</i> a large amount of rain that suddenly falls in an area rivulets— <i>n.</i> small streams of water or liquid endangered— <i>adj.</i> used to describe a type of animal or plant that has become very rare and that could die out completely	Focus Question: Flip Pearson and Dr. Werner took two of the eyases from the bridge for a reason. Why did the two men take the eyases?.	
	My thoughts about why two of the eyases were taken:	Evidence from the Text:



EXPEDITIONARY
LEARNING

Grade 6: Module 4: Unit 2: Lesson 2

Applying Research Skills: “Rachel Carson: Environmentalist and Writer”



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

I can compare how different authors portray the same idea or event. (RI.6.9)
I can provide a list of sources I used to gather information in a bibliography. (W.6.8)
I can assess the credibility of each source I use. (W.6.8)

Supporting Learning Targets

- I can record bibliographic information for the sources I read in my research.
- I can assess the credibility of the article “Rachel Carson: Environmentalist and Writer.”
- I can analyze the author’s presentation of information and ideas in “Rachel Carson: Environmentalist and Writer.”

Ongoing Assessment

- Learning from Frightful’s Perspective: Chapter 13 (from homework)
- Researcher’s notebook
- Comparing and Contrasting Authors’ Presentation graphic organizer



Agenda	Teaching Notes
<ol style="list-style-type: none"> 1. Opening <ol style="list-style-type: none"> A. Engaging the Reader: “Learning from Frightful’s Perspective” (8 minutes) B. Unpacking Learning Targets (2 minutes) 2. Work Time <ol style="list-style-type: none"> A. Citing Our Sources (20 minutes) B. Authors’ Presentation of Ideas and Information: “Rachel Carson: Environmentalist and Writer” (10 minutes) 3. Closing and Assessment <ol style="list-style-type: none"> A. Revisiting the “Big Idea” of the Module (5 minutes) 4. Homework <ol style="list-style-type: none"> A. Read Chapter 14, “Sam Battles Bird Instincts” and complete Learning from Frightful’s Perspective: Chapter 14.. 	<ul style="list-style-type: none"> • As students collect basic bibliographic information, they must understand how to give credit to the source providing the information. Discuss the importance of giving credit where credit is due. See the Unit 3 overview for additional resources on this topic for teacher reference. • In this lesson, students begin recording the authors, titles, sources, and dates of the sources they use to collect information. They also begin to assess the credibility of research texts. It is important to consider several factors: who published the text, when it was published, who wrote it, why was it written, and what evidence, facts, and details were used to support the author’s claims or ideas. • Guiding students through the process of evaluating sources is an important part of their learning, as well as a model for developing and expressing relevant information and opinions. • Students will again use the “Rachel Carson: Environmentalist and Writer” article they read for gist and paraphrasing information about the benefits or consequences of DDT in Lesson 1. They will now add both bibliographic and credibility source information to the researcher’s notebook. Refer to Assessing Sources (see supporting materials) as a guide for assessing the credibility of a source text. • Students reread “Rachel Carson: Environmentalist and Writer” and answer text-dependent questions to guide them toward understanding and identifying how an author presents information and ideas. Evaluating this information helps students compare and contrast one article with another. • In this lesson and Lesson 3, different authors wrote the articles about Rachel Carson and a similar topic. This helps students move toward mastery of RI.6.9, in which students compare and contrast one author’s presentation of ideas with that of another. In future lessons, and in other articles in the research folder, students read texts with varied viewpoints about the issue of DDT, in order to be exposed to a more balanced analysis. • In advance: Review the Assessing Sources graphic organizer. Reread the article “Rachel Carson: Environmentalist and Writer” to identify how the author presents the article, what type of evidence is used, and how text features are used. • In advance: Preview and prepare to display the video (see Opening Part A). • Post: Learning targets.



Lesson Vocabulary	Materials
bibliographic, assess, credibility, analyze; poachers (153) pesticides, insecticides, biocides, herbicides	<ul style="list-style-type: none">• <i>Frightful's Mountain</i> (book; one per student)• Peregrine Falcon Facts anchor chart (from Unit 1)• Video: “2010 time lapse feeding 4/8/10 to 5/24/10; SCPBRG Falcons” http://www.youtube.com/watch?v=6d_6Xk36Zfw• Research folder (from Lesson 1)• Researcher’s notebook (from Lesson 1; in research folder)• Credibility Checklist (from Lesson 1; in research folder)• “Rachel Carson: Environmentalist and Writer” (from Lesson 1; in research folder)• Document camera• Equity sticks• Comparing and Contrasting Authors’ Presentation graphic organizer (one per student)• Learning from Frightful’s Perspective: Chapter 14 (one per student)



Opening	Meeting Students’ Needs
<p>A. Engaging the Reader: “Learning from Frightful’s Perspective” (8 minutes)</p> <ul style="list-style-type: none"> • Be sure students have their text, <i>Frightful’s Mountain</i>. Ask students to join their triad partners to share their responses to the “Learning from Frightful’s Perspective” focus question for Chapter 13, “Sam Takes Charge.” Remind students to include evidence supporting their thoughts about why the men took two of Frightful’s eyases. Encourage students to use and explain the glossary term <i>poachers</i> as they discuss their responses. • Ask students to share terminology they found in the chapter and added to “Words I Found Difficult.” Tell students to look for context clues and use those as they collaborate to determine the meaning of difficult words. Remind students to write the words, page numbers they were found on, and a brief definition as they record new vocabulary. • Circulate to observe students’ verbal and written responses. Acknowledge triads working as a team to share evidence-based responses and determine meanings of new words. Interact with those who need support to develop response skills and identify and define new vocabulary words. • Refocus students whole group. Invite students to share their responses to the focus question. Ask students what information about enemies or threats to peregrine falcons could be added to the Peregrine Falcon Facts anchor chart. • As students identify the poachers who stole two of Frightful’s eyases, invite them to share why the poachers took the eyases. Ask them if they know of other living things that are captured or killed for similar reasons. • To build student interest, show a brief video: “2010 time lapse feeding 4/8/10 to 5/24/10; SCPBRG Falcons.” • Remind students that in today’s lesson they will continue to learn how to collect information about research. Explain that the steps they’ll take will help them as they gather credible information and develop their own thoughts about how we try to balance the needs of people and the natural world. • As students respond, circle words on the posted learning target and annotate words for meaning. Emphasize and review the words <i>bibliographic</i>, <i>assess</i>, <i>credibility</i>, and <i>analyze</i> 	<ul style="list-style-type: none"> • Some students may need support for responding to the Learning from Frightful’s Perspective focus question. Consider pulling these students into small groups for guided practice with the focus question and adding vocabulary to “Words I Found Difficult.” • Some students may need help independently reading chapters in <i>Frightful’s Mountain</i>. Consider providing a listening station with an audio version of the novel or guided reading support. • Adding visuals or graphics to the Peregrine Falcon Facts anchor chart can help students remember or understand key information. These visuals or graphics could be added throughout the reading of the novel. • Using visuals or graphics to respond to focus questions and help define new terminology can also help students remember and understand.



Opening (continued)	Meeting Students’ Needs
<p>B. Unpacking Learning Targets (2 minutes)</p> <ul style="list-style-type: none"> Focus students’ attention on the learning targets. Invite students to read the learning targets with you: <ul style="list-style-type: none"> “I can record bibliographic information for the sources I read in my research.” “I can assess the credibility of the article ‘Rachel Carson: Environmentalist and Writer.’” “I can analyze the author’s presentation of information and ideas in ‘Rachel Carson: Environmentalist and Writer.’” Ask students to identify what words in the learning targets they think are most important. 	

Work Time	Meeting Students’ Needs
<p>A. Citing Our Sources (20 minutes)</p> <ul style="list-style-type: none"> Explain that information used from an outside source must be documented. Some of the source information is called <i>bibliographic</i> information because it identifies the book, magazine, article, Web site, etc. that a particular subject was written in. Tell students that part of the documentation includes the organization or source that published it, how it was shared, and when it was published. Let students know that giving credit to the author or writer of sources they use for their writing and speaking is important. It acknowledges sources they use as credible and contributes to the credibility of their own information that they share as writers and speakers. Make sure students have their research folder. Distribute or ask students to take the researcher’s notebook out of their research folder. Distribute or ask students to take the Credibility Checklist out of their research folder. Distribute or ask students to take “Rachel Carson: Environmentalist and Writer” out of their research folder. Remind students that they have written the title in the “Source Information” section of the researcher’s notebook. Explain that they’ll use the article to complete other source information. Use a document camera to model recording source information as students find and add it to their researcher’s notebook. Use equity sticks to call on students. Ask where the author’s name is located and what it is. Tell students to write the author’s name in the researcher’s notebook. Use a document camera to model where the author’s name should be located. Tell students to complete the rest of the “Source Information” section. Invite them to look for information with an elbow partner. 	<ul style="list-style-type: none"> As students collect, assess, and analyze research information, they’ll use a variety of materials. Teachers may remind students of strategies for keeping materials such as graphic organizers, articles, references, and vocabulary organized and maintained in their research folder. During transitions or after work completion, allow time for students to add or return materials to their research folders.



Work Time (continued)	Meeting Students’ Needs
<ul style="list-style-type: none"> • Have students use equity sticks to share the date and the source type of the article. Model writing this information on the researcher’s notebook displayed with the document camera. • Invite students to use the Credibility Checklist to guide them as they decide if the “Rachel Carson: Environmentalist and Writer” article was <i>credible</i> or able to be believed. Ask them to respond to the questions to help them decide if this source seems believable. Tell students to assess credibility and share their responses with an elbow partner. • Refocus students whole class. Call on students to share their credibility ratings. Explain that finding source information is an important part of choosing what they might use for research. Tell students to consider that as they respond to the questions: <ul style="list-style-type: none"> * “Does this source help you refocus or refine your research question in any way? How?” * “What are new questions you would like answered before making your claim about DDT?” • Inform students that looking for answers to the research question “Do the benefits of DDT outweigh its harmful consequences?” involves looking closely at authors’ claims and evidence. • Read aloud the first paragraph of the article as students read along. Ask what claim or central idea students can find. Model paraphrasing to record the central idea in that paragraph. For example: “Rachel Carson was a revolutionary.” Ask what detail or evidence supports that idea. Model by writing a quote that supports the idea: “Her work ... helped launch a new age of environmental awareness in the Untied States.” • Read aloud the rest of the excerpt as students read along. Ask students to think about what went wrong in nature. Ask what they feel is the claim or central idea. Model by paraphrasing a claim or central idea such as <ul style="list-style-type: none"> * “Pesticides caused silence in nature.” • Invite students to share a quote that has evidence to support the claim. Write a quote such as: <ul style="list-style-type: none"> * “Pesticides had gotten into the water, air, and soil and were killing or sickening all sorts of creatures—including humans.” • Ask students to look at the subtitle of the next excerpt, “Anything but Silence.” Encourage students to listen for or identify a claim or central idea presented in this excerpt. Read aloud as students read along. • Ask students what happened when people read Rachel Carson’s book <i>Silent Spring</i>. Listen for: “an uproar,” “furious,” “don’t worry ...” or “worry.” Explain that those responses suggest a claim or idea that many people reacted strongly to Rachel Carson’s book. Model paraphrasing the claim or idea by writing: <ul style="list-style-type: none"> * “Many people reacted to Rachel Carson’s book.” 	



Work Time (continued)	Meeting Students’ Needs
<ul style="list-style-type: none">• Invite students to quote evidence that supports the claim or idea. Listen for quotes such as: “It caused such an uproar”; “Chemical manufactures were furious with Carson”; “But Americans did worry.” Model documenting evidence by using a quote that supports a claim.• Read aloud as students read along in the next excerpt, “Coming to Terms with Nature.” Invite students to listen for a claim and evidence as they read.• Call on students to share the claim or central idea expressed in the excerpt. Listen for responses suggesting that people are encouraged to think for themselves. Model paraphrasing by writing a statement such as: “Rachel Carson thought people should think for themselves about the use of pesticides.”• Ask students to quote evidence in the text that supports the claim that was paraphrased. Model by recording quotes such as:<ul style="list-style-type: none">* “As you listen to the present controversy about pesticides, I recommend that you ask yourself: Who speaks? And why?”* “I deeply believe that we in this generation must come to terms with nature.”• Compliment students for using their close reading skills, and paraphrasing and quoting evidence to look closely or analyze how an author presents information.• Tell students this is an important part of choosing what they might use for research in their argument. Tell students to consider that as they respond to the questions:<ul style="list-style-type: none">* “Does this source help you to refocus or refine your research question in any way? How?”* “What are new questions you would like answered before making your claim about DDT?”• Ask students to put their researcher’s notebook and their Credibility Checklist in their research folder. Explain they will read other articles and add information to the researcher’s notebook.	



Work Time (continued)	Meeting Students’ Needs
<p>B. Authors’ Presentation of Information and Ideas: “Rachel Carson: Environmentalist and Writer” (10 minutes)</p> <ul style="list-style-type: none"> • Explain to students that different authors sometimes write about the same information, idea, or events. Those authors may portray their information differently. • Tell students that in another lesson, they will read an article about Rachel Carson written by a different author. Explain that they will compare that article to “Rachel Carson: Environmentalist and Writer.” To do that, it is important to look at how each author presents their information. • Distribute the Comparing and Contrasting Authors’ Presentation graphic organizer and display using a document camera. Invite students to write the title of the article, “Rachel Carson: Environmentalist and Writer,” under Text 1. Model as students write. • Tell students they will reread “Rachel Carson: Environmentalist and Writer.” During this close read, students should consider information to help them record responses to the following questions: <ul style="list-style-type: none"> * “How does the author introduce the article?” * “What type of evidence does the author include?” * “How does the author use text features?” • Inform students that authors use different writing techniques to introduce their topic with quotes, anecdotes, questions, facts and statistics. • Invite students to reread the first paragraph with an elbow partner. Tell students to pay attention to how the author, Kathy Wilmore, introduces her article. • Invite elbow partners to share what style they thought the author used to introduce the article. Listen for responses that include asking questions or sharing background knowledge. Use the document camera to model a response to the question using a complete sentence such as: “The author introduces the article by asking questions about what a revolutionary might be like.” Tell students to write the response on their graphic organizers. • Tell students you will read the next part of the article aloud as they read along. Encourage students to search for different types of evidence used in each excerpt. Explain that authors can present evidence in different ways such as facts, statistics, quotes, explanations, and stories. 	<ul style="list-style-type: none"> • When introducing the Comparing and Contrasting Author’s Presentation graphic organizers or recording forms, consider using a document camera to visually display the document for students who struggle with auditory processing. • Providing models of expected work supports all learners but especially challenged learners. • Some students may benefit from identifying and adding only one or two types of evidence to the Comparing and Contrasting Author’s Presentation graphic organizer. • Using a document camera to model how the author introduces an article, what evidence is used, and how text features are used provides a visual cue to students as they learn how to identify and record this information.



Work Time (continued)	Meeting Students’ Needs
<ul style="list-style-type: none">• At the end of the first excerpt, pause and ask students:<ul style="list-style-type: none">* “What type of evidence was used to support the idea that something had gone wrong in an American town?”• Listen for responses such as: “The author used facts about sickness and death”; “The author explained how pesticides were killing or sickening different creatures”; or “The author used a question to ask where had the birds gone.”• Use the document camera again to model writing responses that explain the type of evidence an author includes in his/her writing. Ask students to write responses to identify some of the types of evidence Kathy Wilmore uses in “Rachel Carson: Environmentalist and Writer.”• Tell students that looking at types of evidence can help them <i>analyze</i> or study closely and carefully what an author is saying.• Explain that authors also use text features, such as photos, illustrations, graphs and charts, diagrams, quotes, captions, etc. to present information. Invite students to look closely at the article “Rachel Carson: Environmentalist and Writer” to see what text features were used.• Call on students to identify text features they noticed. Listen for responses such as: “The author used a photo of Rachel Carson” and “The author used a quote.” Ask students to explain what text features were used on the Comparing and Contrasting Authors’ Presentation graphic organizer. Model as students record their responses.• Ask students to place their graphic organizer in their research folder for future lessons.• Compliment students for their investigation of how authors present information and for placing their work in their research folders.• Tell students they will now think in a broader way about the research question: “Do the benefits of DDT outweigh its harmful consequences?”	



Closing and Assessment	Meeting Students’ Needs
<p>A. Revisiting the “Big Idea” of the Module (5 minutes)</p> <ul style="list-style-type: none">• Tell students that considering the research question “Do the benefits of DDT outweigh its harmful consequences?” can involve more than two positions. Explain that claims and evidence they have identified can expand their thinking. Tell them they will have the opportunity to consider different positions/possibilities about the use of DDT.• Introduce Four Corners. Post four pieces of chart paper with different DDT choices in different corners or parts of the room. Explain each of the choices.<ul style="list-style-type: none">– DDT is beneficial and can be used for many reasons.– DDT is beneficial only for preventing health problems like malaria and Lyme disease.– DDT is harmful only when used incorrectly.– DDT is harmful and should not be used.• Ask students to consider each of the statements for one minute. Tell students to stand near the statement that reflects mostly their thoughts.• Invite students to share with others in their corner why they chose that position. Include evidence in the sharing.• Congratulate students for sharing their different perspectives. Explain that it is important to consider different ways of thinking and to share those thoughts as they learn how to develop their own position.	<ul style="list-style-type: none">• Using Four Corners helps students expand their thinking and consider various possibilities about the use and effects of DDT.
Homework	Meeting Students’ Needs
<ul style="list-style-type: none">• Read Chapter 14, “Sam Battles Bird Instincts” and complete Learning from Frightful’s Perspective: Chapter 14.	



EXPEDITIONARY
LEARNING

Grade 6: Module 4: Unit 2: Lesson 2

Supporting Materials



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Comparing and Contrasting Authors' Presentation Graphic Organizer

Name: _____

Date: _____

Text 1: Title: “DDT Spray Scares Mosquitoes Away, Study Finds”	Compare and Contrast the Authors’ Presentations	Text 2: Title: “You Think You Have It Tough?”
How does the author introduce the article?	How are they similar? How are they different?	How does the author introduce the article?
What claim does the author make?	How are they similar? How are they different?	What claim does the author make?
What type of evidence does the author include?	How are they similar? How are they different?	What type of evidence does the author include?
How does the author use text features (photographs, graphs, diagrams, etc.)?	How are they similar? How are they different?	How does the author use text features (photographs, graphs, diagrams, etc.)?



Comparing and Contrasting Authors' Presentation Graphic Organizer

Which article is more effective in its argument? Why?



Learning from Frightful's Perspective: Chapter 14

Name: _____

Date: _____

Focus Question: In what ways has Frightful changed from the beginning of the novel until now?.	Evidence from the Text:	
	My thoughts about how Frightful has changed:	
<p>Chapter 14: "Sam Battles Bird Instincts"</p> <p>Words I Found Difficult:</p> <p>Glossary: eddy—n. a circular current cupola—n. a small structure built on top of a roof imprinted—v. something caused to stay in your mind permanently (as in memory)</p>		



EXPEDITIONARY
LEARNING

Grade 6: Module 4: Unit 2: Lesson 3

Comparing an Author's Presentation of Ideas: "Rachel Carson: Sounding the Alarm on Pollution"



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Long-Term Target Addressed (Based on NYSP12 ELA CCLS)	
I can compare how different authors portray the same idea or event. (RI.6.9)	
Supporting Learning Targets	Ongoing Assessment
<ul style="list-style-type: none">• I can analyze the author's presentation of ideas in "Rachel Carson: Sounding the Alarm on Pollution."• I can compare and contrast the authors' presentation of ideas for "Rachel Carson: Environmentalist and Writer" and "Rachel Carson: Sounding the Alarm on Pollution."	<ul style="list-style-type: none">• Learning from Frightful's Perspective: Chapter 14 (from homework)• Comparing and Contrasting Authors' Presentation graphic organizer



Agenda	Teaching Notes
<ol style="list-style-type: none"> 1. Opening <ol style="list-style-type: none"> A. Engaging the Reader: Learning from Frightful's Perspective (8 minutes) B. Unpacking Learning Targets (2 minutes) 2. Work Time <ol style="list-style-type: none"> A. Author's Presentation of an Idea: "Sounding the Alarm on Pollution" (20 minutes) B. Comparing and Contrasting Authors' Presentations of an Idea: "Banning DDT" (10 minutes) 3. Closing and Assessment <ol style="list-style-type: none"> A. Reflecting on Learning: Group Discussion (5 minutes) 4. Homework <ol style="list-style-type: none"> A. Read Chapter 15, "A Pal Finds a Pal" and complete Learning from Frightful's Perspective: Chapter 15. 	<ul style="list-style-type: none"> • In Lesson 2, students identified claims and supporting evidence and completed Source 1 in their researcher's notebook using the article "Rachel Carson: Environmentalist and Writer." They also used this article to complete "Text 1" on the Comparing and Contrasting Authors' Presentation graphic organizer. Now, in Lesson 3, students build their comparing and contrasting skills by analyzing two different authors portraying the same information or event. Students will complete "Text 2" information on the Comparing and Contrasting Authors' Presentation graphic organizer using "Rachel Carson: Sounding the Alarm on Pollution." (Students should have this article from Unit 1 or their research folder.) • When students record information for Text 1 and Text 2, they then compare and contrast the two articles. They note the articles' similarities and differences by looking at how the authors introduce the event, use various types of evidence, and use text features. • In Lesson 6, students will get more practice with comparing and contrasting authors' presentations using two other articles from the research folder. • This skill will be assessed in Lesson 9 on the mid-unit assessment. Students will use this same graphic organizer to compare and contrast authors' presentations in two articles. • In advance: Form partnerships. • In advance: Create the Authors' Presentation of Ideas anchor chart (see supporting materials). • Post: Learning targets; Authors' Presentation of Ideas anchor chart.



Lesson Vocabulary	Materials
analyze, compare, contrast, authors' presentation of ideas; from "Rachel Carson: Sounding the Alarm": Green Giants, influential, conservation, synthetic, sound science	<ul style="list-style-type: none">• <i>Frightful's Mountain</i> (book; one per student)• Research folder (from Lesson 1)• "Rachel Carson: Sounding the Alarm on Pollution" article (one per student) (in research folder; also from Unit 1)• Comparing and Contrasting Authors' Presentation graphic organizer (from Lesson 2)• Authors' Presentation of Ideas anchor chart (new; teacher-created)• Document camera• Learning from Frightful's Perspective: Chapter 15 (one per student)

Opening	Meeting Students' Needs
<p>A. Engaging the Reader: Learning from Frightful's Perspective (8 minutes)</p> <ul style="list-style-type: none">• Be sure students have their book, <i>Frightful's Mountain</i>.• Invite students to take out their Learning from Frightful's Perspective: Chapter 14 homework.• Remind students that their task for this assignment was to consider ways in which Frightful has changed as a character from the beginning of the novel until now.• Ask students to discuss this question with their triads, emphasizing that they should be referencing evidence from the chapter as they talk. This means they should be guiding their peers to specific page numbers and lines of text that support their thinking.• Also remind students to review any words they included in their "Words I Found Difficult" list, assisting one another in determining the word meaning.• Circulate and support students in their conversations. Specifically, look for student to notice that Frightful has become more reliant on her falcon instincts than she had in the beginning of novel, and it is not as easy for Sam to interact with her.	



Opening (continued)	Meeting Students' Needs
<p>B. Unpacking Learning Targets (2 minutes)</p> <ul style="list-style-type: none"> • Invite two volunteers to read the learning targets. The class should read along silently as each target is read aloud. <ul style="list-style-type: none"> * "I can analyze the author's presentation of ideas in "Rachel Carson: Sounding the Alarm on Pollution." * "I can compare and contrast the authors' presentation of ideas for "Rachel Carson: Environmentalist and Writer" and "Rachel Carson: Sounding the Alarm on Pollution." • As students read aloud the targets, circle analyze, authors' presentation of ideas, and compare and contrast. • Tell students analyze means to study to determine the relationship of something. Ask triads to discuss: <ul style="list-style-type: none"> * "What is something you have had to analyze?" • Invite triads to share their examples. • Listen for examples such as analyzing the data in a math problem, analyzing the bacteria in a culture, or analyzing the word choice in a poem. • Share with students that authors often write about similar subjects because they share similar interests. When authors present or write about their ideas, they look for a variety of ways to engage the reader. Some examples of engagement would include sharing an anecdote or story, using statistics, using a graph to depict information, or sharing a photograph. • Tell students in today's lesson they'll analyze articles and identify techniques the authors use to present their information. • Next, ask triads to discuss: <ul style="list-style-type: none"> * "What does it mean to <i>compare and contrast</i>?" * "What is something you have had to compare and contrast?" • Remind students they have discussed the meaning of <i>compare and contrast</i> in previous lessons. Invite triads to share their meanings and examples of something they compared and contrasted with the class. Listen for: "Comparing means noticing similarities <i>and</i> differences, while contrasting means noticing differences." 	<ul style="list-style-type: none"> • Posting learning targets for students to view throughout the lesson allows them to check their understanding. The learning targets also provide a reminder to students and teachers about the intended learning behind a given lesson or activity.



Work Time	Meeting Students' Needs
<p>A. Author's Presentation of an Idea: "Rachel Carson: Sounding the Alarm on Pollution" (20 minutes)</p> <ul style="list-style-type: none">• Invite students to find their research folder.• Ask them to locate the article "Rachel Carson: Sounding the Alarm on Pollution" article and their Comparing and Contrasting Authors' Presentation graphic organizer.• Tell students they will be reading this article and analyzing how the author presents information.• Go over the Authors' Presentation of Ideas anchor chart with students. Remind students these ideas were introduced and discussed in Lesson 2, and now they can reference this anchor chart as they analyze this text.• Read through the ways authors engage the reader in an introduction, make claims, use types of evidence to inform or persuade the reader, and use text features to call attention to important information.• Form student partnerships. Ask partners to independently read the first section, Paragraphs 1 through 4, of the article. Tell students to stop when they get to "Deadly Chemicals." When they finish reading, students should discuss how the author introduces the event or topic, and write their response in phrase form. Remind them to refer to the anchor chart's introduction section to guide their discussion. They will have 4 minutes to read, discuss, and write their response.• Circulate to provide encouragement. Applaud students for reading carefully and referring to the anchor chart.• Reconvene the class. Cold call partners to share how the article is introduced. Listen for: "The author gives facts and background information to introduce Rachel Carson. For example, the author said Rachel Carson was a soft-spoken scientist but compared her to a towering <i>Green Giant</i>. The author feels her work was <i>influential</i>, and as a result, it caused change. She also wrote three books."• Use a document camera to model writing the students' responses in the appropriate box. Use bullets to identify points.• Ask students to Think-Pair-Share:• "What claim is the author Robert W. Peterson making when he compares Rachel Carson to a 'towering green giant'?"• Cold call partners to share their ideas. Listen for: "He claims that she was a person who cared about <i>conservation</i>, or protecting our natural world. She was a hero to our environment."	<ul style="list-style-type: none">• Research indicates that cold calling improves student engagement and critical thinking. Prepare students for this strategy ahead of time by discussing the purpose, giving appropriate think time and being intentional by indicating that this strategy will be used before you begin asking questions.• Consider providing select students with a partially completed graphic organizer. This will allow them to focus their time and attention on the most important thinking.• Creating norms for conversation helps to establish a positive group dynamic and make clear the expectations for collaboration.



Work Time (continued)	Meeting Students' Needs
<ul style="list-style-type: none">• Ask partners to independently read the next three sections, Paragraphs 5 through 12 of the article. Tell students to stop when they get to "A Writer at Age 10." Share that when they finish reading they should discuss what types of evidence the author used to inform or persuade the reader. Ask them to write their responses in phrase form. Remind them to refer to the types of evidence section of the anchor chart to guide their discussion. Tell students they will have 8 minutes to read, discuss, and write their response.• Circulate to support students. Encourage reluctant readers to read aloud one paragraph and share the main idea. Then, invite them to read the next paragraph.• After about 8 minutes, reconvene the class. Cold call partners to share the types of evidence the author used to support his claim. Listen for: "The author presented <i>data or statistics</i> on harmful consequences and amount of chemical spread; the author also presented <i>information from experts</i> claiming some scientists say pesticides caused harm to people and shared a <i>quote</i>; the author used <i>facts</i> from businesses, government agencies, and manufacturers claiming the book was unsound; and the author used a <i>quote</i> from <i>Silent Spring</i> to identify harmful consequences."• Using a document camera, model writing their responses. Use bullets to identify points.• Direct students to the last section on their graphic organizer asking about text features Robert W. Peterson used to support his claim. Tell students they have 2 minutes to discuss and write their responses. Remind them to use the anchor chart as a reference.• Circulate to support students. Notice partners who are collaborating to determine text features.• Cold call partners to share their text features. Listen for: "The author uses section headings or subtitles to highlight main ideas, uses a center bar to point out further articles and quote something from <i>Silent Spring</i> that appeals to the emotion, uses drawings/graphics to call attention to the natural world, and uses different fonts to make an idea/quote stand out."• Using a document camera, model writing their responses. Use bullets to identify points.• Give students specific positive feedback of things you saw or heard related to the focus of analyzing the authors' presentation of ideas and/or their collaboration skills with their peers.	



Work Time (continued)	Meeting Students' Needs
<p>B. Comparing and Contrasting Authors' Presentations of an Idea: "Banning DDT" (10 minutes)</p> <ul style="list-style-type: none"> • Invite students to look at the middle column of the Comparing and Contrasting Authors' Presentation graphic organizer. Tell students this section is for comparing and contrasting the authors' presentations of an idea in the two Rachel Carson articles. • Ask students to discuss and write their responses to the first section comparing the similarities and differences of the two articles' introductions. Remind them to simply read what was written in the Text 1 and Text 2 introduction section of their graphic organizer. Ask them to notice what was similar and what was different. Tell students they will have 2 minutes to discuss and write their response. Tell students to write their response in bullets or short notes, as their space is limited. • Circulate to support students. Check to see that students are writing complete sentences. • Cold call partners to share their thoughts. Model writing their responses. Encourage sentence writing. • Listen for: "Both articles were similar because they introduced Rachel Carson to the reader by giving facts and background information, and they were different because in 'Rachel Carson: Environmentalist and Writer,' the author used a questioning technique and in 'Rachel Carson: Sounding the Alarm on Pollution,' the author used statements." • Invite students to discuss the middle section of the middle column. Ask them to compare and contrast by looking at the types of evidence the authors used to support their claim in Text 1 and Text 2 columns. Ask them to notice what was similar and what was different. Tell students they will have 4 minutes to discuss and write their response in complete sentences. Pause to give students time. • Circulate and support students. Check their understanding of responding to both similarities and differences. • Check students are writing their response in complete sentences. • Cold call partners to share their thinking. Model writing their responses using the document camera. • In comparing and contrasting types of evidence, listen for: "Both articles were similar and had data on harmful consequences, such as they mentioned pesticides had caused the death of mammals and birds and hurt people. Both articles were similar and gave facts from businesses, government agencies, and manufacturers. Both articles were similar and gave quotes on harmful consequences. There were also differences. In 'Rachel Carson: Environmentalist and Writer,' the article concludes with asking the reader questions and using quotes from <i>The New York Times</i> and Rachel Carson. In 'Rachel Carson: Sounding the Alarm on Pollution,' the author concludes the article with background information on the early years of Rachel Carson. 	<ul style="list-style-type: none"> • When reviewing the graphic organizers or recording forms, consider using a document camera to display documents for students who struggle with auditory processing. • Providing models of expected work supports all students, especially challenged learners.



Work Time (continued)	Meeting Students' Needs
<ul style="list-style-type: none">• Ask students to compare and contrast the text features of both articles. Tell them they will have 2 minutes to discuss and write their response in complete sentence form.• Circulate and support select partners. Again, remind students to read the text feature section of Text 1 and Text 2 to provide information to use to fill out this section. Remind students to write their responses in complete sentences.• Reconvene the class. Cold call partners to share their thinking and responses. Model writing their answers using a document camera.• In comparing and contrasting the text features, listen for: "Both were similar because each article divided the text into sections with subtitles, both used quotes from her book, <i>Silent Spring</i>, and both used fonts to make titles stand out. There were also differences. In 'Rachel Carson: Environmentalist and Writer,' a photo of Rachel Carson was used. In 'Rachel Carson: Sounding the Alarm on Pollution,' a caricature of her was used as well as other drawings of the natural world, and a center bar was used to call attention to further reading."• Invite students to discuss the final question:<ul style="list-style-type: none">* "Which article is more effective in its argument and why?"• Cold call partners to share their thinking. Remind students there is no right answer to this question. Tell them it's important to support their thinking by citing evidence from the article.• Give students specific positive feedback on comparing and contrasting the two articles. Share that the authors, Robert W. Peterson and Kathy Wilmore, had similarities and differences in their presentations of the idea.• Ask students to hand in their graphic organizers. Tell them you would like to read their responses to check for their understanding. Reviewing their responses will help guide future lessons.	



Closing and Assessment	Meeting Students' Needs
<p>A. Reflecting on Learning: Group Discussion (5 minutes)</p> <ul style="list-style-type: none">Partners join another partner group to make a group of four. Ask groups:<ul style="list-style-type: none">"Which article was more effective in its argument and why?" Tell students their answers may vary depending on their research question."What have you learned about how authors introduce a claim, the types of evidence they use to inform or persuade the reader, and how authors use text features to inform or persuade the reader?""Is there one standout feature you feel engages the reader the most?"Circulate to listen to students' responses. Compliment groups that discuss effectively and reflect on their learning.Cold call a few pairs of students to share their thoughts with the class.Remind students that when they are introduced to a new skill, the work can be challenging and require a lot of focus. Let them know they will have another opportunity to practice this important skill in Lesson 6.	
Homework	Meeting Students' Needs
<ul style="list-style-type: none">Read Chapter 15, "A Pal Finds a Pal" and complete Learning from Frightful's Perspective: Chapter 15.	



EXPEDITIONARY
LEARNING

Grade 6: Module 4: Unit 2: Lesson 3

Supporting Materials



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Authors' Presentation of Ideas Anchor Chart
For Teacher Reference

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

.....
Date:
.....

How do authors introduce (or begin) their presentation of ideas?

- With a story
- With facts or statistics
- With questions that get the reader thinking
- With some background information on the topic or idea

What types of evidence do authors use to inform or persuade the reader about a claim they are making?

- Facts about a particular topic
- Statistics to support an idea or claim
- Statistics to inform
- Quotes from experts
- Stories to give meaning or examples

How do authors use text features to inform or persuade the reader about a claim they are making?

- Photographs to make the reader see
- Photographs to make the reader feel
- Sidebars to explain some important concept
- Large fonts to make an idea or quote stand out

Learning from Frightful's Perspective: Chapter 15

Name: _____

Date: _____

<p>Focus Question: Several characters in this chapter face challenges, including Frightful, Sam, and Mole. What challenges do characters in this chapter encounter, and how do they overcome them?</p>	<p>Evidence from the Text:</p>	
	<p>My thoughts about challenges faced in Chapter 15:</p>	
<p>Chapter 15: “A Pal Finds a Pal”</p> <p>Words I Found Difficult:</p> <p>Glossary: falconer—<i>n.</i> a person who hunts with falcons or hawks and trains them for hunting incognito—<i>adv.</i> keeping one’s true identity secret (as by using a different name or a disguise) thicket—<i>n.</i> a group of bushes or small trees that grow close together pellet—<i>n.</i> a wad of indigestible material (as of bones and fur) regurgitated by a bird of prey</p>		



EXPEDITIONARY
LEARNING

Grade 6: Module 4: Unit 2: Lesson 4

Research Tasks: New Words, Relevant Information, Revision



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

I can use common Greek and Latin affixes (prefixes and suffixes) and roots as clues to help me determine the meaning of a word (e.g., audience, auditory, audible). (L.6.4b)

I can conduct short research projects to answer a question. (W.6.7)

I can use several sources in my research. (W.6.7)

I can refocus or refine my question when appropriate. (W.6.7)

I can gather relevant information from a variety of sources. (W.6.8)

I can assess the credibility of each source I use. (W.6.8)

I can quote or paraphrase what others say about my topic while avoiding plagiarism. (W.6.8)

I can provide a list of sources I used to gather information in a bibliography. (W.6.8)

Supporting Learning Targets

- I can use affixes to help me determine the meaning of unfamiliar words.
- I can gather relevant information from my research materials.
- I can revise my research question if necessary.

Ongoing Assessment

- Learning from Frightful's Perspective: Chapter 15 (from homework)
- Research vocabulary
- Researcher's notebook, Source 2



Agenda	Teaching Notes
<ol style="list-style-type: none"> 1. Opening <ol style="list-style-type: none"> A. Engaging the Reader: Learning from Frightful’s Perspective (8 minutes) B. Unpacking Learning Targets (2 minutes) 2. Work Time <ol style="list-style-type: none"> A. Affixes: Using Prefixes and Suffixes to Determine Word Meaning (10 minutes) B. Reading Second Research Text (20 minutes) Closing and Assessment 3. Closing and Assessment <ol style="list-style-type: none"> A. Refocusing Our Research Question: How Might a Text Change the Direction of Our Research? (5 minutes) 4. Homework <ol style="list-style-type: none"> A. Read Chapter 16, “Frightful and Oksi Run the Show” and complete Learning From Frightful’s Perspective: Chapter 16. 	<ul style="list-style-type: none"> • Students’ ability to successfully read source text is affected by how well students understand the text and whether they are interested in the text. In this lesson, time is dedicated to be sure students understand the terminology, with a particular focus on using Greek and Latin affixes, or prefixes and suffixes. Identifying and using prefixes and suffixes to determine word meaning offers students a guide for understanding text (in the Paul Müller article, students focus particularly on words with common affixes). • In previous lessons, students used the researcher’s notebook to gather notes while thinking about the research question: “Do the benefits of DDT outweigh its harmful consequences?” They read “Rachel Carson: Environmentalist and Writer” and recorded source information, claims, or central ideas and details or evidence. After recording information from the articles, the credibility of the source was evaluated. Students weighed whether the article helped them consider the research question and think of new questions relevant to their claim about DDT. In this lesson, students apply those skills as they read a new article, “Malaria Carrying Mosquito Crash Lands Due to His Insecticide,” about Paul Müller. • Students also have had practice completing the researcher’s notebook; in Lesson 2, they filled in Source 1 for the “Rachel Carson: Environmentalist and Writer” article, with you modeling for them. Now they must apply those sourcing skills with increased independence: they work in triads to identify source information, claims or ideas, and details or evidence from the article about Paul Müller. • In this lesson, challenge students to read closely for information on both sides of the argument about the use of DDT. Continue to emphasize that different perspectives or ideas help develop thinking. • In advance: Review the Affixes Resource. Read “Malaria Carrying Mosquito Crash Lands Due to His Insecticide” for the gist, source information, claims or ideas, and evidence. • Post: Learning targets.



Lesson Vocabulary	Materials
affixes, relevant, revise; prefixes, suffixes; ecology, environmentalist, chemist, pesticide, typhus, plague, disinfectant	<ul style="list-style-type: none">• <i>Frightful's Mountain</i> (book; one per student)• Document camera• Affixes Resource (one per student)• Research Vocabulary graphic organizer (one per student)• Research folder (from Lesson 1)• "Malaria Carrying Mosquito Crash Lands Due to His Insecticide" (from Lesson 1; in research folder)• Researcher's notebook, Source 2 (from Lesson 1; one per student; in research folder)• Learning from Frightful's Perspective: Chapter 16 (one per student)



Opening	Meeting Students' Needs
<p>C. A. Engaging the Reader: Learning from Frightful's Perspective (8 minutes)</p> <ul style="list-style-type: none">• Be sure students have their text, <i>Frightful's Mountain</i>.• Compliment students for joining their triads to share their responses to the Learning from Frightful's Perspective focus question for Chapter 15, "A Pal Finds a Pal." Encourage students to use evidence that explains what challenges characters in this chapter faced, and how they faced those challenges.• Ask students to share with their triad a word they added to their "Words I Found Difficult" list. Remind students to include the page number it was found on and a brief definition of the word on the list. As usual, encourage group members to collaborate and use context clues to determine the words' meanings.• Circulate to observe students' shared and written responses. Make note of students who begin work easily and collaborate with triad members and those who may need support.• Refocus students whole group. Cold call them to share their evidence-based responses to the focus question. Listen for responses that include evidence such as: Sam was not a licensed falconer; the two little eyases were registered in Albany and under protection of the U.S. government; they will be raised by a registered falconer.• Emphasize that using evidence to answer questions and share information can be an important part of raising new thoughts.	<ul style="list-style-type: none">• Direct students to the last five pages of Chapter 15 to help find evidence for the focus question response.
<p>D. B. Unpacking Learning Targets (2 minutes)</p> <ul style="list-style-type: none">• Read aloud, or invite a student to read aloud, today's learning targets.<ul style="list-style-type: none">* "I can use affixes to help me determine the meaning of unfamiliar words."* "I can gather relevant information from my research materials."* "I can revise my research question if necessary."• Ask students to identify what words in the learning targets they think are most important. Listen for "affixes," "relevant," and "revise." Circle or highlight those words.• Ask:<ul style="list-style-type: none">* "Looking at words that might be unfamiliar or not known—how do you think you find the meaning of new words?"• Listen for responses that include using context clues, dictionaries, or parts of words like prefixes. Tell students that part of the work time involves using parts of words to help figure out what they mean.	



Work Time	Meeting Students' Needs
<p>A. Affixes: Using Prefixes and Suffixes to Determine Word Meaning (10 minutes)</p> <ul style="list-style-type: none">• Display (using a document camera) and distribute the Affixes Resource.• Invite students to look at the title of the chart. Point out that “Prefixes and Suffixes” is a subtitle below the title. Explain that affixes are letters or syllables attached to a word. They are added to change the word’s function or meaning.• Call on students to identify each of the column titles and what they notice in each column.• Tell students they will use the Affixes Resource to help them determine the meaning of new words. Explain that the chart has many commonly used affixes but not all. The meaning of other affixes can also be found in dictionaries. Encourage students to add new prefixes and suffixes when they notice them in their reading.• Explain that reading articles for research often includes new words. Learning how to pronounce new words and learning the meanings helps understand text. Many new words have been introduced in the articles they have read as they continue with research about the benefits and harmful consequences of DDT.• Distribute the Research Vocabulary graphic organizers to each student.• Use the document camera to display the words <i>ecology</i>, <i>environmentalist</i>, <i>chemist</i>, and <i>pesticide</i>. Tell students that these are words they have read in the Rachel Carson articles or may read today in a new article. Tell them that each of these words has important root words, prefixes, and/or suffixes.• Model writing the word <i>ecology</i> on the Research Vocabulary graphic organizer. Ask students to add the word to their graphic organizer and circle what part of the word they think is a prefix or suffix. Ask students to look at the Affixes Resource to find what they circled.• Ask students to think about what the word means and then share their meaning with their partner. Tell students to write what they think the word means on their graphic organizer. Call on students to share their definition with the class. Listen for responses like: “a study of the environment” or “a science that studies living things and the environment.”• Use the document camera to write the words <i>environmentalist</i>, <i>chemist</i>, and <i>pesticide</i> on the Research Vocabulary graphic organizer. Ask partners to identify prefixes and/or suffixes and root words. Use the Affixes Resource to find the affixes and their meanings to help them determine the word’s meaning.• Students should then record meanings on the graphic organizer as well as which strategy helped them determine the meaning.	<ul style="list-style-type: none">• This lesson builds familiarity with the structure of words or parts of words. Learning prefixes and suffixes helps students determine what a word means or how the function of a word changes.• Consider partnering ELL students who speak the same language. This can allow them to have more meaningful discussion as they work to determine meaning.• For some students, consider providing words that are frequently used in the research articles and/or share the same affix. For example, words like “pesticide,” “insecticide,” and “herbicide” have the same suffix and a root word. This may contribute to identifying meaning and practicing the skill of using affixes to determine meaning.



Work Time	Meeting Students' Needs
<ul style="list-style-type: none"> • Call on students or partners to share their meanings they thought of. Listen for responses like: <ul style="list-style-type: none"> – Ecologist: “a person who studies the environment” – Chemist: “someone who studies or works with chemicals” – Pesticide: “something that kills pests” • Encourage students to use that strategy to help them understand new words more easily; other strategies will be used in the next lesson. Tell students that having multiple strategies for understanding new words allows them to understand complex texts, which leads to a deeper understanding of important topics. • Ask students to put their Research Vocabulary graphic organizers in the research folder. Encourage them to keep their Affixes Resource to use for Work Time B. 	
<p>B. Reading Second Research Text (20 minutes)</p> <ul style="list-style-type: none"> • Distribute or ask students to take the article “Malaria Carrying Mosquito Crash Lands Due to His Insecticide” and their researcher’s notebook from their research folder. • Ask students to turn and talk: <ul style="list-style-type: none"> * “How did we use this research notebook when we read about Rachel Carson?” Listen for students to make connections to the research question: “Do the benefits of DDT outweigh the consequence?” and to point out that they read articles about Rachel Carson and recorded source information, claims or central ideas, and details or evidence. After recording information from the articles, the credibility of the source was evaluated. Students considered if the article was helpful for considering the research question and thinking of new questions as they considered their claim about DDT. • Tell students they will read a new article that offers more information about DDT. Invite students to look carefully at the article to locate and record source information on the Source 2 page. Ask students to discuss and compare what each of them recorded. Encourage students to edit and change as they learn from each other. • Before reading, introduce students to new scientific words: <i>typhus</i>, <i>plague</i>, and <i>disinfectant</i>. Do not define the words yet. Simply ask students to listen for context clues and consider affixes to determine meaning. • Ask students to read along as you read aloud. 	<ul style="list-style-type: none"> • When reviewing the Research Vocabulary graphic organizer, consider using a document camera for display and to model how to record source information. • Providing models of expected work supports all students, especially challenged learners. • During Work Time B, you may want to support a small group of students in finding claims and evidence in the article. Some students will need more guided practice before they are ready for independent work.



Work Time (continued)	Meeting Students' Needs
<ul style="list-style-type: none">At the end of the first paragraph, call on students:<ul style="list-style-type: none">* “What does <i>typhus</i> mean? How did you figure it out?”* “What does <i>plague</i> mean? How did you figure it out?”Note that students likely are relying on the familiar strategy of using context clues, which is fine: not every vocabulary word has a clear prefix or suffix. Ask which category the words should be added to on the Scientific Word Wall. Post those words on the Word Wall in the disease/health category.Tell students now they have considered some of the key vocabulary in this article, it is time to go deeper with understanding the article as a whole. Invite students to get into triads. Tell students to reread the article. Remind them that a close read helps them identify claims or central ideas and find evidence that supports those claims.Tell students to identify at least three claims. Each claim should be supported by at least one detail or piece of evidence. Challenge students to read closely for information on both sides of the argument about the use of DDT. Explain that different perspectives or ideas are helpful in developing their own thinking.Encourage students to pause at the end of each paragraph to consider what claims or ideas and supporting evidence were in that passage. Remind them to paraphrase the claims or ideas and to quote evidence for support.Circulate to listen and ensure that all students participate in the reading. Support triads in their discussions. Guide students as they identify and record claims by paraphrasing and evidence by writing quotes. Ask probing questions such as:<ul style="list-style-type: none">* “What claim or central idea is presented in the first paragraph?”* “What evidence can you quote to support the claim?”Refocus students as a whole group. Call on triads to share a claim or idea that they paraphrased and quote a detail or evidence that offers support.Use a document camera to visually share responses with the whole class. Model ways to improve responses.Probe students’ thinking about any new ideas or questions this article stimulated. Invite them to share.Give specific positive praise for behaviors you saw students using that promote effective close reading (if appropriate, connect this back to the Things Close Readers Do anchor chart from Module 1). Continue to emphasize that rereading closely can help generate new thinking about a topic. This is essential when conducting research.	



Closing and Assessment	Meeting Students' Needs
<p>A. Refocusing Our Research Question: How Might a Text Change the Direction of Our Research? (5 minutes)</p> <ul style="list-style-type: none">• Focus students on their researcher's notebook. Ask students to write responses to the two questions at the end of Source 2:<ul style="list-style-type: none">* "Does this source help you to refocus or refine your research question?"* "What are new questions you would like answered before you make your own claim about DDT?"• As time permits, invite students to share out.	
Homework	Meeting Students' Needs
<ul style="list-style-type: none">• Read Chapter 16, "Frightful and Oksi Run the Show" and complete Learning From Frightful's Perspective: Chapter 16.	



EXPEDITIONARY
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Grade 6: Module 4: Unit 2: Lesson 4

Supporting Materials



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Affixes Resource

Name: _____

Date: _____

Prefixes	Meaning	Example	New Word
anti-	against	antifrost	
bio, bi	life	biology	
de-	opposite	defrost	
dis-	not, opposite of	disagree	
eco-	environment		
en-, em-	cause of	encode, embrace	
fore-	before	forecast	
in-, im-	in	infield, inside	
in-, im-, il-, ir	not	incorrect, impossible	
inter	between	interact	
intro	into, with, inward	introduce	
man, manu	hand, make, do	manicure, manual	
mid	middle	midway	
mis	wrongly	misfire	
non-	not	nonsense	
over-	beyond	overlook	
pre-	before	prefix	



Affixes Resource

Name: _____

Date: _____

Prefixes, cont.	Meaning	Example	New Word
pro-	for, forward	propel	
pre-	before	prefix	
pro-	for, forward	propel	
re-	again	return	
sem-, semi	half	semicircle	
sub-	under	submarine	
super	over or above	superstar	
trans-	across	transport	
un-	not	unfriendly	
under-	below	undersea	



Affixes Resource

Name: _____

Date: _____

Suffixes	Meaning	Example	New Word
-able, -ible	can be done	comfortable	
-al, -ial	having characteristics of	personal	
-cide, -cides	to kill	pesticide	
-ed	past-tense verbs	hopped	
-en	made of	wooden	
-er	comparative	higher	
-er, -or	one who	worker, actor	
-est	comparative	biggest	
-ful	full of	careful	
-ic	having characteristics of	electronic	
-ing	action or process	running	
-ion, -tion	act, process	promotion	
-ist	one that performs an action	cyclist	
-ity, -ty	state of	beauty	
-ive, -ative,	performs an action	active	



Affixes Resource

Name: _____

Date: _____

Suffixes, cont.	Meaning	Example	New Word
-less	without	fearless	
-ly	in a certain manner	quickly	
-ment	action or process	enjoyment	
-ness	state of, condition of	kindness	
-ology	study	zoology	
-ory	relating to, characterized by	memory	
-ous, -eous, -ious	possessing the qualities of	joyous	
-s, -es	more than one	books, boxes	



Research Vocabulary Graphic Organizer

Name: _____

Date: _____

Word from the text	What do you think it means?	What strategy helped you determine the meaning? <small>(CC = Context Clues, A+R = Affixes + Root Words, RM = Resource Material)</small>	What is the dictionary's definition of this word?
1.			
2.			
3.			
4.			

Learning from Frightful's Perspective: Chapter 16

Name: _____

Date: _____

<p>Focus Question: We see several moments in this chapter that show the strong relationships between the characters. What relationships are written about? How do we know they are strong relationships?</p>	<p>Evidence from the Text:</p>	
	<p>My thoughts about the relationships between characters in Chapter 16:</p>	
<p>Chapter 16: “Frightful and Oksi Run the Show”</p> <p>Words I Found Difficult:</p> <p>Glossary:</p> <p>thermal—n. a rising body of warm air</p> <p>hacking porch—n. a board on which a hawk is fed</p>		



EXPEDITIONARY
LEARNING

Grade 6: Module 4: Unit 2: Lesson 5

Resource Materials and Gathering Information: Reading Another “Choice” Text from the Research Folder



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

I can use resource material (glossaries, dictionaries, thesauruses) to help me determine or clarify the pronunciation, meaning of key words and phrases, and parts of speech. (L.6.4c)
I can conduct short research projects to answer a question. (W.6.7)
I can use several sources in my research. (W.6.7)
I can refocus or refine my question when appropriate. (W.6.7)
I can gather relevant information from a variety of sources. (W.6.8)
I can assess the credibility of each source I use. (W.6.8)
I can quote or paraphrase what others say about my topic while avoiding plagiarism. (W.6.8)
I can provide a list of sources I used to gather information in a bibliography. (W.6.8)

Supporting Learning Targets

- I can use resource materials to determine the meaning of unfamiliar words.
- I can gather relevant information from my research materials.
- I can revise my research question if necessary.

Ongoing Assessment

- Learning from Frightful’s Perspective: Chapter 16 (from homework)
- Researcher’s notebook



Agenda	Teaching Notes
<ol style="list-style-type: none">Opening<ol style="list-style-type: none">Engaging the Reader: Learning from Frightful’s Perspective (8 minutes)Unpacking Learning Targets (2 minutes)Work Time<ol style="list-style-type: none">Resources: Using Dictionaries and Thesauruses to Determine Word Meaning (10 minutes)Reading Third Research Text (20 minutes)Closing and Assessment<ol style="list-style-type: none">Debrief: Revising the Big Idea (5 minutes)Homework<ol style="list-style-type: none">Read Chapter 17: “Frightful Feels the Call of the Sky” and complete Learning from Frightful’s Perspective: Chapter 17.	<ul style="list-style-type: none">In this lesson, students continue to build ways to determine word meaning. They use resource materials such as dictionaries and thesauruses to determine meaning of unfamiliar words. Based on your students’ background knowledge with these reference materials, consider modifying Work Time A.At this point, students have completed two sources in their researcher’s notebook, Source 1 and Source 2. Students have paraphrased claims or the central idea of articles, and they have cited evidence using direct quotations from authors. In this lesson, students choose another article from their research folder and continue to develop paraphrasing skills and identify the author’s claim or central idea. They also determine supporting evidence for each claim or central idea and use quotation marks to quote the author’s exact words. Students also identify and record source information to give credit to the author of the article.In Lessons 7 and 8, students will have an opportunity to use Web sites to gather more information on their research question. They will complete Source 4 and 5 in their researcher’s notebook using internet articles.In Lesson 9, students will complete the Mid-Unit 2 Assessment, on which they will apply these same skills: read an article and identify source information, paraphrase claims, and cite supporting evidence. Preview this assessment in advance to have a sense of how these lessons scaffold students toward success.Post: Learning targets.



Lesson Vocabulary	Materials
relevant, revise, guide words, entry words, synonyms, antonyms; environment, chemist	<ul style="list-style-type: none">• <i>Frightful’s Mountain</i> (book; one per student)• Peregrine Falcon Facts anchor chart (from Unit 1)• Dictionary (one per partner group)• Thesaurus (one per partner group)• Research Vocabulary graphic organizer (one per student; from Lesson 4; in research folder)• Research folder (from Lesson 1)• Sticky note (one per partner group)• Document camera• Researcher’s notebook (from Lesson 1; in research folder)• Credibility Checklist (from Lesson 1; in research folder)• Assessing Sources (from Lesson 1; in research folder)• Learning from Frightful’s Perspective: Chapter 17 (one per student)



Opening	Meeting Students’ Needs
<p>A. Engaging the Reader: Learning from Frightful’s Perspective (8 minutes)</p> <ul style="list-style-type: none">• As students enter the room, invite them to sit in their triad groups with their book, <i>Frightful’s Mountain</i>. Invite them to discuss the focus question from Learning from Frightful’s Perspective: Chapter 16 about the important relationships highlighted in this chapter. Remind students to cite evidence from the novel to support their thinking.• After students share their responses, they should share their vocabulary from the “Words I Found Difficult” list. Ask each group member to share words and meanings. If a meaning is unclear, remind them to refer to the page number where the word was found and use context clues to try to determine the meaning.• Circulate to listen to how in-depth students’ responses are. Recognize students citing evidence to support their thinking and compliment students for looking in the text to use context clues to determine word meaning.• Provide support to students who may find using context clues challenging when determining word meaning. Give definitions to students if words cannot be defined using context clues.• After students have finished their discussions, invite volunteers to share facts to add to the Peregrine Falcon Facts anchor chart.• Cold call triads to share their definitions. Listen for: to make a new, updated, or amended version of the research question.	
<p>B. Unpacking Learning Targets (2 minutes)</p> <ul style="list-style-type: none">• Invite students to read the learning targets with you:<ul style="list-style-type: none">* “I can use resource materials to determine the meaning of unfamiliar words.”* “I can gather relevant information from my research materials.”* “I can revise my research question if necessary.”• Point out that these learning targets are similar to those in Lesson 4 because this lesson follows a similar structure.• Remind them they did a lot of work gathering relevant information from research materials in previous lessons.• Invite triads to discuss the meaning of the word <i>relevant</i>.• Cold call triads to share their definitions. Listen for: “Information that directly addresses or is important in answering the research question.”• Invite triads to discuss the meaning of the word <i>revise</i>.	



Work Time	Meeting Students’ Needs
<p>A. Resources: Using Dictionaries and Thesauruses to Determine Word Meaning (10 minutes)</p> <ul style="list-style-type: none">• Tell students that successful readers and writers use a variety of resource materials to develop their skills. Share in this lesson they will be introduced to (or review, based on your class’s skills) two resources: a dictionary and a thesaurus. Explain these resources will help build vocabulary, develop reading comprehension, and develop spelling accuracy.• Inform students they will verify the definitions they wrote on the Researcher’s Vocabulary graphic organizer in Lesson 4. Share they will find each word in the dictionary to check for meaning and then find that word’s synonym in the thesaurus.• Form student partnerships. Distribute a dictionary and a thesaurus to each partner group.• Ask students to find their Research Vocabulary graphic organizer in their research folder.• Invite partners to open up to a page in the dictionary. Point out the <i>guide words</i> found on the top of each page. Explain how guide words make the dictionary much easier to use. Tell students the guide word on the left is the first <i>entry word</i> on the page, and the guide word on the right is the last entry word on the page. Remind students how each entry word is in alphabetical order on the page. Choose an entry word to model how it was alphabetized on the page.• Ask students to Think-Pair-Share:<ul style="list-style-type: none">* “What information is included with each entry word?”• Cold call partners to share their thoughts. Listen for: the spelling of the word, its pronunciation, how it is divided into syllables, and its parts of speech.• Ask students to Think-Pair-Share:<ul style="list-style-type: none">* “What is a thesaurus?”• Cold call partners. Listen for: “a book that lists words with their synonyms and related concepts.” Clarify as needed. Point out that antonyms (a word’s “opposite”) also are usually listed.• Next, ask partners to quickly skim and locate the word <i>environment</i>. Reiterate that words are listed alphabetically. Remind them to use the guide words at the top of the page to speed up the search.• After students have located the word <i>environment</i>, invite them to read through the words underneath this word. Ask them to select a word that closely matches the meaning of <i>environment</i> as they have been using it in this module.• Circulate to provide support to select students needing help locating the word “environment” or choosing a synonym. Compliment students who work cooperatively.	<ul style="list-style-type: none">• Using dictionaries provides another way to build vocabulary, reading comprehension, and spelling accuracy.



Work Time	Meeting Students’ Needs
<ul style="list-style-type: none">• Distribute a sticky note to each partner group. Ask partners to write a synonym for “environment” on the sticky note and post it on the board.• After partners have posted their synonyms, collect the sticky notes and read their synonyms to the class. Some examples students could have shared: <i>habitat, nature, setting, surrounding, terrain.</i>• Ask partners to Think-Pair-Share:<ul style="list-style-type: none">* “When and why would you want to use a thesaurus?”• Listen for: “to learn other words that mean sort of the same thing as a word I found in a text I am reading” or “to look up a replacement word that might be more appropriate to use in my writing.” Emphasize that building one’s vocabulary is an incredibly powerful way to become a better reader, and that learning synonyms often helps you clarify a word’s meaning or understand the subtle differences between words.• Focus students on their Researcher’s Vocabulary graphic organizer, specifically the left-hand column. Ask students to do the following with their partner:<ol style="list-style-type: none">1. Look up the definition of each word in the dictionary, and write the definition in the appropriate box on the far right.2. Look up the word in the thesaurus to find its synonym. Write the synonym on the line in the same box.3. Tell students if the word does not have a synonym they should write “none” on the line.• Using a document camera, model with the word <i>chemist</i>. Invite students to read what they wrote in Lesson 4. Explain to students they will use a dictionary to compare the definition they wrote with the definition written in the dictionary. Also, challenge them to find a synonym for <i>chemist</i>.• Next, ask one partner to look up “chemist” in the dictionary. Ask the other partner to look up “chemist” in the thesaurus.• Cold call partners to share the definition and a synonym if chemist has one. Model writing the definition in the box and its synonym on the line. Listen for: “The definition is a person who looks at the structure and transformation of substances, and a synonym could be <i>scientist</i>.”• Give students time to work together to look up the other words. Ask students to exchange resources after each word’s definition and synonym is complete. Students will then get practice using both resources.	



Work Time (continued)	Meeting Students’ Needs
<ul style="list-style-type: none"> • Circulate and provide support to students needing help looking up words. • Continue to give specific positive feedback on students’ developing skills to use these resources to effectively grow their vocabulary. Help link this work to the bigger picture: Building one’s vocabulary is one of the most powerful strategies to become a stronger reader and learn more about the world. These tools will help. 	
<p>B. Reading Third Research Text (20 minutes)</p> <ul style="list-style-type: none"> • Invite students to open their research folder and find their researcher’s notebook. Ask them to turn to page 4, Source 3. • Direct students’ attention to the first box on the top of the page. Tell them their research question should be written in this box. Remind students that a researcher continually revisits the research question to determine if revisions on the question are needed. • Ask students to read through the questions and ideas they wrote in response to the two questions at the bottom of pages 2 and 3. Pause to give students time. • After reading through their information, invite students to either copy the original research question or revise their question based on their thinking from Source 1 and Source 2. Allow students time to write their research question. Circulate to support students questioning and revising their research question. • Invite students who changed their research question to share it with the class. • Ask students to open their research folder and choose an article they haven’t read. Tell them to take 3 minutes to skim the articles they haven’t read to find the one that best provides answers to their research question. • Circulate to provide support to students needing help making their choice selection. • Next, direct students’ attention to the Source Information section of the graphic organizer. Remind students this information is critical for giving authors credit and to avoid plagiarism. Invite students to fill out this section of the graphic organizer. Tell students to set a goal of 2 minutes. • Remind them to use the Credibility Checklist in their research folder and to use Assessing Sources to determine credibility. • After students have completed the Source Information section, ask them to independently skim their article for the gist. Tell them they will have 3 minutes to read their article. • Circulate to support students with vocabulary words. 	<ul style="list-style-type: none"> • During Work Time B, you may want to pull a small group of students to support in finding evidence from the novel. Some students will need more guided practice before they are ready for independent work.



Work Time (continued)	Meeting Students’ Needs
<ul style="list-style-type: none">• After 3 to 4 minutes, reconvene the class. Direct students’ attention to the section titled Claims/Central Ideas. Tell students in this area, they should paraphrase the author’s claim/s or central idea. Remind students a claim should be written in their own words or paraphrased, and quotation marks are not needed.• Next, direct students’ attention to the section titled Details/Evidence. Tell students in this area they should cite supporting evidence. Remind them to copy the author’s words exactly and to use quotation marks where the quote begins and ends. Tell students they will have 10 minutes to complete their claims and supporting evidence. Remind students each claim may have more than one piece of supporting evidence.• Pause to give work time. Circulate to support students as needed. Notice students writing claims in their own words and quoting evidence. Notice students writing in complete sentences.• After 10 minutes, reconvene the class. Ask students to find a partner that read the same article. Explain they should compare source information and also compare claims and supporting evidence.• After 2 minutes, invite the class to take their seats. Congratulate students on their independent work. Share that you would like to collect Source 3 to read and check for understanding. Tell them in Lessons 7 and 8 they will be using this same graphic organizer with an article from the internet. Explain the information collected today will help guide future lessons.	



Closing and Assessment	Meeting Students’ Needs
<p>A. Debrief: Revising the Big Idea (5 minutes)</p> <ul style="list-style-type: none">• Remind students in Lesson 2 they participated in a Four Corners activity. Ask them to remember which corner they went to and reflect on their new learning from the articles they read in Lessons 3 and 4.• Tell students that considering the research question “Do the benefits of DDT outweigh its harmful consequences?” can involve more than two positions. Explain that claims and evidence they identified can expand their thinking. Tell students they will have the opportunity to change their thinking about the use of DDT.• Introduce Four Corners again. Post four pieces of chart paper with different DDT choices in different corners or parts of the room. Explain each of the choices.<ul style="list-style-type: none">– DDT is beneficial and can be used for many reasons/purposes.– DDT is beneficial but only for preventing health problems such as malaria and Lyme disease.– DDT is harmful only when used incorrectly.– DDT is harmful and should not be used.• Ask students to consider each of the statements. Tell students to stand near the statement that most reflects their thinking/position on the use of DDT. Invite students who went to a different corner to share why they chose that comment—in other words, how did their new research change their position? Encourage students to cite evidence.• Congratulate students for sharing their different perspectives. Reiterate that it is important to consider different perspectives on their topic and to share that thinking as they learn to develop their own position.	
Homework	Meeting Students’ Needs
<ul style="list-style-type: none">• Read Chapter 17, “Frightful Feels the Call of the Sky” and complete Learning from Frightful’s Perspective: Chapter 17.	



EXPEDITIONARY
LEARNING

Grade 6: Module 4: Unit 2: Lesson 5

Supporting Materials



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Learning from Frightful's Perspective: Chapter 17

Name: _____

Date: _____

Focus Question: When migration time was getting close, what changes started happening that told the birds it was time to go south or west?	Evidence from the Text:	
	My thoughts about migration time:	
<p>Chapter 17: “Frightful Feels the Call of the Sky”</p> <p>Words I Found Difficult:</p> <p>Glossary:</p> <p>nestling—<i>n.</i> a young bird that has not left the nest</p> <p>ravenously—<i>adv.</i> very eagerly or greedily</p> <p>wanting food, satisfaction, or gratification</p> <p>paternalism—<i>adv.</i> acting like a father</p> <p>cupola—<i>n.</i> a small structure built on top of a roof</p>		



EXPEDITIONARY
LEARNING

Grade 6: Module 4: Unit 2: Lesson 6

Presentation of Events: Comparing Two Authors



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

I can use context (e.g., the overall meaning of a sentence or paragraph; a word's position or function in a sentence) to determine meaning of a word or phrase. (L.6.4a)
I can compare and contrast one author's presentation of events with that of another (e.g., a memoir written by and a biography on the same person). (RI.6.9)

Supporting Learning Targets

- I can use context clues to determine the meaning of unfamiliar words.
- I can compare and contrast two authors' presentation of events.

Ongoing Assessment

- Learning from Frightful's Perspective: Chapter 17 (from homework)
- Research Vocabulary using context clues
- Comparing and Contrasting Authors' Presentation



Agenda	Teaching Notes
<ol style="list-style-type: none">Opening<ol style="list-style-type: none">Engaging the Reader: Learning from Frightful's Perspective (8 minutes)Unpacking Learning Targets (2 minutes)Work Time<ol style="list-style-type: none">Context Clues: Reviewing Using Context Clues to Determine Word Meaning (10 minutes)Comparing Two Authors' Presentation of Events (20 minutes)Closing and Assessment<ol style="list-style-type: none">Last Words: Any New/Interesting Ideas on Benefits and/or Consequences of Using DDT (5 minutes)Homework<ol style="list-style-type: none">Read Chapter 18: "The Earth Calls Frightful" and complete Learning from Frightful's Perspective: Chapter 18.	<ul style="list-style-type: none">In previous lessons, students used affixes, dictionaries, and thesauruses to determine word meaning. In today's lesson, students learn context clue strategies to increase knowledge and skills for expanding vocabulary and improving understanding of texts they read.Using context clues is a great way to figure out the meaning of a word. Learning basic strategies helps to find and use clues.In today's lesson, student read two articles from different authors that provide additional information about DDT. Students look closely at how the authors introduce their positions and use evidence and text features to support ideas. Students must compare and contrast different authors' presentation of information.The article "A New Home for DDT" is at a challenging Lexile measure for sixth graders. If necessary to support your students, consider excerpting this article further, keeping in mind that students are looking for how the author introduces the article, what evidence the author includes, and if there are any text features employed to support the argument.After reading and comparing and contrasting two articles, students must reflect on any new information presented and how that affects their own thoughts about the benefits and consequences of DDT.In advance: Read the articles for comparing and contrasting two different authors' presentation of information about DDT: "Biological Energy—Here, Let Me Fix It!" and "A New Home for DDT."After this lesson, encourage students to add these two texts to their research folders.Post: Learning targets.



Lesson Vocabulary	Materials
context, compare, contrast	<ul style="list-style-type: none">• Research folder (begun in Lesson 1)• Research Vocabulary graphic organizer (from Lesson 4; in research folder)• Context Clues resource (one per student)• Document camera• Using Context Clues practice sheet (one per student)• Comparing and Contrasting Authors' Presentations graphic organizer (one per student)• "Biological Energy—Here, Let Me Fix It!" article (one per student; in research folder)• "A New Home for DDT" article (one per student; in research folder)• Authors' Presentation of Ideas anchor chart (begun in Lesson 3)• Learning from Frightful's Perspective: Chapter 18 (one per student)



Opening	Meeting Students' Needs
<p>A. Engaging the Reader: Learning from Frightful's Perspective (8 minutes)</p> <ul style="list-style-type: none">• Invite students to join their triads and share their responses to the Learning from Frightful's Perspective focus question for Chapter 18: "The Earth Calls Frightful."<ul style="list-style-type: none">* "Who were the people on Hook Mountain? Why did they cheer when Frightful flew over?"• Encourage students to use details or evidence that supports their response.• Tell students to share vocabulary words they added to their "Words I Found Difficult" list with their triad partners. Remind each group member to share words they have selected and the meaning. Add the page number it was found on and a brief definition of the word. Encourage triad members to collaborate to determine the meaning of the words.• Circulate and listen to gauge students' responses to the focus question. Commend students for using details and evidence to support their focus question responses. Recognize students for determining meaning of new words.• Guide students needing support in responding to focus questions and defining words.• Refocus triads whole group. Call on students to share their triad's responses to the focus question. Listen for ideas and details or evidence such as:<ul style="list-style-type: none">– "The people on Hook Mountain were men and women who came in the fall to count birds of prey when they were flying on their migration route. The people came every year to see if the birds were surviving."– "The people on Hook Mountain counted migrating birds of prey each year. This helped them learn if banning pesticides and laws that protected the birds were working."– "The people on Hook Mountain cheered because they saw Frightful fly over. It was a thrill to see a peregrine falcon because they are a rare sight." <p>Recognize students for using details or evidence to express their answers.</p>	<ul style="list-style-type: none">• In advance, consider selecting students who benefit from reading or participation support to circle or highlight the important words on today's learning targets.



Opening	Meeting Students' Needs
<p>B. Unpacking Learning Targets (2 minutes)</p> <ul style="list-style-type: none">• Invite two students to each lead the class as they all read the learning targets aloud:<ul style="list-style-type: none">* “I can use context clues to determine the meaning of unfamiliar words.”* “I can compare and contrast two authors’ presentation of events.”• Ask students to look closely at the posted learning targets to identify three important words. Listen for responses that include: context, compare, and contrast. Invite students to circle those words on the posted learning targets. Share the meaning of each of the words:<ul style="list-style-type: none">* “Context—other words and sentences that are around a new word.”* “Compare—to say that (something) is similar <i>to</i> something else.”* “Contrast—to compare two things to show how they are different.”• Thank students for leading the reading of the targets and identifying the important words.• Explain that using context clues to learn word meanings is an important part of understanding what they read. Tell students today they’ll work with context clues to solve the mystery of unknown words.• Inform students they will also compare and contrast the DDT article they read in the last lesson with a new article.	
Work Time	Meeting Students' Needs
<p>A. Context Clues: Reviewing Using Context Clues to Determine Word Meaning (10 minutes)</p> <ul style="list-style-type: none">• Remind students that in the past few lessons they’ve been learning and using different strategies to determine word meaning. To do this, they have been using affixes, which include both prefixes and suffixes, and resources such as dictionaries and thesauruses.• Today they will add to those strategies by using context clues to figure out the meaning of a word.• Explain that <i>context</i> is other words and sentences that are around or near the new word. These are hints or clues that help you determine the meaning of an unknown word. When you use context clues you are making an informed guess.• Authors provide clues in different ways. Those strategies include definitions, synonyms, and antonyms.• Inform students they will use those strategies to find context clues and determine the meaning of a word.	<ul style="list-style-type: none">• Some students may benefit from using definitions and synonyms to find the meaning of new words.• Students may benefit from rereading to increase understanding and find context clues.



Work Time (continued)	Meeting Students' Needs
<ul style="list-style-type: none"> • Form student partnerships. • Ask students to go into their research folder and bring out their Research Vocabulary graphic organizer. • Ask students to also find their Context Clues Resource in their research folder. Use a document camera to display the Context Clues Resource. • Introduce context clue strategies that help determine the meaning of a word. Distribute the Using Context Clues practice sheet, using the document camera to display the practice sheet and introduce instructions. • Tell students to think-pair-share as they identify a different context clue used in each passage. Ask them to read each passage to themselves. Tell students to look carefully for different types of clues. Ask students to share the clues they identified with their partner and the definitions for the words. Record the clues and meanings of the highlighted words. • Circulate to observe and support students needing help identifying clues and using them to determine word meanings. • Refocus students whole group. Ask them to look at the word <i>environmentalist</i> on their Research Vocabulary graphic organizer. Tell student to compare the meaning of <i>environmentalist</i> they identified using context clues with the definition they found in the dictionary and by using affixes. • Call on students to share the meaning/meanings they found using different strategies. • Ask students to look at the question on third column: “What strategy helped you determine meaning?” Ask students to write which of the strategies were helpful. Suggest they record all of the strategies that were helpful. • Commend students for using different types of context clues to search for word meaning. Explain that all of the strategies are helpful in building their vocabulary skills and strengthening their reading for claims and evidence. Tell students they can practice these vocabulary strategies as they compare and contrast how two different authors present their information. 	
<p>B. Comparing Two Authors' Presentation of Events (20 minutes)</p> <ul style="list-style-type: none"> • Direct students to open the research folders to their Comparing and Contrasting Authors' Presentation graphic organizers. • Ask students to also take two articles from their research folder titled “Biological Energy—Here, Let Me Fix It!” and “A New Home for DDT.” 	<ul style="list-style-type: none"> • Consider supporting a small group of students in reading the articles and identifying how authors presented their information.



Work Time (continued)	Meeting Students' Needs
<ul style="list-style-type: none">• Use a document camera. Focus students' attention on the columns on the Comparing and Contrasting Authors' Presentation graphic organizer called Text 1 and Text 2.• Remind students that they selected one of the articles to read in the last lesson. The title of that article should be written under Text 1. The other title, which they will read today, should be written under Text 2.• Explain that in this lesson, first they will reread the article they have already read to identify how the author presented information.• Use the document camera to point out three different ways authors present information that students will identify as they read. Those include:<ul style="list-style-type: none">* "How does the author <i>introduce</i> the article?"* "What type of <i>evidence</i> does the author include?"* "How does the author use <i>text features</i> (photographs, graphs, diagrams, etc.)?"• Use the document camera to review strategies authors use to introduce and use evidence and text features with the Authors' Presentation of Ideas anchor chart (from Lesson 3).• Tell students they will have about 8 minutes to read and respond to the questions for each article. Suggest that students complete reading in about 3 minutes to allow time to find and record the information that identifies the way the authors present information.• When students have finished reading both articles and documenting how the authors presented information, they should compare how the articles were similar and how they were different. Allow students 4 minutes to compare and contrast the presentation strategies.• Circulate and observe to gauge how well students are doing with reading and identifying the authors' presentation.• Remind students when it is time to begin reading and assessing the other article.• Give students specific positive praise on at least two strengths. Suggest one goal for strengthening.	<ul style="list-style-type: none">• Some students may need more guided practice with comparing and contrasting authors' presentations of ideas and information before they are ready for independent work.• Consider providing alternative articles to some students.• Students may benefit from reviewing the Authors' Presentation of Events anchor chart before reading the articles and completing the Comparing and Contrasting Authors' Presentation graphic organizer.• Some students may benefit from using the using the Authors' Presentation of Events anchor chart as they read the articles and compare and contrast.



Closing and Assessment	Meeting Students' Needs
<p>A. Last Words: Any New/Interesting Ideas on Benefits and/or Consequences of Using DDT (5 minutes)</p> <ul style="list-style-type: none">• Ask students to turn and talk with a partner to share which article they thought was more effective in presenting information and why.• Tell students to identify at least one new or interesting idea they learned on the benefits and/or consequences of using DDT and write that idea at the bottom of the Comparing and Contrasting Authors' Presentation graphic organizer.• Remind students to put their graphic organizer and the two articles in their research folders.	
Homework	Meeting Students' Needs
<ul style="list-style-type: none">• Read Chapter 18: "The Earth Calls Frightful" and complete Learning from Frightful's Perspective: Chapter 18.	



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Grade 6: Module 4: Unit 2: Lesson 6

Supporting Materials



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Context Clues Resource

The first way to figure out the meaning of a new word is from its context. The context is the other words or sentences that are around the new word. Here are some strategies, or clues, for unlocking the meaning of a new word.

Clue 1: Search for a definition, a statement giving the meaning of a word.

Clue 2: Search for a synonym, a word or words that means almost the same thing.

Clue 3: Search for an antonym, a word or words that mean the opposite of a word.

Clue 4: Reread the sentence and substitute a word that seems to make sense in the context.

If the word still does not make sense after using context clues, check a dictionary.



Using Context Clues Practice Sheet

Name: _____

Date: _____

Read the following statements. Use a context clue to find the meaning of the bold word in each statement.

Rachel Carson's work as a writer and scientist advocating for the needs of the environment captured people's attention. Her book, *Silent Spring*, began a new age of awareness about pollution and other threats in the natural world. Because Rachel Carson spoke out about the silence of birds and worked to protect the natural world, she became known as an **environmentalist**.

Search for a definition for **environmentalist** in the sentences around the word. What definition does the text provide?

Rachel Carson wrote about an American town where all life used to live in harmony with its surroundings. She told people that **environment** changed when pesticides were used in that setting.

Search for a synonym for **environment** in the sentences around it. What synonym does the text provide?



Using Context Clues Practice Sheet

Chemical manufacturers were furious with Rachel Carson. They disagreed with her message as an environmentalist and called her a hysterical fanatic. They claimed that pesticides were perfectly **benign**, not harmful as Carson claimed, and there was no need to protect the natural world.

Search for an antonym for **benign**. What antonym does the text provide? What does **benign** mean?



Comparing and Contrasting Authors' Presentations Graphic Organizer

Name: _____

Date: _____

Text 1: Title: "Biology—Here, Let Me Fix It!"	Compare and Contrast the Authors' Presentations	Text 2: Title: "How DDT Harmed Hawks and Eagles"
How does the author introduce the article?	How are they similar? How are they different?	How does the author introduce the article?
What claim does the author make?	How are they similar? How are they different?	What claim does the author make?
What type of evidence does the author include?	How are they similar? How are they different?	What type of evidence does the author include?
How does the author use text features (photographs, graphs, diagrams, etc.)?	How are they similar? How are they different?	How does the author use text features (photographs, graphs, diagrams, etc.)?



Comparing and Contrasting Authors' Presentations Graphic Organizer

Which article is more effective in its argument? Why?



Learning from Frightful's Perspective: Chapter 18

Name: _____

Date: _____

Focus Question: What can you infer (or figure out based on evidence in text) about the people on Hook Mountain? What traits would you use to describe these people?	Evidence from the Text:	
	My thoughts about the people who the people were on Hook Mountain:	
<p>Chapter 18: “The Earth Calls Frightful”</p> <p>Words I Found Difficult:</p> <p>Glossary: Galapagos Islands—n. the volcanic islands off the coast of Ecuador (to which they belong) in the eastern Pacific Ocean winter solstice—n. the time at which the sun appears at noon at its lowest altitude above the horizon; in the Northern Hemisphere it is usually around December 22 magnetic pull—n. the earth has two magnet-like pulls made by swirling motions of molten iron, one at the North Pole and one at the South Pole</p>		



EXPEDITIONARY
LEARNING

Grade 6: Module 4: Unit 2: Lesson 7

Researching Digital Sources, Part 1: Guided WebQuest



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

I can conduct short research projects to answer a question. (W.6.7)
I can use several sources in my research. (W.6.7)
I can refocus or refine my question when appropriate. (W.6.7)
I can gather relevant information from a variety of sources. (W.6.8)
I can quote or paraphrase what others say about my topic while avoiding plagiarism. (W.6.8)
I can provide a list of sources I used to gather information in a bibliography. (W.6.8)

Supporting Learning Targets

- I can choose digital resources that will help me answer my research question.
- I can gather relevant information from digital resources about my research question.

Ongoing Assessment

- Learning from Frightful's Perspective: Chapter 18 (from homework)
- Researcher's notebooks
- Exit Ticket: Using Digital Resources



Agenda	Teaching Notes
<ol style="list-style-type: none">Opening<ol style="list-style-type: none">Engaging the Reader: Learning from Frightful's Perspective (8 minutes)Unpacking Learning Targets (2 minutes)Work Time<ol style="list-style-type: none">Researching Digital Texts: Mini Lesson (10 minutes)Researching Digital Texts: WebQuest (20 minutes)Closing and Assessment<ol style="list-style-type: none">Exit Ticket: Using Digital Resources (5 minutes)Homework<ol style="list-style-type: none">Read Chapter 19, "Destiny is On Wing" and complete Learning From Frightful's Perspective: Chapter 19.	<ul style="list-style-type: none">At this point in the research process, students have gathered information relevant to their central research question using resources provided in their research folders. They have learned to collect basic bibliographic information, paraphrase central claims and ideas from the text, and collect important evidence related to those claims and ideas.Students have been collecting this information about sources in their researcher's notebooks. They have also collected additional questions they have about their topic, and revised their research question when necessary.In this lesson, students research digital resources. This process continues in Lesson 8. This research will take the form of a guided WebQuest. Students receive a list of internet resources on the topic of DDT (see supporting materials). Using a similar process to that of choosing print material (determining which source is most relevant to their questions), students will choose what to read from this menu of resources.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.If you have access to a class web page, consider posting the links provided to that page, making it easier for students to follow the links rather than typing them in themselves.In order to successfully complete the next two lessons, students will each need access to a computer. If technology is limited, consider pairing students at computers.Students collect information in a way identical to the print resources in their researcher's notebooks. What differs in this process, however, is the assessment of credibility. In this lesson, you must demonstrate multiple strategies for assessing the credibility of an internet resource.In advance: Set up technology allowing you to model the internet research process for students. For example, connect a laptop to a projector or use an interactive whiteboard.After students have completed this lesson, collect their exit tickets as a formative assessment. These will help you to form small groups or set individual appointments with students to assist them in this digital research in Lesson 8.



- | | |
|--|---|
| | <ul style="list-style-type: none">• Post: Learning targets. |
|--|---|



Lesson Vocabulary	Materials
digital	<ul style="list-style-type: none">• <i>Frightful's Mountain</i> (book; one per student)• Digital Resources on DDT (one per student; one to display)• Document camera• Researcher's notebook (begun in Lesson 1)• Exit Ticket: Using Digital Resources (one per student)• Learning from Frightful's Perspective: Chapter 19 (one per student)



Opening	Meeting Students' Needs
<p>A. Engaging the Reader: Learning from Frightful's Perspective (8 minutes)</p> <ul style="list-style-type: none">• Be sure students have their text, <i>Frightful's Mountain</i>.• Invite students to sit in triads to discuss Learning from Frightful's Perspective: Chapter 18.• Compliment students for promptly sitting in their triads and discussing the focus question from last night's homework :<ul style="list-style-type: none">* "What can you <i>infer</i> about the people standing on the top of the mountain? What traits would you use to describe these people?• Circulate to listen to responses shared about what character traits they could infer about the people standing on the mountain. Also, provide support to triads trying to define unfamiliar words.• Reconvene the class and ask students to share out.• Listen for, "These must be very dedicated people to the environment. They know about peregrine falcons and the danger they face, and they waited on a mountain top just for the sight of one."• Remind students of Rachel Carson's quote, "Nothing exists in nature alone," discussed in Lesson 1. Invite students to think about the quote again. Ask:<ul style="list-style-type: none">* "How do the events of this chapter relate to the quote 'Nothing exists in nature alone'?"• Ask students to share their thinking with their triads, then cold call a few students to share their group's thinking. Guide students toward the idea that this chapter brings up multiple connections: Sam, as a human, had a positive effect on nature by recognizing Frightful's need to leave and live in nature. But this chapter also brings up how rare the peregrine sighting was as a result of harm to the peregrine falcon population caused by DDT.	



Opening (continued)	Meeting Students' Needs
<p>B. Unpacking Learning Targets (2 minutes)</p> <ul style="list-style-type: none"> • Invite students to read the learning targets with you: <ul style="list-style-type: none"> * “I can choose digital resources that will help me answer my research question.” * “I can gather relevant information from digital resources about my research question.” • Invite students to Think-Pair-Share: <ul style="list-style-type: none"> * “What does <i>digital</i> mean?” * “How is <i>digital</i> different from <i>print</i>?” • Listen for: “<i>Digital</i> means electronic or on the computer. It’s different from the paper resources we have been reading.” Clarify as needed. • Ask: <ul style="list-style-type: none"> * “Now that you have seen the learning targets for this lesson, what do you think you will be doing today? Why?” • Listen for: “Reading resources on the internet instead of reading articles printed on paper in our research folders.” 	
Work Time	Meeting Students' Needs
<p>A. Researching Digital Texts: Mini Lesson (10 minutes)</p> <ul style="list-style-type: none"> • Distribute the Digital Resources on DDT to each student and display using a document camera. Tell students that this is a list of Web sites that represents a variety of opinions and sources of information about DDT. Point out the two columns on this list. Ask students to Think-Pair-Share: <ul style="list-style-type: none"> * “What does the left-hand column of this list represent?” Listen for students to respond with something like: “These are the Web sites that we can visit about DDT” or “These are the actual URLs that we can follow to read about DDT.” • Give students a few seconds to scan the right-hand column. Ask students to Think-Pair-Share: <ul style="list-style-type: none"> * “How do you think this right-hand column will be helpful?” Guide students toward the idea that the Web site descriptions can help if they are looking for answers to specific questions, or if there is one area of DDT they want to read more about. They don’t have to visit every single Web site to find what they’re looking for. 	<ul style="list-style-type: none"> • Post the questions you are asking students to think and talk about. This will help all students, but especially those who struggle with multistep directions.



Work Time (continued)	Meeting Students' Needs
<ul style="list-style-type: none">• Remind students that when deciding which resource to read next, whether it be print or digital, they need to ask themselves a couple of key questions:<ul style="list-style-type: none">– What is the source information for this? (author, Web site, date, etc.)– Is it a credible source? (If not, students should skip it and move on to other sources.)– What information am I missing in my research?– What questions do I need answered before I can take a position on this issue?• Ask students to Think-Pair-Share:<ul style="list-style-type: none">* “If one of my research questions is ‘Are there other solutions to the problem of malaria?’, which Web site might I start with?”• Remind students to look at both columns of the Digital Resources on DDT to help guide their thinking. Cold call a partnership to share their thinking. Listen for: “We would go to the Web site for the Pesticide Action Network because it says the Web site discusses why DDT is not the only solution for malaria.”• Ask students to take out their researcher’s notebook. Remind students that before deciding which Web site to read, they should go back and review the notes they have already taken. They should also be sure to reread the questions they recorded in the bottom portion of each page. And then they should ask themselves the two key questions:<ul style="list-style-type: none">– What information am I missing in my research?– What questions do I need answered before I can take a position on this issue?• Tell students that many online forums have reader responses included. These readers are not necessarily experts in the field, and are not required to use evidence to back up their thinking. Therefore, students should avoid reading reader responses, as it may skew their opinions unnecessarily.• Give students 3 to 4 minutes to review their notes in their researcher’s notebooks. Then, ask students to turn to an elbow partner and share their thinking about which Web site they may begin with and why.	



Work Time (continued)	Meeting Students' Needs
<p>B. Researching Digital Texts: WebQuest (20 minutes)</p> <ul style="list-style-type: none"> Remind students that reading a Web site is like reading any other complex text. They should read through the site first to understand the general structure and to get the gist. Remind students they should be on the lookout for new and difficult vocabulary, using the many strategies they have learned to determine the meaning of new words. On their second reading of the Web site, they should go back and collect and paraphrase the important claims and specific evidence to record in their researcher's notebooks. Remind students that the Web site they choose to explore should be Source 4 in their researcher's notebook. Give students the next 20 minutes to read one of the digital sources available to them and fill in the Source 4 page of their researcher's notebook. Circulate and support students in their work. Specifically, some students may need additional guidance in choosing the Web site that will best serve their individual research. 	<ul style="list-style-type: none"> During Work Time B, you may want to pull a small group of students to support in finding evidence from the Web sites. Some students will need more guided practice before they are ready for independent work. Consider printing Web site materials for those students who need the support of "pencil and paper" work where they can highlight, annotate, or chunk text.
Closing and Assessment	Meeting Students' Needs
<p>A. Exit Ticket: Using Digital Resources (5 minutes)</p> <ul style="list-style-type: none"> Distribute the Exit Ticket: Using Digital Resources to each student. Tell students that its purpose is for you to gauge their comfort level with using digital resources, their need for a greater variety of resources, and any struggles they may have had in using the internet as a research tool. Tell students you will read these exit tickets to help prepare for Day 2 of using digital resources. Give students 3 to 4 minutes to complete the exit ticket. Circulate and support students as they work. Collect exit tickets and use them to make any accommodations or create small group instruction that may help in Lesson 8. 	
Homework	Meeting Students' Needs
<ul style="list-style-type: none"> Read Chapter 19 of Frightful's Mountain, "Destiny is On Wing" and complete Learning From Frightful's Perspective: Chapter 19. 	



EXPEDITIONARY
LEARNING

Grade 6: Module 4: Unit 2: Lesson 7

Supporting Materials



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Digital Resources on DDT

Name: _____

Date: _____

Web Site URL:	Description of Web Site:
http://www.discoveriesinmedicine.com/Com-En/DDT.html#bDDT	This Web site is a general information Web site. It defines what DDT is, how it is used, its benefits, and its dangers.
http://www.panna.org/issues/persistent-poisons/the-ddt-story	This is the Web site for the Pesticide Action Network. It gives breakdowns on what foods and where in our bodies DDT can still be found. It also discusses why DDT is not the only solution for malaria.
http://www.nothingbutnets.net	This is the Web site of a nonprofit organization, Nothing But Nets, committed to helping end the malaria epidemic. This Web site informs about malaria, preventative measures against malaria, and the treatment of malaria in developing countries.
http://animals.nationalgeographic.com/animals/birds/peregrine-falcon/	This is a <i>National Geographic's</i> Web site with general information about the peregrine falcon.
http://news.nationalgeographic.com/news/2006/08/060801-ddt-malaria.html	This is a <i>National Geographic</i> article about the use of DDT in the fight against malaria.



Exit Ticket: Using Digital Resources

Name:

Date:

On a scale from 1 to 5, how comfortable were you finding information from digital resources?

1	2	3	4	5
I feel lost		OK, but need some help		Totally confident

Were you able to find the information you need with the digital resources given, or do you need more sources?

☐ I'm OK with what we have

☐ I need more sources

What, if anything, was difficult about researching with digital resources?

Learning from Frightful's Perspective: Chapter 19

Name: _____

Date: _____

<p>Focus Question: Where did Frightful decide to nest? Who was the tiercel that would be her mate?.</p>	<p>Evidence from the Text:</p>	
<p>My thoughts about Frightful's nesting:</p>		
<p>Chapter 19: "Destiny Is on Wing"</p> <p>Words I Found Difficult:</p> <p>Glossary: contentment—<i>n.</i> the state of being happy and satisfied accumulated—<i>v.</i> gathered or acquired (something) gradually as time passes biological clock—<i>n.</i> a system in the body that controls the occurrence of natural processes conservation—<i>n.</i> the protection of animals, plants, and natural resources another</p>		



EXPEDITIONARY
LEARNING

Grade 6: Module 4: Unit 2: Lesson 8

Researching Digital Sources, Part 2: Guided WebQuest



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

I can conduct short research projects to answer a question. (W.6.7)
I can use several sources in my research. (W.6.7)
I can refocus or refine my question when appropriate. (W.6.7)
I can gather relevant information from a variety of sources. (W.6.8)
I can quote or paraphrase what others say about my topic while avoiding plagiarism. (W.6.8)
I can provide a list of sources I used to gather information in a bibliography. (W.6.8)

Supporting Learning Targets

- I can choose digital resources that will help me answer my research question.
- I can gather relevant information from digital resources about my research question.

Ongoing Assessment

- Learning from Frightful's Perspective: Chapter 19 (from homework)
- Researcher's notebook



Agenda	Teaching Notes
<ol style="list-style-type: none">1. Opening<ol style="list-style-type: none">A. Unpacking Learning Targets (2 minutes)2. Work Time<ol style="list-style-type: none">A. Researching Digital Texts: WebQuest (30 minutes)B. Mix and Mingle: Sharing Our Digital Learning (8 minutes)3. Closing and Assessment<ol style="list-style-type: none">A. Preparing for the Mid-Unit 2 Assessment (5 minutes)4. Homework<ol style="list-style-type: none">A. Review your researcher's notebook and the Comparing and Contrasting Authors' Presentation graphic organizer to prepare for the tasks of the Mid-Unit 2 Assessment.	<ul style="list-style-type: none">• This lesson is the second part of a two-part lesson in which students continue to research the question "Do the benefits of DDT outweigh its harmful consequences?"• In Lesson 7, students were introduced to a menu of Web sites from which they could choose. They were guided through the process of choosing which Web site might be best in helping them find information they need, fill gaps in their research, or answer questions before they take a personal position about the use of DDT.• In this lesson, students continue researching digital sources. For some students, this may mean returning to the same Web site they visited in Lesson 7 because they did not finish the process of filling in their researcher's notebook. For other students, this means visiting a new Web site to complete the Source 5 section of their researcher's notebook.• In advance: In order to successfully complete this lesson, students will each need access to a computer. If technology is limited, consider pairing students at computers.• In advance: Review Mix and Mingle, used in Work Time B. (See Appendix.)• Post: Learning targets.

Lesson Vocabulary	Materials
	<ul style="list-style-type: none">• Researcher's notebook (begun in Lesson 1)• Digital Resources on DDT (from Lesson 7)



Opening	Meeting Students' Needs
<p>A. Unpacking Learning Targets (2 minutes)</p> <ul style="list-style-type: none">• Invite students to read the learning targets with you:<ul style="list-style-type: none">* “I can choose digital resources that will help me answer my research question.”* “I can gather relevant information from digital resources about my research question.”• Because students focused on the first learning target in Lesson 7, tell them that today you would like to concentrate on the second learning target.• Invite students to Think-Pair-Share:<ul style="list-style-type: none">* “What does <i>relevant</i> mean?”* “Why is it important to find relevant information?”• Listen for: “<i>Relevant</i> means that the information is related to my research question, or is helpful in answering questions I still have. It’s important to find relevant information because the purpose of this research is to answer questions that I have.” Clarify as needed.<ul style="list-style-type: none">* “Now that you have seen the learning targets for this lesson, what do you think you will be doing today? Why?”• Listen for: “We are going to continue reading articles on the internet, and searching for answers to our research question.”	<ul style="list-style-type: none">• Learning targets are a research-based strategy that helps all students, but helps challenged learners the most.• Discussing and clarifying the language of learning targets helps build academic vocabulary.• Posting learning targets allows students to reference them throughout the lesson to check their understanding. The learning targets also provide a reminder to students and teachers about the intended learning behind a given lesson or activity.



Work Time	Meeting Students' Needs
<p>A. Researching Digital Texts: WebQuest (30 minutes)</p> <ul style="list-style-type: none">• Congratulate students on the great progress they made yesterday in transitioning from print to digital resources. Tell them that it's sometimes difficult to use the internet as a research tool, given the vast amount of information found there. That's why it's so important to have a targeted and specific question you are trying to answer.• Invite students to take out their researcher's notebook and refer to Source 4, where they collected information from digital sources in Lesson 7. Ask students to Think-Pair-Share:<ul style="list-style-type: none">* "What is something new you learned in your WebQuest yesterday?"• Invite pairs to share a new piece of learning that they recorded in their notebooks. Ask students to Think-Pair-Share:<ul style="list-style-type: none">* "What is a question you were left with that you would like to pursue today?"• Invite individual students to share a question to which they would like to find an answer. After a student has shared a question, ask the class to take out their Digital Resources on DDT from Lesson 7. Ask students to Think-Pair-Share:<ul style="list-style-type: none">* "Given the question we just heard, which Web site would be best to visit in search of an answer?"• Allow students to talk with a partner about which Web site on the list might have the answer. Invite volunteers to share which Web sites might be a good start, and what evidence from the Digital Resources on DDT page led them to this conclusion.• Tell students they will have the next 25 minutes to continue searching for answers to their questions about DDT. They should be writing in their researcher's notebook for Source 5.• Circulate and assist students with reading and technology, as well as with completing their writing in their researcher's notebook for Source 5.	<ul style="list-style-type: none">• During Work Time A, you may want to pull a small group of students to support in finding evidence from the Web sites. Some students will need more guided practice before they are ready for independent work.• Consider printing Web site materials for those students who need the support of "pencil and paper" work where they can highlight, annotate, or chunk text.



Work Time (continued)	Meeting Students' Needs
<p>B. Mix and Mingle: Sharing Our Digital Learning (8 minutes)</p> <ul style="list-style-type: none">• Tell students they will now do an activity called Mix and Mingle to share their learning and insights from their digital resources.• Remind students that this is especially important because they did not all read the same articles, as they pursued answers to their own individual questions. This means that information they hold in their researcher's notebooks may be helpful to their peers, who chose to read different resources. Similarly, someone may be hanging on to a piece of evidence that will be very helpful to students, so it's important to listen carefully as others share.• Tell students that before they mix and mingle they should place a star next to two or three pieces of information that they found especially interesting and helpful in answering their questions. They will share these pieces of evidence with their peers.• Give students 1 minute to identify the learning they'll share with their peers.• Give students 5 minutes to mix and mingle and share.• Invite students to return to their seats. Cold call a few students, as time permits, to share a new fact they learned by listening.• Give students specific positive feedback on their cooperative learning and active listening.	



Closing and Assessment	Meeting Students' Needs
<p>A. Preparing for the Mid-Unit 2 Assessment (5 minutes)</p> <ul style="list-style-type: none"> Once students are seated, remind them that in the next lesson they will complete their mid-unit assessment. Remind students that they will be reading two new articles about DDT for the mid-unit assessment. They will then complete a research page identical to a page from their researcher's notebook to show they understand how to collect information about sources, paraphrase information in answer to their research question, and collect important facts and details. They will also show how they can compare and contrast two authors' presentations of ideas and information. To do this, they will complete a Comparing and Contrasting Authors' Presentations graphic organizer, identical to the ones they used during previous lessons. Ask students to Think-Pair-Share: <ul style="list-style-type: none"> * "What questions or worries do you still have about our assessment in the next lesson?" Invite students to share, as needed, their questions. Clarify any and all points, ensuring students feel confident about participating in this assessment. 	<ul style="list-style-type: none"> Consider displaying for students the page from the researcher's notebook and the Comparing and Contrasting Authors' Presentation graphic organizer. Seeing this document will allow students to mentally prepare for the task they complete in the mid-unit assessment.
Homework	Meeting Students' Needs
<ul style="list-style-type: none"> Review your researcher's notebook and the Comparing and Contrasting Authors' Presentation graphic organizer to prepare for the tasks of the Mid-Unit 2 Assessment. 	

There are no new supporting materials for this lesson.



EXPEDITIONARY
LEARNING

Grade 6: Module 4: Unit 2: Lesson 9

Mid-Unit Assessment: Comparing and Contrasting Two Texts: Simulated Research



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

- I can compare how different authors present the same idea or event. (RI.6.9)
- I can conduct short research projects to answer a question. (W.6.7)
- I can use several sources in my research. (W.6.7)
- I can refocus or refine my question when appropriate. (W.6.7)
- I can gather relevant information from a variety of sources. (W.6.8)
- I can assess the credibility of each source I use. (W.6.8)
- I can quote or paraphrase what others say about my topic while avoiding plagiarism. (W.6.8)
- I can provide a list of sources I used to gather information in a bibliography. (W.6.8)
- I can use a variety of strategies to determine the meaning of unknown words and phrases. (L.6.4)
 - a. I can use context to determine the meaning of a word or phrase.
 - b. I can use common Greek and Latin affixes (prefixes) and roots as clues to help me determine the meaning of a word.
 - c. I can use resource materials (glossaries, dictionaries, thesauruses) to help me determine or clarify the pronunciation, meaning of key words and phrases, and parts of speech.
 - d. I can check the accuracy of my guess about the meaning of a word or phrase by using resource materials.

Supporting Learning Targets

- I can gather relevant information from research materials.
- I can assess the credibility of the article “DDT Spray Scares Mosquitoes Away, Study Finds.”
- I can compare and contrast the authors’ presentation of ideas for “DDT Spray Scares Mosquitoes Away, Study Finds” and “You Think You Have It Tough?”
- I can use multiple strategies help me determine the meaning of a word.

Ongoing Assessment

- Mid-Unit 2 Assessment: Comparing and Contrasting Two Texts: Simulated Research



Agenda	Teaching Notes
<ol style="list-style-type: none"> 1. Opening <ol style="list-style-type: none"> A. Unpacking Learning Targets and Assessment Prompt (5 minutes) 2. Work Time <ol style="list-style-type: none"> A. Mid-Unit 2 Assessment: Simulated Research Task: “DDT Spray Scares Mosquitoes Away, Study Finds” (15 minutes) B. Mid-Unit 2 Assessment: Comparing and Contrasting Authors’ Presentation (15 minutes) C. Mid-Unit 2 Assessment: Research Vocabulary (5 minutes) 3. Closing and Assessment <ol style="list-style-type: none"> A. Reflecting on Learning Targets (5 minutes) 4. Homework 	<ul style="list-style-type: none"> • At this point, students have completed their research from several sources, both print and digital. They have also been comparing and contrasting authors’ presentations of ideas, specifically how the author introduces the idea, the claim, what type of evidence the author uses, and how the author uses other text features. • Thus, in this mid-unit assessment, students are asked to read two informational articles: “DDT Spray Scares Mosquitoes Away, Study Finds” and “You Think You Have It Tough?” After reading “DDT Spray Scares Mosquitoes Away, Study Finds,” students are asked to complete a “simulated research” page identical to a page in their researcher’s notebooks. • This on-demand assessment is meant to assess students’ ability to do independent research. However, students’ researcher’s notebooks should be referenced when assessing students’ ability to conduct an ongoing research project. • After reading “You Think You Have It Tough?” students are asked to compare and contrast these two authors’ presentations of malaria and the use of DDT. Students will use the Comparing and Contrasting Authors’ Presentation graphic organizer identical to the one they have been using throughout this unit • Finally, students will complete a Research Vocabulary graphic organizer identical to the one they’ve used since the beginning of this unit. Students are invited to complete the process of giving an initial idea for a word’s definition using context clues and/or root words and affixes, then confirming or revising their definition using resource materials such as a dictionary. • Although the author of “You Think You Have It Tough?” does not specifically mention the use of DDT in the article, at this point in the module, students should be able to make the connection between mosquitoes and malaria and the use of DDT. • The article “DDT Spray Scares Mosquitoes Away, Study Finds” is a high Lexile in qualitative measures. However, it is appropriate to this task because by now students should be familiar with much of the vocabulary that makes this a complex text. • Sample student responses are provided in the supporting materials. These responses are just examples; actual student responses will vary.



Agenda	Teaching Notes (continued)
	<ul style="list-style-type: none">• In advance: Read the articles used in this mid-unit assessment (see supporting materials). Also read the sample student response for the simulated research page and comparing authors' presentations to familiarize yourself with the expectations for students.• Be sure students have access to their Credibility Checklist, which they have been using throughout their research. This will be necessary for completing the simulated research page.• Be sure students have access to a resource material, such as a print or online dictionary, to determine word meanings.• Post: Learning targets; Mid-Unit 2 Assessment prompt.

Lesson Vocabulary	Materials
compare, contrast	<ul style="list-style-type: none">• Mid-Unit 2 Assessment: Comparing and Contrasting Two Texts: Simulated Research (one per student and one to display)• “DDT Spray Scares Mosquitoes Away, Study Finds” (assessment text; one per student)• “You Think You Have It Tough?” (assessment text; one per student)• Mid-Unit 2 Assessment: Comparing and Contrasting Two Texts: Simulated Research graphic organizer (one per student)• Mid-Unit 2 Assessment: Comparing and Contrasting Two Texts: Simulated Research graphic organizer, sample student response (for teacher reference)• Mid-Unit 2 Assessment: Comparing and Contrasting Authors' Presentations graphic organizer (one new blank per student)• Mid-Unit 2 Assessment: Comparing and Contrasting Authors' Presentations graphic organizer: sample student response (for teacher reference)• Mid-Unit 2 Assessment: Research Vocabulary: Using Multiple Strategies to Determine the Meaning of Words graphic organizer (one new blank per student)• Dictionaries (one per student)• Credibility Checklist (one new blank per student)



Opening	Meeting Students' Needs
<p>A. Unpacking Learning Targets and Assessment Prompt (5 minutes)</p> <ul style="list-style-type: none">• In advance, display and distribute the Mid-Unit 2 Assessment: Comparing and Contrasting Two Texts: Simulated Research. Tell students:<ul style="list-style-type: none">* “Today you will be reading two articles: ‘DDT Spray Scares Mosquitoes Away, Study Finds’ and ‘You Think You Have It Tough?’ Both of these are informational articles about mosquitoes, malaria, and DDT.* “After reading the first article, ‘DDT Spray Scares Mosquitoes Away, Study Finds,’ complete a Simulated Research graphic organizer identical to the ones you have been completing in your researcher’s notebooks.* “After reading the second article, ‘You Think You Have It Tough?’, complete a Comparing and Contrasting Authors’ Presentations graphic organizer identical to the one you have used in previous lessons.”* “Finally, for each word on the Research Vocabulary: Using Multiple Strategies to Determine the Meaning of Words graphic organizer, use a strategy such as context clues or root words and affixes to make an initial determination for the word’s meaning. Then use a resource material, such as a dictionary, to confirm or revise that meaning.”• Invite students to read along as you read aloud the mid-unit assessment prompt. Ask students to Think-Pair-Share:<ul style="list-style-type: none">* “Based on this prompt, describe to a partner, in your own words, what you think you will be doing in your assessment today.”• Confirm for students that they will be reading two articles today. They will be completing graphic organizers and note-taking tools identical to the ones they have been using throughout their research process.• Ask:<ul style="list-style-type: none">* “Are there any clarifying questions about this prompt?”• Give students the opportunity to ask any questions about the prompt or the assessment.• Tell students the purpose of this assessment is to give them the opportunity to show their mastery of learning targets that they have been working on for the last couple of weeks. Tell students that you would like to review those learning targets now.	



Opening (continued)	Meeting Students' Needs
<ul style="list-style-type: none">• Read aloud, or invite a student to read aloud, today's learning targets:<ul style="list-style-type: none">* "I can gather relevant information from research materials."* "I can assess the credibility of the article 'DDT Spray Scares Mosquitoes Away, Study Finds.'"* "I can compare and contrast the authors' presentation of ideas for 'DDT Spray Scares Mosquitoes Away, Study Finds' and 'You Think You Have It Tough?'"* "I can use multiple strategies help me determine the meaning of a word."• Ask:<ul style="list-style-type: none">* "Looking at these learning targets, and the assessment prompt, how do you think you will be showing your mastery of the learning targets?"* Listen for example such as: "We'll read the article and pretend like we're doing it for research, so we'll fill in our researcher's notebook" and "We'll have to decide if the article we read is credible using our Credibility Checklist" and "We'll have figure out the meaning of new words using the strategies we have learned."	



Work Time	Meeting Students' Needs
<p>A. Mid-Unit 2 Assessment: Simulated Research Task: “DDT Spray Scares Mosquitoes Away, Study Finds” (15 minutes)</p> <ul style="list-style-type: none">• Distribute the informational article “DDT Spray Scares Mosquitoes Away, Study Finds” and the Mid-Unit 2 Assessment: Comparing and Contrasting Two Texts: Simulated Research graphic organizer to each student.• Remind students that, as always, they will need to read all, or parts of, this article multiple times to truly find meaning in it. The first time they’ll read to get the overall flow; the second time they should begin to collect the necessary information and evidence they need to complete the graphic organizer.• Point out that students will use a Credibility Checklist exactly like the one they’ve used in previous lessons.• Tell students they will return to this article once more for the second part of this assessment in which they compare and contrast authors’ presentations. They can start thinking about how this article is introduced, what claim is made, what kinds of evidence the author includes, and how the author uses (or does not use) additional text features.• Give students 15 minutes to read this article and complete the graphic organizer. Circulate and support students as they work, specifically refocusing students who may become distracted and asking prompting questions of students who get stuck.	



Work Time (continued)	Meeting Students' Needs
<p>B. Mid-Unit 2 Assessment: Comparing and Contrasting Authors' Presentations (15 minutes)</p> <ul style="list-style-type: none">• After 15 minutes, begin to distribute the article “You Think You Have It Tough?” and the Comparing and Contrasting Authors' Presentations graphic organizer.• Once these are distributed, pause students in their work. Assure them that they will have additional time to complete what they are working on, but you would like to introduce them to the second part of their task.• Tell them that in the second part of this assessment, they will be reading a new article. Students will not have to complete the simulated research task, however. Their focus will be on comparing this author's presentation of ideas (malaria, mosquitoes, and DDT) with that of the article they just completed.• Remind students of the different ways they learned to analyze an author's presentation: by thinking about how the author introduces the ideas, what types of evidence the author uses, and how (or if) the author uses additional text features.• Remind students that by thinking of each of these things individually, they can describe “overall” how the author has presented the event.• Finally, remind students that they have practiced the skill of thinking about which author is more effective in presenting information or arguing their side of something. Today, they will continue to show their mastery of that skill.• Tell students they will have the next 15 minutes to read this second article, and then complete the Comparing Authors' Presentation graphic organizer.• Circulate and support students as they work. Specifically, some students will be helped by prompting questions and the ability to “verbally rehearse” their answer with you before writing it down.	



Work Time (continued)	Meeting Students' Needs
<p>C. Mid-Unit 2 Assessment: Research Vocabulary (5 minutes)</p> <ul style="list-style-type: none">• After 15 minutes, begin to distribute the Research Vocabulary: Using Multiple Strategies to Determine the Meaning of Words graphic organizer.• Pause students in their work. Again, tell them that if they need additional time, it will be provided to them, but you would like to introduce them to the final piece of this assessment.• Review the graphic organizer with students. Tell them that this graphic organizer is identical to the one they have been using in their own research, and they should use it in the exact same way they have been practicing.• Point out to students that for the purposes of this assessment, the words they'll work with have been chosen for them. Point out that all of the words come from their reading, specifically the article "DDT Spray Scares Mosquitoes Away, Study Finds."• Remind students of the multiple strategies they have been practicing: using context clues, using root words and affixes, and using resource materials such as a dictionary. Tell students they should look closely at the word, and its context, to determine their strategy.• Point out to students that dictionaries have been made available to them. These dictionaries can be used to help them confirm or revise their initial determination of the words' meanings.• Give students 5 minutes to complete the vocabulary section of the assessment.	



Closing and Assessment	Meeting Students' Needs
<p>A. Reflecting on Learning Targets (5 minutes)</p> <ul style="list-style-type: none">• Ask students to turn and talk:<ul style="list-style-type: none">* “Look back at today’s learning targets. What is one area that you feel is a ‘star’ for you? What is one area that you’d call a ‘step,’ or an area in which you need more work?”• As time permits, invite volunteers to share their thoughts whole group.	
Homework	Meeting Students' Needs
<ul style="list-style-type: none">• None.	



EXPEDITIONARY
LEARNING

Grade 6: Module 4: Unit 2: Lesson 9

Supporting Materials



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Mid-Unit 2 Assessment:
Comparing and Contrasting Two Texts
Simulated Research

Name:

Date:

Learning Targets

- I can compare how different authors portray the same idea or event. (RI.6.9)
- I can conduct short research projects to answer a question. (W.6.7)
- I can use several sources in my research. (W.6.7)
- I can refocus or refine my question when appropriate. (W.6.7)
- I can gather relevant information from a variety of sources. (W.6.8)
- I can assess the credibility of each source I use. (W.6.8)
- I can quote or paraphrase what others say about my topic while avoiding plagiarism. (W.6.8)
- I can use common Greek and Latin affixes (prefixes) and roots as clues to help me determine the meaning of a word (e.g., *audience*, *auditory*, *audible*). (L.6.4b)
- I can use resource materials (glossaries, dictionaries, thesauruses) to help me determine or clarify the pronunciation, meaning of key words and phrases, and parts of speech. (L.6.4c)
- I can check the accuracy of my guess about the meaning of a word or phrase by using resource materials. (L.6.4d)

Directions:

- Today you will be reading two articles: “DDT Spray Scares Mosquitoes Away, Study Finds” and “You Think You Have It Tough?” Both are informational articles about mosquitoes, malaria, and DDT.
- After reading the first article, “DDT Spray Scares Mosquitoes Away, Study Finds,” complete the simulated research page identical to the pages you have been completing in your researcher’s notebook.
- After reading the second article, “You Think You Have It Tough?”, complete the Comparing and Contrasting Authors’ Presentation graphic organizer identical to the one from previous lessons.



DDT Spray Scares Mosquitoes Away, Study Finds (Assessment Text)

Reuters, UK Edition
Washington
Date: *August 9, 2007*

(Reuters)—Mosquitoes that carry malaria, dengue fever and yellow fever avoid homes that have been sprayed with DDT, researchers reported on Wednesday.

The chemical not only repels the disease-carrying insects physically, but its irritant and toxic properties helps keep them away, the researchers reported in the Public Library of Science journal PLoS ONE.

They estimate that DDT spray reduced the risk of disease **transmission** by nearly three-quarters.

Malaria affects more 40 percent of the world's population, killing more than a million people every year, most of them young children.

DDT use has been **discontinued** in most countries because of fears the pesticide may cause cancer and because of its potential effects on animals such as birds.

But the World Health Organization last year recommended the use of DDT in places like Africa where malaria is still common, saying the benefits outweighed the risks.

In the study, Dr. Donald Roberts of the Uniformed Services University of the Health Sciences in Bethesda, Maryland and **colleagues** tested DDT against *Aedes aegypti* mosquitoes in Thailand.

This species of mosquito does not carry malaria but it can transmit dengue and yellow fever.

“In huts sprayed with DDT, 59 of the 100 mosquitoes would not enter. Of the 41 that enter, 2 would die and fall to the floor,” the researchers wrote.

Only 27 mosquitoes could theoretically bite and survive.

They said over a 24-hour period, DDT use would reduce the risk of a mosquito bite by 73 percent.

The researchers said the effects should hold for other species of mosquitoes, including Anopheles mosquitoes, which do transmit malaria.

DDT Spray Scares Mosquitoes Away, Study Finds (Assessment Text)

“The historical record of malaria control operations show that DDT is the most cost-effective chemical for malaria control. Even now DDT is still considered to be the cheapest and most effective chemical for use in house spray operations,” the researchers wrote.

Two other chemicals were also effective, the researchers found. “In huts sprayed with alphacypermethrin, all 100 mosquitoes would enter the house. Of the 100 that entered, 15 would die. Of the remaining 85, 46 would exit prematurely and 9 of those would die,” they wrote.

This translated to 61 percent effectiveness.

“In huts sprayed with dieldrin, all 100 mosquitoes would enter the house,” they wrote. Just eight mosquitoes that could take a blood meal and survive for a 92 percent protection, but it was likely the mosquitoes could develop resistance to this chemical, they said.

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HERE and THERE

You Think YOU Have it Tough?

Here

Photo: Nancy Payne



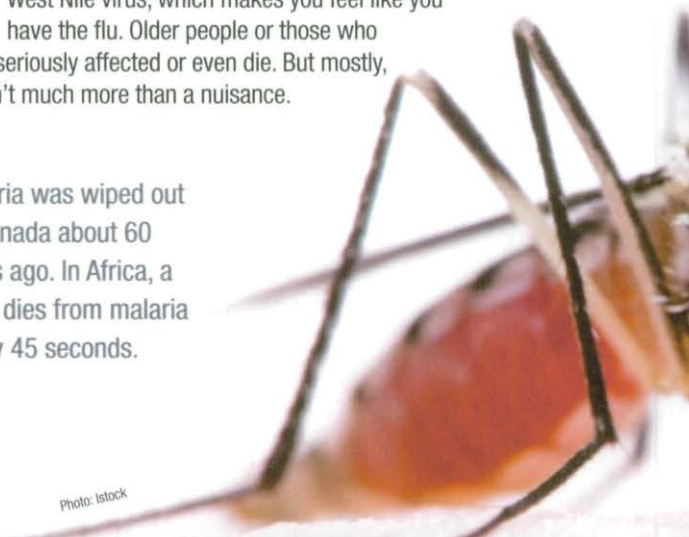
The sun has just set and you're trying to enjoy a bonfire with friends, but clouds of mosquitoes buzz and bite and drive you crazy. Or maybe you're out for a hike, swatting away stingers. Or trying to get to sleep while that one obnoxious mosquito whines around your head.

Mosquitoes are incredibly irritating, but except in very rare cases, the worst thing that happens to kids here is an itchy bump after a bite. Occasionally, Canadians are bitten by a mosquito carrying West Nile virus, which makes you feel like you have the flu. Older people or those who are already sick can be more seriously affected or even die. But mostly, mosquito bites in Canada aren't much more than a nuisance.

60 YEARS

Malaria was wiped out in Canada about 60 years ago. In Africa, a child dies from malaria every 45 seconds.

Photo: iStock



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Poke.
Slap.
Itch.

What comes next is
very different for you
and for someone your
age in other countries.

There

Photo: Spread The Net



Some species of mosquito have a parasite — another tiny creature living off of them — that moves into humans' blood stream when that mosquito bites. The result is malaria, a disease that kills close to one million people every year, mostly children. An infected child who doesn't die may still be left paralyzed, brain damaged or blind.

Poorer people are more likely to live in conditions where mosquitoes breed. That means they are also more likely to get bitten and more likely to get malaria and other diseases. Malaria occurs in parts of the Caribbean, Asia, Africa, the Middle East and South America. It can be treated with drugs if it's discovered right away, but many people can't afford those treatments.

\$10

There's an easy way to fight malaria and other diseases carried by mosquitoes: bed nets. These long-lasting nets keep bugs from biting kids in the night. One \$10 donation buys a net that's been treated with insecticide. It can protect up to five children. The Canadian charity Spread the Net has sent more than half a million bed nets to the African countries where malaria problems are the worst.



KAYAK #39 FEB 2012 35

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Mid-Unit 2 Assessment: Comparing and Contrasting Two Texts:
Simulated Research Graphic Organizer

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

.....
Date:
.....

Source Information	Claims/Central Ideas (<i>Paraphrase the Benefits or Harmful Consequences</i>)	Details/Evidence
Source Title:		
Author:		
Date:		
Source Type (<i>newspaper article, book, Web site, video, etc.</i>):		
Credible? Yes / No (<i>Use your Credibility Checklist to guide you.</i>)		
Does this source help you refocus or refine your research question in any way? How?		
What new questions you would like answered before making your claim about DDT?		



Comparing and Contrasting Authors' Presentations Graphic Organizer

Name: _____

Date: _____

Text 1: Title: "DDT Spray Scares Mosquitoes Away, Study Finds"	Compare and Contrast the Authors' Presentations	Text 2: Title: "You Think You Have It Tough?"
How does the author introduce the article?	How are they similar? How are they different?	How does the author introduce the article?
What claim does the author make?	How are they similar? How are they different?	What claim does the author make?
What type of evidence does the author include?	How are they similar? How are they different?	What type of evidence does the author include?
How does the author use text features (photographs, graphs, diagrams, etc.)?	How are they similar? How are they different?	How does the author use text features (photographs, graphs, diagrams, etc.)?



Comparing and Contrasting Authors' Presentations Graphic Organizer

Which article is more effective in providing information or in building an argument? Why?



Research Vocabulary: Using Multiple Strategies to Determine the Meaning of Words

Name: _____

Date: _____

- Each of these words comes from the article “DDT Spray Scares Mosquitoes Away, Study Finds.”
- Refer to the article in order to use context clues to determine word meaning.
- Refer to your affixes list in order to use affixes + root words to determine word meaning.
- Refer to a resource material to confirm or revise your initial meaning.

Word from the Text	What do you think it means?	What strategy helped you determine the meaning? (CC = Context Clues, A+R = Affixes + Root Words, RM = Resource Material)	What is the dictionary's definition of this word?
1. transmission			
2. discontinued			
3. colleagues			



Credibility Checklist

Name: _____

Date: _____

Title of Article: _____

Source Information	Most Credible	Fairly Credible	Least Credible
Author	Expert in the field	Educated on topic	Little or no information about author
Date	Recently published or revised	Outdated	No date listed
Source Type	Official Web sites, institutional sites, academic journals, reputable news sources	Published material	Unfamiliar Web sites
Publisher	Publisher's relationship to the topic is balanced or neutral	Publisher is sponsored by a trusted source	Clearly biased or favoring a position for a purpose

Mid-Unit 2 Assessment: Comparing and Contrasting Two Texts:
 Simulated Research Graphic Organizer
 Sample Student Response
 (for Teacher Reference)

Source Information	Claims/Central Ideas (Paraphrase the Benefits or Harmful Consequences)	Details/Evidence
Source Title: <i>DDT Spray Scares Mosquitos Away, Study Finds</i>	<ul style="list-style-type: none"> • DDT is a very effective in fighting off malaria. • Malaria affects a huge number of people in the world. • DDT should work on several different types of mosquitoes that carry diseases. • There are other pesticides that work, but not as well as DDT. 	<ul style="list-style-type: none"> • “They estimate that DDT spray reduced the risk of disease transmission by nearly three-quarters.” • “Malaria affects more than 40 percent of the world’s population, killing more than a million people every year, most of them young children.” • “In huts sprayed with dieldrin, all 100 mosquitoes would enter the house.” • “But it was likely the mosquitoes could develop resistance to this chemical, they said.”
Author: <i>N/A</i>		
Date: <i>August 9, 2007</i>		
Source Type (<i>newspaper article, book, Web site, video, etc.</i>): <i>Article</i>		
Credible? Yes / No (<i>Use your Credibility Checklist to guide you.</i>)		
Does this source help you refocus or refine your research question in any way? How?		
What new questions you would like answered before making your claim about DDT?		
<p>(Answers will vary in this section. The important thing to look for is students include evidence to support their thinking.)</p>		



Comparing and Contrasting Authors' Presentations: Sample Student Response
(Answers, for Teacher Reference)

Text 1: Title: "DDT Spray Scares Mosquitoes Away, Study Finds"	Compare and Contrast the Authors' Presentations	Text 2: Title: "You Think You Have It Tough?"
How does the author introduce the article?	How are they similar? How are they different?	How does the author introduce the article?
The author introduces the article by immediately providing information about DDT and malaria.	They are similar because they are both talking about mosquitoes. They are different because one is more personal and talking to the reader, while the other is more informational.	The author introduces the article by asking me to imagine a situation in which I am being bitten by mosquitoes.
What claim does the author make?	How are they similar? How are they different?	What claim does the author make?
What type of evidence does the author include?	How are they similar? How are they different?	What type of evidence does the author include?
The author includes lots of statistics about malaria. The author includes lots of statistics about DDT and its effect on mosquitoes. The author gives evidence from scientists.	They are similar because they both include statistics and facts. One difference is that the author of "DDT Spray Scares Mosquitoes Away, Study Finds" provides many more statistics and the names of scientists who have studied it.	The author gives facts about mosquitoes in Canada. The author gives facts about mosquitoes in other parts of the world. The author provides facts about malaria and how many people die.



Comparing and Contrasting Authors' Presentations: Sample Student Response
(Answers, for Teacher Reference)

How does the author use text features (photographs, graphs, diagrams, etc.)?	How are they similar? How are they different?	How does the author use text features (photographs, graphs, diagrams, etc.)?
This author does not include any text features.	They are not similar because only one of the articles uses text features. They are different because the author of “You Think You Have It Tough” uses photographs of children and mosquitoes.	The author shows pictures of kids from different parts of the world. This helps me to imagine the real people struggling with malaria. The author uses sidebars with facts to show important information. The author uses large text for important questions or ideas.

Which article is more effective in providing information or in building an argument? Why?

(Answers will vary in this section. The important thing to look for is students include evidence to support their thinking. Consider referring to the NYS 2-point short response rubric for scoring guidance.)



EXPEDITIONARY
LEARNING

Grade 6: Module 4: Unit 2: Lesson 10

Forming a Research-Based Claim: Cascading Consequences Chart



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

I can use my experience and knowledge of language and logic, as well as culture, to think analytically, address problems creatively, and advocate persuasively. (RI.6.9a)

Supporting Learning Targets

- I can think analytically about my research in order to determine what evidence is important to me.
- I can use evidence from my research to add to my Cascading Consequences chart.

Ongoing Assessment

- Researcher's notebook
- Harmful Consequences Cascading Consequences chart
- Benefits of DDT Cascading Consequences chart
- Exit Ticket: Reflecting on My Beliefs about DDT

Agenda

1. Opening
 - A. Book Frenzy: Launching an Independent Reading Book (8 minutes)
 - B. Unpacking Learning Targets (2 minutes)
2. Work Time
 - A. Reflecting on Research: Synthesizing My Learning (12 minutes)
 - B. Cascading Consequences (18 minutes)
3. Closing and Assessment
 - A. Exit Ticket: Share a Persuasive Piece of Evidence You Found (5 minutes)
4. Homework
 - B. Begin your independent reading book at home. Read for 30 minutes.

Teaching Notes

- This lesson introduces students to a new independent reading book. Students will be introduced to several book titles. If they enjoyed *Frightful's Mountain* by Jean Craighead George, they may want to consider reading *My Side of the Mountain* (a Newberry Honor Book) or *On the Far Side of the Mountain*. Consider inviting the school librarian or a local librarian to join the class to present some current titles to students.
- This lesson launches the End of Unit 2 assessment in which students present their claim and findings, outlining their position on the use of DDT. Students will use information from articles, videos, and multimedia such as charts, graphs, and tables to present their position to an audience and advocate persuasively during a hosted Gallery Walk.
- In the first half of Unit 2, students read new information about the use of DDT. Using a researcher's notebook, they collected bibliographic information about each article and paraphrased the author's claims. Supporting evidence was quoted from the articles. After each article was completed, students addressed whether they needed to refocus or refine their research question. Students then compared and contrasted two authors' presentations of events, looking at how each author introduced the article and used types of supporting evidence text features. Students built vocabulary by using context clues, affixes, and root words to help define unfamiliar words. Reference materials such as dictionaries and thesauruses were used to verify initial definitions.



Agenda	Teaching Notes (continued)
	<ul style="list-style-type: none">• In this lesson, students think analytically about the research they collected in their researcher's notebook. They code relevant information into two categories: Benefits of DDT or Harmful Consequences of DDT. The coded information will be added to either of the Cascading Consequences charts from Unit 1. This process allows students to think analytically and begin to determine what evidence is important to them.• Students use part of their Cascading Consequences chart as a visual to support their claim and findings in the End of Unit 2 Assessment.• In Lesson 11, students will be introduced to a Stakeholders Impacts chart, the next step in the decision-making process. Students will weigh the impacts of the use of DDT on stakeholders and apply personal values to each stakeholder affected. The Stakeholders Impacts chart can also be used as a visual to support students' claim in the End of Unit 2 Assessment.• In advance: Locate students' Cascading Consequences charts from Unit 1 so that new information can be added in today's lesson.• Students may not have enough room to add new research to the Unit 1 charts and may need to tape blank sheets of paper onto their charts.• In Lessons 10–14, students may need to reference articles from Unit 1 and Unit 2 to clarify and verify information. Use the routines of your classroom to help students organize and keep these resources.• Read “Learning to Make Systematic Decisions” by Edelson, Tarnoff, Schwille, Bruozas, and Switzer to become familiar with this decision-making process and prepare for Lesson 11.• Post: Learning targets.



Lesson Vocabulary	Materials
claim, evidence, analytically, analyze, relevant	<ul style="list-style-type: none">• Researcher's notebook (one per student; in research folder)• Research folder• Colored pencils (two different colors per student)• Benefits of DDT Cascading Consequences chart (from Unit 1; in research folder)• Harmful Consequences of DDT Cascading Consequences chart (from Unit 1; in research folder)• Cascading Consequences Codes for Text References (one per student)• Tape (one per partner group)• Blank sheets of paper (8½" by 11"; three sheets per student)• Document camera• Harmful Consequences of DDT Cascading Consequences chart example (one for display)• Exit Ticket: Reflecting on My Beliefs about DDT (one per student)



Opening	Meeting Students' Needs
<p>A. Book Frenzy: Launching an Independent Reading Book (8 minutes)</p> <ul style="list-style-type: none"> • Have selected books in specific areas around the classroom. Walk around the room giving short introductions to several books to pique students' interest. If possible, have copies of <i>My Side of the Mountain</i> and <i>On the Far Side of the Mountain</i> and other novels written by Jean Craighead George for students who enjoyed <i>Frightful's Mountain</i>. Remind students how to self-select books at their appropriate level of challenge for their interests and reading ability. • Give students time to select their book. • Invite students to set a goal for their reading. To do this, ask students to begin reading their book. Share that after 1 minute you will ask them to stop. Tell them this is the amount of reading for 1 minute and ask them to set a goal for 30 minutes of reading for their homework. 	<ul style="list-style-type: none"> • Provide book choices from a variety of genres and Lexile ranges.
<p>B. Unpacking Learning Targets (2 minutes)</p> <ul style="list-style-type: none"> • Read aloud the learning targets for today: <ul style="list-style-type: none"> * "I can think analytically about my research in order to determine what evidence is important to me." * "I can use evidence from my research to add to my Cascading Consequences chart." • Ask triads to think back to Unit 1. Say: <ul style="list-style-type: none"> * "What was an example of an author's <i>claim</i> about DDT and an example of supporting <i>evidence</i>?" • Invite triads to share. Listen for examples such as Rachel Carson's book <i>Silent Spring</i>, which made a claim that DDT was killing birds. Supporting evidence was: "There was a strange stillness ... On the mornings that had once throbbed with the dawn chorus of ... (many) bird voices there was now no sound...." • Ask students to discuss in their triads: <ul style="list-style-type: none"> * "What does it mean to think <i>analytically</i>?" * Discuss a time of when you had to <i>analyze</i> something. Share with your triad what you had to do." • Invite triads to share. Listen for: Sometimes science or math data needs to be analyzed. To analyze, we read through the material, identified criteria, and separated or grouped the criteria into areas or categories. 	<ul style="list-style-type: none"> • Learning targets are a research-based strategy that helps all students, especially challenged learners. • Posting learning targets allows students to reference them throughout the lesson to check their understanding. The learning targets also provide a reminder to students and teachers about the intended learning behind a given lesson or activity. • Discussing and clarifying the language of learning targets helps build academic vocabulary.



Opening (continued)	Meeting Students' Needs
<ul style="list-style-type: none">• Share an example of analyzing with students and say:<ul style="list-style-type: none">* “In Unit 1, you read articles about malaria and DDT. You identified the authors’ claims and supporting evidence and then made decisions about where to place this information on a Cascading Consequences chart. You had a choice of either putting the new information on a Benefits of DDT Cascading Consequences chart or on a Harmful Consequences Cascading chart.”• Ask triads:<ul style="list-style-type: none">* “After reading the learning targets, what do you think we will be doing today?”• Invite volunteers to share. Listen for: “We will be reading our research, identifying criteria or consequences, and adding to our Cascading Consequences charts.”	



Work Time	Meeting Students' Needs
<p>A. Reflecting on Research: Synthesizing My Learning (12 minutes)</p> <ul style="list-style-type: none"> • Invite students to find their researcher's notebook in their research folder. Ask them to find Source 1 and read through the claims and/or central ideas and the evidence and/or details sections to think about what is <i>relevant</i> information. Explain that information is considered relevant if it identifies a benefit or a harmful consequence of DDT. Pause to give students time to read. • Reconvene the class after students have read their information. • Explain that you would like them to analyze and code their Source 1 research. Ask them to choose two different colored pencils. Invite students to reread to find relevant information. Share that if a claim supports the use of DDT or is a benefit of DDT, they should make a plus sign in front of the sentence with one of their colored pencils. Explain they should make a minus sign with the other colored pencil in front of a sentence identifying information that would not support the use of DDT and would be a harmful consequence. • Pause to give students time. • Circulate to support those who help identifying “relevant” information. • Refocus the class. Invite volunteers to share something coded with a minus sign identifying a harmful consequence. • Listen for examples such as: “Pesticides had gotten into the water, air, and soil and were killing or sickening all sorts of creatures—including humans.” • Share that students will have 10 minutes to read Sources 2 through 4 and code each claim and supporting evidence with a plus or minus sign. Suggest students make a key on the cover to help remind them which colors represent benefits and harmful consequences. • Circulate and support students in analyzing and coding their research. Encourage and appreciate students for coding their information correctly. Consider using a document camera to model more student examples for struggling students. • Refocus the class and invite students to share information. Say: <ul style="list-style-type: none"> * “Who can share an example of research, coded with a plus sign, supporting the use of DDT and is a benefit of using DDT?” * “Who can share an example of research, coded with a minus sign, not supporting the use of DDT and is a harmful consequence of DDT?” • Praise students for thinking analytically and coding their research. Tell them that reading and coding relevant information is <i>analyzing</i>. Explain that organizing their information is an important step and will help them think about what evidence is most important and meaningful to them. 	<ul style="list-style-type: none"> • Consider partnering ELLs who speak the same home language when discussion of complex content or multistep directions is required. This lets students follow the lesson and have more meaningful discussions and clarify points in their native language. • Many students will benefit from seeing questions or examples posted on an interactive whiteboard or via a document camera.



Work Time (continued)	Meeting Students' Needs
<p>B. Cascading Consequences (18 minutes)</p> <ul style="list-style-type: none"> Form student partnerships. Ask students to retrieve their Benefits of DDT Cascading Consequences chart and Harmful Consequences of DDT Cascading Consequences chart from their research folders. Distribute the Cascading Consequences Codes for Text References handout. Share that students will be adding to their charts, and ask if they need to tape some blank sheets of paper to their charts to add new research. Ask students to read through the consequences on each chart. Point out that claims can be identified in ovals and supporting evidence can be identified in boxes. Pause to give students time to read through their research. Next, invite partners to think of possible claims and supporting evidence to add to their charts from <i>Frightful's Mountain</i>. Ask them to Think-Pair Share: <ul style="list-style-type: none"> * “Did you read about any benefits of DDT or any harmful consequences of DDT in <i>Frightful's Mountain</i>?” Ask partners to share their thinking. Listen for: Drum’s mate was affected by bioaccumulation. Because the falcon migrated to areas of the world where DDT was sprayed, DDT had built up in her tissues, causing her death. Page 246, Paragraph 2 in <i>Frightful's Mountain</i> supports this claim with evidence. Using a document camera, model how to add new information and display the Harmful Consequences of DDT Cascading Consequences chart example. Point out that as new information is added, the source should also be cited. Remind students to refer to the Cascading Consequences Codes for Text References handout to code their text source. When adding new information, remind students first to check for a claim, an oval, saying DDT builds up in the tissues of peregrine falcons. If they do not have this as a claim, ask them to add this claim. Ask students to add as evidence that Drum’s mate died because DDT had built up in her tissues. Explain bioaccumulation had occurred over several years of migration. Tell students they could add new evidence stating that DDT caused eggshells to thin and crack under the falcon’s weight, resulting in no new births. Another piece of evidence could be without new chicks being born, the population of the peregrine falcons would be affected. Ask students to add this new information to their chart, pausing to give them time and circulating to support students. Tell partners they will now add more information to their charts using research from their researcher’s notebook Sources 1 through 4. Remind them if the information has a plus sign, it will be added to the Benefits of DDT Cascading Consequences chart, and if the information has a minus sign, it will be added to the Harmful Consequences of DDT chart. Remind students to first determine if the new information is a claim or a new piece of evidence. 	<ul style="list-style-type: none"> When reviewing the graphic organizers or recording forms, consider using a document camera to display the document for students who struggle with auditory processing. Providing models of expected work supports all students, especially challenged learners. During Work Time B, you may want to pull a small group of students to support in finding claims and evidence. Some students will need more guided practice before they are ready for independent work.



Work Time (continued)	Meeting Students' Needs
<ul style="list-style-type: none">• Invite partners to find a claim and a supporting piece of evidence from Source 1, “Rachel Carson: Environmentalist and Writer.” Pause to give partners time.• Cold call partners to share a claim and supporting evidence.• Listen for an example such as a claim is that pesticides had gotten into the soil, water, and air. Supporting evidence would be this pollution resulted in sickness and death in plants, sickness and death in animals, and sickness and death in birds.• Using a document camera, model writing the claim and its supporting evidence, and display the Harmful Consequences Cascading Consequences chart example.• Ask students to finish adding claims and evidence to their charts from Source 1. Remind students to add only relevant information. After all of the information from Source 1 is added, explain they have 10 minutes to should continue with this same process, adding information from Sources 2, 3, and 4.• Circulate to support students in determining how to add information to their charts. Encourage students to use the time to add all of their research to the appropriate chart.• Commend partnerships for supporting each other in identifying claims and evidence and in determining if the information was relevant.	



Closing and Assessment	Meeting Students' Needs
<p>A. Exit Ticket: Share a Persuasive Piece of Evidence You Found (5 minutes)</p> <ul style="list-style-type: none">• Invite students to think about the claims and evidence they added to their Cascading Consequences charts. Give students time to remember a particularly persuasive piece of evidence that affected them.• Ask them to briefly share with their partner the piece of evidence that caused them to pause and think more deeply about the use of DDT.• Distribute the Exit Ticket: Reflecting on My Beliefs about DDT.• Refocus the group.• Give students 1 minute to read the questions on the exit ticket. Then invite them to record their thoughts on the exit ticket.	<ul style="list-style-type: none">• Using an exit ticket allows students to reflect on their values and beliefs about DDT and provide you with a quick check for understanding of the learning target about evidence that is personally important to them.
Homework	Meeting Students' Needs
<ul style="list-style-type: none">• Begin your independent reading book at home. Read for 30 minutes.	



EXPEDITIONARY
LEARNING

Grade 6: Module 4: Unit 2: Lesson 10

Supporting Materials



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Cascading Consequences Codes for Text References

Name: _____

Date: _____

Please refer to the codes in parentheses to reference the article, video, graph, chart, table, diagram, or world map. Add this code to the Cascading Consequences chart to cite the source of the evidence.

Resources	Benefits of DDT Cascading Consequences Chart	Harmful Consequences of DDT Cascading Consequences Chart
Article:	“The Exterminator” (EX)	“Welcome Back” (WB)
	“Double Whammy” (EX/D.W.)	“Rachel Carson: Sounding the Alarm on Pollution” (R.C.)
	“Public Fear” (EX/P.F)	
	“Seriously Sick” (EX/S.S.)	
	“Killer Genes” (EX/K.G.)	
Video:	John Stossel DDT (V- J.S. DDT)	DDT dichlorodiphenyl-trichloroethane (V-DDT)
Graphs and Charts: (G&C)	DDT Bad, Malaria Much Worse—(world map)	Lake Kariba, Africa DDT Levels (diagram)
	Malaria Trends in South Africa—(graph)	DDT in Human Body Fat in U.S. (table)
	Increases in Malaria for South American Countries—(graph)	DDT in Breast Milk (graph)
	DDT and Malaria in Ceylon—(graph)	Changes in Thickness of Egg Shells (graph)

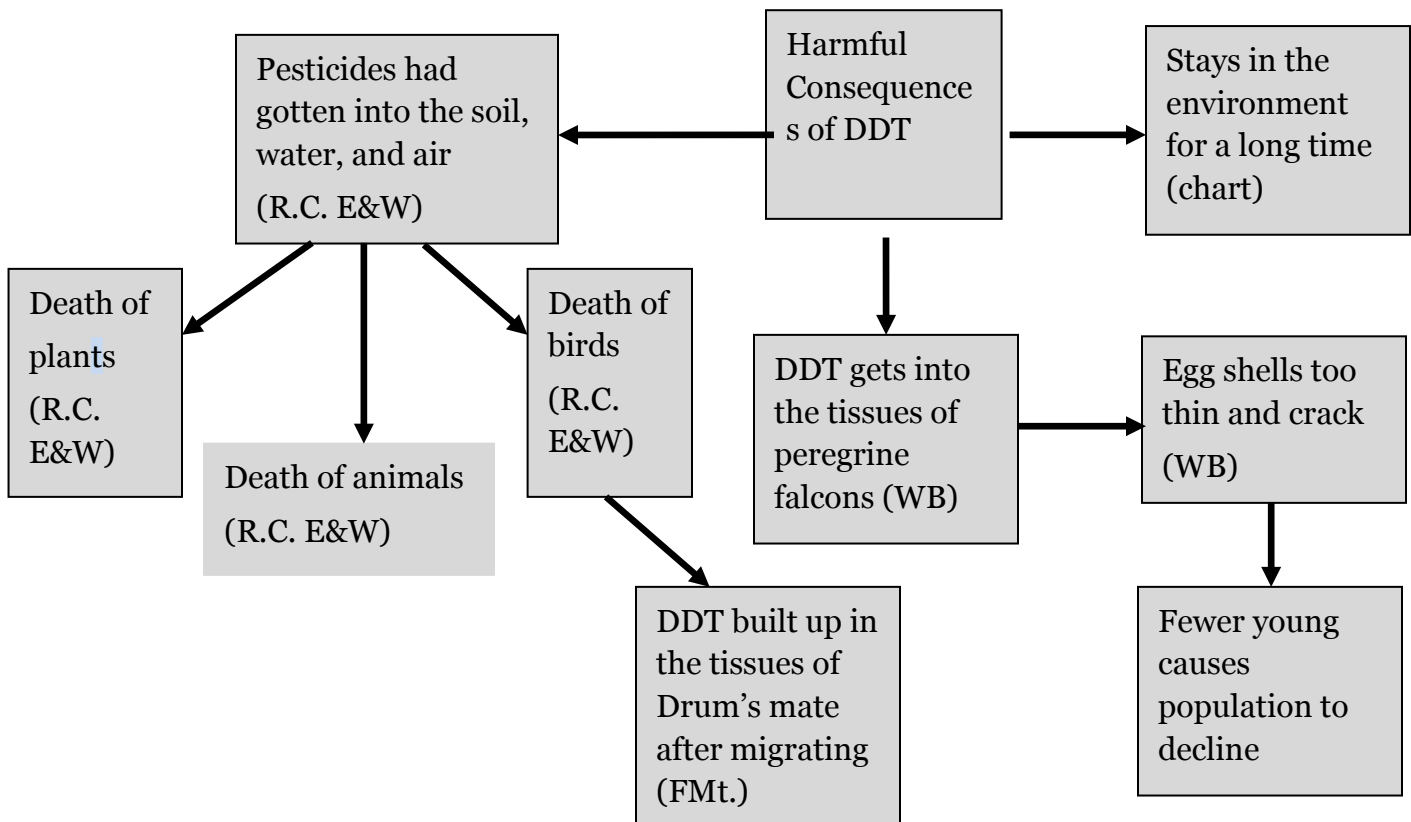


Harmful Consequences of DDT Cascading Consequences Chart Example

Name: _____

Date: _____

Unit 1	Unit 2
“Welcome Back” (WB)	“Rachel Carson: Environmentalist and Writer” (R.C. E&W)
“Rachel Carson: Sounding the Alarm on Pollution” (R.C. SA)	Paul Müller (PM)
	“Biological Energy—Here, Let Me Fix It!” (BE)
	“How DDT Harmed Hawks and Eagles” (DDTH&E)





Exit Ticket: Reflecting on My Beliefs about DDT

.....
Name:

.....
Date:

1. What was a particularly *persuasive* piece of evidence you reflected on today? This evidence probably caused you to pause and think more deeply about what you were reading about and the impact it may have on our environment or people. Share your thoughts about this piece of evidence.

2. Should the world rethink the ban on DDT? Explain why or why not.



EXPEDITIONARY
LEARNING

Grade 6: Module 4: Unit 2: Lesson 11

Forming a Research-Based Claim: Creating Stakeholders Charts



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

I can use my experience and knowledge of language and logic, as well as culture, to think analytically, address problems creatively, and advocate persuasively. (RI.6.9a)
I can use evidence from a variety of grade-appropriate texts to support analysis, reflection, and research. (W.6.9)
I can present claims and findings in a logical order. (SL.6.4)
I can support my main points with description, facts, and details. (SL.6.4)

Supporting Learning Targets

- I can describe the criteria on which I will be assessed for the end of unit assessment.
- I can create a Stakeholders Impacts chart using evidence from my research.
- I can explain my position on DDT to my peers using evidence from my research.

Ongoing Assessment

- Goldilocks Rule for Choosing Books
- Who Are Stakeholders?
- Stakeholders Impacts chart
- Exit Ticket: Four Corners notecard



Agenda	Teaching Notes
<ol style="list-style-type: none"> 1. Opening <ol style="list-style-type: none"> A. Independent Reading (6 minutes) B. Unpacking Learning Targets (2 minutes) 2. Work Time <ol style="list-style-type: none"> A. Where Are We Going? (5 minutes) B. Mini Lesson: Who Are Stakeholders? (10 minutes) C. Creating a Stakeholders Impacts Chart: Who's Affected by DDT? (15 minutes) 3. Closing and Assessment <ol style="list-style-type: none"> A. Where Do You Stand? Four Corners Activity (5 minutes) B. Exit Ticket: Four Corners Notecard (2 minutes) 4. Homework <ol style="list-style-type: none"> A. Read to achieve your reading goal and complete the Reading Tracker and Reviewer's Notes. 	<ul style="list-style-type: none"> • In today's lesson, students consider if they selected an appropriate book for their independent reading. A good book selection contributes to achieving several reading purposes, including: <ul style="list-style-type: none"> – Engages and motivates students in learning things they care about – Promotes students' love of reading – Builds students' vocabulary – Builds students' knowledge about the world – Builds students' ability to read more challenging texts for longer periods of time • When unpacking the learning targets, read aloud and model effective speaking techniques as students prepare for their presentations at the end of the unit. • As students prepare for their End of Unit 2 Assessment: Presenting a Claim and Findings, inform them of the criteria guiding them as they prepare during the next few lessons. • Throughout Unit 2, students have worked on several stages of the research process, including: <ul style="list-style-type: none"> – Reading a variety of texts – Identifying source information – Identifying claims or central ideas and evidence that support those claims – Comparing and contrasting different authors' presentation of information – Using different strategies to determine the meaning of research vocabulary – Developing Cascading Consequences charts for different perspectives of the research question, "Do the benefits of DDT outweigh its harmful consequences?" • In this next stage of the research process, students identify the effects of DDT on stakeholders, which can be people, other organisms, or other components of the environment. This requires students to look closely at their understanding of their research. As students examine the impacts of DDT on stakeholders, they are challenged to bring in their values and consider different decisions. • At the end of this lesson, students consider their feelings about DDT as they prepare to write their own claim. Participating in the Four Corners activity again provides an opportunity for student to make a choice from a more personal perspective following this lesson's work.



Agenda	Teaching Notes (continued)
	<ul style="list-style-type: none">• In advance: Review the End of Unit 2 Assessment and the criteria that students will be evaluated on for their formal presentation of their research-based claims to an audience.• In advance: Prepare to introduce the Stakeholders Impacts chart and model the process of assessing the impacts of DDT on stakeholders. Remind students that the impacts can be either positive or negative.• Review claims and evidence that students listed on their Cascading Consequences charts to consider different stakeholders and both the beneficial and harmful effects of DDT on those stakeholders in each situation they used.• Post: Learning targets.

Lesson Vocabulary	Materials
criteria, stakeholder, impact, position; logical, academic vocabulary, domain-specific vocabulary, redundancy	<ul style="list-style-type: none">• Goldilocks' Rule for Choosing Books (one per student)• Reading Tracker and Reviewer's Notes graphic organizer (one per student and one for display)• Document camera• Research folder• Presenting a Claim and Findings Criteria graphic organizer (one per student)• Equity sticks• Who Are Stakeholders? chart (one per student)• Who Are Stakeholders? chart (for teacher reference)• Stakeholders Impacts chart (one per student)• Stakeholders Impacts Chart Assessment Rubric (teacher resource; one per student)• Notecards (one per student)



Opening	Meeting Students' Needs
<p>A. Independent Reading (6 minutes)</p> <ul style="list-style-type: none">• Entrance ticket: Goldilocks' Rule for Choosing Books.• Tell students that selecting a new book that feels just right is important. Explain that when they are reading a “just right” book, there are lots of benefits, such as building reading skills and learning about new perspectives.• Ask students to take a couple of minutes to do a Goldilocks self-check to see if they feel the book they picked out is “just right” for them.• For students who feel this way, tell them to join their triad partners who are available to briefly share reviews and opinions. If time allows, invite students to partner read if they are reading the same book or to continue reading on their own.• For students who would like to select a different book, provide guidance as they look for their “just right” book.• Distribute the Reading Tracker and Reviewer's Notes graphic organizer.• Display the graphic organizer with the document camera as it is explained. Inform students they will use the Reading Tracker and Reviewer's Notes for a few purposes:<ol style="list-style-type: none">1. To keep track of their reading goals2. To explain what is happening in the book3. To respond to a question that interests them and share with their reading partners• Explain that using the Reading Tracker and Reviewer's Notes is helpful for achieving their goals, having engaging discussions with their triad partners, and enjoying the independent reading.• Have students continue sitting with their triads as they unpack today's learning targets.	<ul style="list-style-type: none">• For students continuing to look for their “just right” book, suggest titles they might find interesting.• Focus on students who appear to have looked at inappropriate reading levels.• Some students may benefit from reading a paragraph or two aloud to determine if a book is right for them.



Work Time	Meeting Students' Needs
<p>A. Where Are We Going? (5 minutes)</p> <ul style="list-style-type: none">• Acknowledge the strong work students did on their Cascading Consequences charts. Explain the claims and evidence they documented will help them prepare for their presentations for the End of Unit 2 Assessment.• Direct students to their research folders and the Presenting a Claim and Findings Criteria graphic organizers.• Use a document camera to display the Presenting a Claim and Findings Criteria graphic organizer as it is introduced. Ask students to refer to their own copy.• Tell students that as they prepare for the End of Unit 2 Assessment, they will consider what they've learned about benefits and harmful consequences of DDT. Explain that they will review research-based claims and supporting evidence to develop their own claim and present it to an audience.• Explain that they'll use a visual display as part of their presentation. Remind students that authors use a variety of strategies, including styles of introduction, ways of sharing information, and using text features to engage and inform readers about ideas. When speakers present information, using different strategies helps convey ideas to the audience.• Use equity sticks to call on students to read each of the criteria.• Define unfamiliar and learning target words to assure that students understand the criteria on which they'll be assessed. Include:<ul style="list-style-type: none">– <i>criteria</i>—things that are used as a reason for making a judgment or decision– <i>logical</i>—sensible or reasonable process for sharing information– <i>academic vocabulary</i>—words relating to school or educational work (e.g., Cascading Consequences chart)– <i>domain-specific vocabulary</i>—words relating to a certain sphere of knowledge (e.g., words related to DDT, such as pesticides)– <i>redundancy</i>—the act of using a word, phrase, etc. that repeats something already said and is therefore unnecessary	<ul style="list-style-type: none">• Displaying the Presenting a Claim and Findings Criteria graphic organizer benefits all students as they begin to develop their own claim and prepare to present for their End of Unit 2 Assessment.



Work Time (continued)	Meeting Students' Needs
<ul style="list-style-type: none">• Explain that as students prepare for their presentations, working with partners helps develop their skills. As presenters, they practice and improve the criteria on which they are assessed. As listeners, they expand their understanding of the criteria, develop their own presentations, and help each other achieve.• Tell students they will have two ways to display important information visually: their Cascading Consequences chart, and a Stakeholders Impacts chart that presents important information in a different way. They will create the latter chart in this lesson.	<ul style="list-style-type: none">• When reviewing the graphic organizers or recording forms, consider using a document camera to display the document for students who struggle with auditory processing.
<p>B. Mini Lesson: Who Are Stakeholders? (10 minutes)</p> <ul style="list-style-type: none">• Post the word <i>stakeholder</i>. Ask students what they think the word <i>stakeholder</i> means. Listen for responses that help define the word such as:<ul style="list-style-type: none">– Someone who has something to win or lose– Someone who is affected by something happening—maybe it's good or bad• Compliment students on their ideas. Share the definition:<ul style="list-style-type: none">– <i>stakeholder</i>—someone or something that is involved in or affected by a course of action• Explain that the use of DDT involves and affects other people and things in both positive and negative ways. Stakeholders can be people, other organisms or living things, or components or parts of the environment.• Distribute a Who Are Stakeholders? chart to each student.• Use a document camera to display the Who Are Stakeholders? chart. Ask students to share who they think stakeholders are when it comes to DDT. Model and add their responses to the appropriate column. Students should write the stakeholders on their chart.• Refer to the Who Are Stakeholders? chart (for teacher reference) to guide students as they consider who or what are stakeholders and how they are affected.• Congratulate students for their efforts in identifying various stakeholders. Explain that identifying who or what is affected by the use of DDT is an important step to considering how these stakeholders are affected by DDT.• Tell students they must now select some of the stakeholders they learned about in their research and look closely at how these stakeholders are affected. Remind them that the affects of DDT can be beneficial or harmful.	<ul style="list-style-type: none">• Some students may benefit from selecting fewer stakeholders to allow appropriate time to consider their own thoughts about DDT.



Work Time (continued)	Meeting Students' Needs
<p>C. Creating a Stakeholders Impacts Chart: Who's Affected by DDT? (15 minutes)</p> <ul style="list-style-type: none">• Direct students to work with partners.• Distribute the Stakeholders Impacts chart to each student.• Use the document camera to display the Stakeholders Impacts chart and model how to complete it. Use the following example that describes something that happened in the novel <i>Frightful's Mountain</i>: Near the end of the book, Frightful migrates back to her home near Sam with another peregrine falcon named Drum. The year before, Drum's mate laid eggs that broke under her weight. Later the mate died from pesticide chemicals that had accumulated in her body.• Ask students who the stakeholders are in this example. Confirm that Drum and his mate are stakeholders, which are living things.• Call on students to identify how DDT or pesticides affected these two peregrine falcons. Model a response such as: "They were unable to hatch their eggs. The mother peregrine falcon died from accumulated pesticides."• Ask students if DDT or pesticides had positive or negative affects. Use a "+" or a "-" to record the response. Confirm that the affect was negative for the peregrine falcons.• Ask student to consider if this negative effect might have a different effect for other stakeholders. Ask them to consider stakeholders such as children living in certain areas of Africa. Guide students to consider benefits and consequences they have found in their research and what effects seem most important as they consider each stakeholder and respond to the questions.• Tell partners the first step is to select five stakeholders. Choose at least one stakeholder from each of the three columns on the Stakeholders Impacts chart. They should also choose stakeholders presented in articles and other sources they used to identify claims and evidence on both of the Cascading Consequences charts, benefits and harmful consequences.• Direct partners to consider the impact in each column and record their responses.• Remind students that the last two columns ask them to consider their own values. Ask them to consider how important the impact of DDT on the stakeholder they are looking at is compared to the effects of DDT on stakeholders somewhere else.• Encourage students to decide how important that stakeholder is to their own thoughts about DDT as they compare benefits and harmful consequences.• Recognize students for their work to identify stakeholders. Commend them for considering their own ideas about the use of DDT.	



Closing and Assessment	Meeting Students' Needs
<p>A. Where Do You Stand? Four Corners Activity (5 minutes)</p> <ul style="list-style-type: none">• Tell students they will now have an opportunity to consider again where they stand on this issue. They will participate in the Four Corners activity again. Point out that today's work is important as they develop their own claims or ideas about DDT. Considering the stakeholders, or those affected in some way by the use of DDT, contributes to clarifying their own thoughts about DDT.• Post or point out the four pieces of chart paper with the different DDT choices located in different parts of the room.• Quickly review guidelines for participating in Four Corners.• Cold call or use equity sticks to select students to read each of the Four Corner choices:<ul style="list-style-type: none">– DDT is beneficial and can be used for many reasons.– DDT is beneficial for preventing health problems and helping agriculture by killing pests.– DDT is only beneficial for preventing health problems like malaria and Lyme disease.– DDT is harmful and should not be used.• Direct students to stand near the choice they feel is closest to their personal thoughts and understandings from their research about DDT.• Invite a student from each corner to share their choice and an evidence-based reason that supports their thinking.• Ask all students to return to their seats. Distribute notecards.	<ul style="list-style-type: none">• Observe students' participation in the Four Corners activity and their written responses to identify students needing support in developing their claims and findings and begin preparing for their End of Unit 2 Assessment.• Review students' positions about DDT to help pair students with writing partners. Consider pairing students with similar claims so they can act as "thought partners."
<p>B. Exit Ticket: Four Corners Notecard (2 minutes)</p> <ul style="list-style-type: none">• Ask students to write the position they selected and their evidence-based reason on their notecard. Tell students to write their name on their card. <p>Collect notecards to review students' thoughts.</p>	
Homework	Meeting Students' Needs
<ul style="list-style-type: none">• Read to achieve your reading goal and complete the Reading Tracker and Reviewer's Notes.	



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Grade 6: Module 4: Unit 2: Lesson 11

Supporting Materials



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Goldilocks' Rule for Choosing Books

Five-Finger Rule: Read the first two pages. Every time you come to a word that you don't know or can't define, put one finger up. If you get to five fingers before the end of the first page, STOP! This is probably not a good book to read on your own.

How many words did you not know on the first two pages? _____

The Page 2 Check: Read the first two pages. At the end of the second page, stop and check for understanding. First try to summarize what you read so far. Does it make sense? If not, STOP!

Summarize:

Did it make sense? _____

The Page 5 Check: Read the first five pages. At the end of the fifth page, stop and ask yourself: "Is this book making me think?" If you have not had to stop and think or clarify, STOP!

Are you thinking? _____

Did you have to clarify? _____

When you did clarify, how did you do it?

So, is this a good book for you?

_____ No, because it's too hard

_____ Yes, because it's just right

_____ No, because it's too easy

_____ No, because it's just right, but I'm not interested



Reading Tracker and Reviewer's Notes Graphic Organizer

Name: _____

Date: _____

Book Title: _____

Please complete one entry for each reading check-in.

Choices for Reviewer's Notes: Choose one idea to respond to for each entry.

- The most interesting/funniest/scariest scene was . . . because . . .
- A connection between this part of the book and what we are studying at school is . . . which helps me understand that . . .
- This part of the book reminds me of (other text, movie) because . . . which helps me understand that . . .
- A character I identify with/don't understand is . . . because . . .
- Something I learned about the world by reading this part of the book is . . . which seems important because . . .

Chapter title/s and pages	Reading Tracker <i>Briefly explain what happened in this part of the book.</i>	Reviewer's Notes <i>Use one of the questions above.</i>



Reading Tracker and Reviewer's Notes Graphic Organizer

Chapter title/s and pages	Reading Tracker <i>Briefly explain what happened in this part of the book.</i>	Reviewer's Notes <i>Use one of the questions above.</i>



Presenting a Claim and Findings Criteria Graphic Organizer

Name: _____

Date: _____

When preparing for and practicing your presentation, keep the criteria below in mind.

Presenter's Criteria	Partner Feedback (Include 1 Star and 1 Wish)
I present my claim clearly.	
I present my findings in logical order.	
I use descriptions, facts, and details to support my claim.	
I make eye contact with my audience.	
I use appropriate volume.	
I clearly pronounce my words.	
I include a visual display that clarifies information in my presentation.	
I use formal English. <ul style="list-style-type: none">• Academic and domain-specific vocabulary.• Language that expresses ideas precisely, eliminating wordiness and redundancy.	



Who Are Stakeholders? Chart

Name:

Date:

stakeholder—*n.* someone or something involved in or affected by a course of action

People	Living Things	Environment



Who Are Stakeholders? Chart
(For Teacher Reference)

stakeholder—*n.* someone or something involved in or affected by a course of action

People	Living Things	Environment
People where malaria is a problem	Birds of prey like the peregrine falcon	Tropical countries in places like Africa and South America
Farmers or people who grow food	Mosquitoes	Water, air, soil
Scientists who study chemistry or the environment	Animals in the food web— insects, fish, birds	Homes
People who live in poverty and can't afford health care	Crops or plants grown for food	Farms
People who businesses or jobs are affected		



Stakeholders Impacts Chart

Name:

Date:

What happens when DDT is used?

Stakeholder					
How is the stakeholder affected by DDT?					
Is this positive (+) or negative(-)?					
If the consequence is negative, do you feel it is offset by greater good elsewhere?					
How important is the stakeholder to you?					
	1 = very; 2 = somewhat; 3 = not much				



Stakeholders Impacts Chart Assessment Rubric
(For Teacher Reference)

	4	3	2	1
Stakeholders	Five or more stakeholders listed.	Three or four stakeholders listed.	Two stakeholders listed.	One stakeholder listed.
How affected?	Explains how five or more stakeholders are affected by the position/option chosen.	Explains how three or four stakeholders are affected by the position/option chosen.	Explains how two stakeholders are affected by the position/option chosen.	Explains how one stakeholder is affected by the position/option chosen.
Intention	Indicates whether the effect for each of the five or more stakeholders was intentional or a side effect.	Indicates whether the effect for each of three or four stakeholders was intentional or a side effect.	Indicates whether the effect for each of two stakeholders was intentional or a side effect.	Indicates whether the effect for the stakeholder was intentional or a side effect.



EXPEDITIONARY
LEARNING

Grade 6: Module 4: Unit 2: Lesson 12

Forming a Research-Based Claim: Cascading Consequences Chart



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

I can present claims and findings in a logical order. (SL.6.4)
I can support my main points with descriptions, facts, and details. (SL.6.4)

Supporting Learning Targets

- I can draft a claim based on my research of DDT.
- I can choose evidence from my research that supports my claim.
- I can revise my claim based on evidence from my research.

Ongoing Assessment

- Forming Evidence-Based Claims graphic organizer

Agenda

1. Opening
 - A. Independent Reading (5 minutes)
 - B. Unpacking Learning Targets (2 minutes)
2. Work Time
 - A. Mini Lesson: Writing a Claim and Findings (10 minutes)
 - B. Drafting a Claim and Findings (20 minutes)
3. Closing and Assessment
 - A. Sharing and Revising Your Claim (8 minutes)
4. Homework
 - A. Read your independent book for 30 minutes. Complete the Reading Tracker and Reviewer's Notes.

Teaching Notes

- This lesson represents a shift for students from building background knowledge and analyzing information about DDT to drafting their own claim and identifying evidence to support their claim.
- Students are making connections about DDT by reviewing the informational articles, videos, charts, graphs, and tables and reflecting on their literary text, *Frightful's Mountain*. Students are reintroduced to the Forming Evidence-Based Claims task worksheet used throughout Module 2. This graphic organizer provides a structure for students' claims and supporting evidence and also asks them to think about the evidence chosen to support their claims. This reflection helps lead students to realize what information is most meaningful to them.
- Students are partnered and asked to draft a claim. After they write their claim, partners search for details and supporting evidence from their Cascading Consequences charts and/or their Stakeholders Impacts chart. Supporting evidence can also be taken from the articles they have read and the data on the graphs, charts, and tables.
- Later in the lesson, students draft their own personal claim and find supporting evidence. Students are reminded to find relevant supporting evidence.
- In this lesson, students will also get an opportunity to share their claim and evidence with peers in a Concentric Circle activity.
- In advance: Post these two guiding questions for all students to see:



Agenda	Teaching Notes (continued)
	<ul style="list-style-type: none">– Do the benefits of DDT outweigh its harmful consequences?– How do we balance the needs of people and the condition of the natural world?• Form student partnerships for working together on the Forming Evidence-Based Claims graphic organizer.• Consider preparing a resource area for students. This should include the articles and charts and graphs students have read and analyzed throughout Units 1 and 2. Also, consider having a listening station for review of the two videos from Unit 1.– Articles:<ul style="list-style-type: none">• “Welcome Back”• “The Exterminator”• “Rachel Carson: Sounding the Alarm on Pollution”• “Rachel Carson: Writer and Environmentalist”• “Biological Energy—Here, Let Me Fix It!”• “How DDT Harmed Hawks and Eagles”• “Malaria Carrying Mosquito Crash Lands Due to His Insecticide”• “You Think You Have It Tough?”• “DDT Spray Scares Mosquitoes Away, Study Finds”• “DDT use should be last resort in malaria- plagued areas, scientists say”



Agenda	Teaching Notes (continued)
	<ul style="list-style-type: none">– Charts, Graphs and Tables:<ul style="list-style-type: none">• “DDT and Malaria in Ceylon”• “DDT Bad, Malaria Much Worse”• “DDT in Breast Milk”• “DDT in Human Body Fat in the United States”• “Changes in Thickness of Eggshells”• “Increase in Malaria for Countries in South America”• “Lake Kariba, Africa DDT Levels”• “Malaria Trends in South Africa”– Videos:<ul style="list-style-type: none">• John Stossel DDT Video• DDT Video on Bioaccumulation

Lesson Vocabulary	Materials
claim, research, evidence, relevant, revise	<ul style="list-style-type: none">• Forming Evidence-Based Claims graphic organizer (one per student)• Document camera• Benefits of DDT Cascading Consequence chart (from Unit 1; in research folder)• Harmful Consequences of DDT Cascading Consequence chart (from Unit 1; in research folder)• Stakeholders Impacts chart (in research folder)• Research folder• Types of Claims and Evidence anchor chart (one per student or use as an anchor chart)• Checklist for Forming an Evidence-Based Claim (one per student)



Opening	Meeting Students' Needs
<p>A. Independent Reading (5 minutes)</p> <ul style="list-style-type: none">• Ask students to sit in book groups.• Invite students to discuss their notes from their Reading Tracker and Reviewer's Notes.• Circulate and listen to determine students who may need reading support. Consider meeting with them later to discuss ways to build student engagement.	<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 partner reading or through audio recordings. Hearing books/texts can be an ongoing assignment for these students.• Posting learning targets for students allows them to reference the targets throughout the lesson to check their understanding. The targets also provide a reminder to students and teachers about the intended learning behind a given lesson or activity.• Asking students to make connections from previous lessons points out how their skills build and as a result their learning grows.



Opening (continued)	Meeting Students' Needs
<ul style="list-style-type: none">• B. Unpacking Learning Targets (2 minutes)• Invite two volunteers to lead the class in reading the learning targets:<ul style="list-style-type: none">* "I can draft a claim based on my research of DDT."* "I can choose evidence from my research that supports my claim."* "I can revise my claim based on evidence from my research."• Say to students:<ul style="list-style-type: none">* "As you can see, our three targets have familiar vocabulary terms: <i>claim</i>, <i>research</i>, <i>evidence</i>, and <i>relevant</i>. In Unit 1 and the first half of Unit 2, we have been identifying an author's claim and supporting evidence by reading articles, viewing videos, and analyzing graphs, charts, and tables about DDT. What do we already know about the meaning of these words: <i>claim</i>, <i>evidence</i>, <i>research</i>, and <i>relevant</i>?"• Invite volunteers to share their responses. Listen for responses like: "We know a claim means to say something is true when some people may believe it's not true," "We know evidence is the details that support a particular claim," "We know researchers gather information or research about a topic to become more knowledgeable," and "If information is relevant, it proves or disproves a claim."• Ask students:<ul style="list-style-type: none">* "After reading the targets, what do you think we will focus on in this lesson?"• Select volunteers to share their responses. Listen for students to explain in this lesson they will write their own claim and provide evidence to support their position on DDT.• Ask:<ul style="list-style-type: none">* "What do you think <i>revise</i> our claim means?"• Listen for: "We will look at our claim and make changes as needed."	



Work Time	Meeting Students' Needs
<p>A. Mini Lesson: Writing a Claim and Findings (10 minutes)</p> <ul style="list-style-type: none">• Tell students today's lesson brings a shift in their learning. In previous lessons, they researched DDT to build background knowledge and analyze their information. Remind them that throughout Unit 1 and the first half of Unit 2 they have considered the guiding questions, "Do the benefits of DDT outweigh its harmful consequences?" and "How do we balance the needs of people and the condition of the natural world?" Explain that, as researchers, their position on this topic has probably changed over time as they gained more knowledge.• Tell students the world is filled with controversies about how best to act on certain issues. Share that successful researchers spend time studying both sides of an issue or argument to understand different perspectives. Explain that some knowledge gained about DDT has been documented in their Cascading Consequences charts. Also explain that completing their Stakeholders Impacts chart provided time to reflect on the stakeholders affected and personalize their understanding of the DDT controversy.• Pose these questions for students to think about:<ul style="list-style-type: none">* "How do you feel about this issue today?"* "Do the benefits of DDT outweigh its harmful consequences?"* "How do we balance the needs of people and the condition of the natural world?"• Remind students that in Lesson 11, they ended class by taking a "stand" and going to one of the four corners that best represented their position on this issue, "Do the benefits of DDT outweigh the harmful consequences?" Share that in this lesson, they'll be able to voice their position or claim in writing. They will advocate persuasively for their position to peers in a hosted Gallery Walk as their End of Unit 2 Assessment.• To prepare for the assessment, they will first write a practice claim about DDT with a partner. Then, they will review information from their Cascading Consequences charts, the Stakeholders Impacts chart, articles, charts, and graphs to find three pieces of supporting evidence.• Form student partnerships.• Distribute the Forming Evidence-Based Claims graphic organizer and display it using a document camera. Remind students that they used this claim and evidence form throughout Module 2.• Point out the two guiding questions posted in the room, and invite students to write them neatly in the space underneath their name and task.	<ul style="list-style-type: none">• Anchor charts provide a visual cue to students about what to do when you ask them to work independently. They also serve as a reference when the class is working in partnerships.



Work Time (continued)	Meeting Students' Needs
<ul style="list-style-type: none">Using a document camera, model writing the two questions for students.Next, ask students to find their Benefits of DDT Cascading Consequences chart and Harmful Consequences of DDT Cascading Consequences chart and their Stakeholders Impacts chart from their research folder. Direct students to read the Cascading Consequences charts and think about the claims or pieces of evidence that caused them to have strong feelings about DDT. Then ask them to read their Stakeholders Impacts chart and think about the stakeholders. How have they been impacted by the decisions people have made regarding DDT?Ask partners to Think-Pair-Share:<ul style="list-style-type: none">* “What pieces of evidence on the Cascading Consequences charts seem the most important to you?” Give students time to share their thoughts with each other.Direct students’ attention to the Types of Claims and Evidence anchor chart, which defines how to write a claim that is clear. Tell students they now are going to write a claim with their partner. Tell them a claim is a single sentence that presents the issue, is specific and clear, is something you believe, and something you can build a solid argument about. Read the Types of Claims and Evidence anchor chart to the students. Point out the example claims.Using a document camera, model for students how they can use the claim examples on the anchor chart to frame their own claim. <p>For example: DDT is and can provide Using DDT has caused is the most pressing challenge facing the world today. Instead of we should be focusing on</p> <ul style="list-style-type: none">Invite partners to draft an initial claim on the back of their graphic organizer. Tell them the claim does not have to represent their own personal belief but rather the goal is to have an opportunity to practice writing a claim with a partner. Give them 3 minutes to write their claim. Pause to give partners time.Circulate and support students needing help with writing their claim.Refocus the whole class.	



Work Time (continued)	Meeting Students' Needs
<ul style="list-style-type: none"> • Next, ask partners to identify one piece of evidence either from their Cascading Consequences charts, from their researcher's notebook, or from their articles, charts, and graphs that would support this claim. Explain the evidence should be relevant to their claim and prove or disprove their position. Tell students they have 2 minutes to find supporting information and write it by their claim. Pause to give partners time. • Circulate to support partnerships. Remind students to use the anchor chart examples of evidence to begin their thinking. Encourage partners to work together. Show appreciation to partners who are collaborating. • Distribute the Checklist for Forming an Evidence-Based Claim. Ask partners to review their claim and evidence with the checklist. • Invite volunteers to share their claim and supporting evidence with the class. Consider writing the example to provide a model for select students. • Congratulate students on their partnership work. 	
<p>B. Drafting a Claim and Findings (20 minutes)</p> <ul style="list-style-type: none"> • Direct students to turn their graphic organizer over to the front side. • Explain to students they will write their own claim and three pieces of supporting evidence. Using the document camera, point to the area where students write their initial claim on the top of their paper above their name. Then point to the first row of boxes, telling students this is where supporting evidence or details is recorded, and the next row of boxes is where they make personal connections about each specific detail. The box titled "How I connect the details" is done when the other information is completed. Explain to students this question is asking them to consider how all of the details are connected. For example, are the details facts and ideas from authors, are the details specific words or language of the authors, or are the details authors' opinions? Tell students that the claim section at the bottom of the page should be left blank. Inform students this is where they will write their final, revised claim at the end of the lesson. • Remind students that there are expectations for quiet writing time. Talking is a great way to learn and share ideas; however, quiet, focused writing is also valuable. Today's focus is on working independently to draft their own claim and identify three pieces of evidence supporting their claim. 	<ul style="list-style-type: none"> • When reviewing the graphic organizers or recording forms, consider using a document camera to visually display the document for students who struggle with auditory processing. • Providing models of expected work supports all learners, but especially challenged learners. • During this work time, you may want to pull a small group of students to support in finding evidence. Some students will need more guided practice before they are ready for independent work.



Work Time (continued)	Meeting Students' Needs
<ul style="list-style-type: none">• Tell students they will have 18 minutes to write.• Ask:<ul style="list-style-type: none">* “How are you feeling, Fist to Five, about your readiness to start writing on your own today? A five means you are ready and excited; a three means you might need help getting started; and a one means please confer with me first.”• Make note of students who have a one, two, or three and circulate to those students first. Then continue conferring with students during this work time. Focus on the first two learning targets: “I can draft a claim based on my research of DDT” and “I can choose evidence from my research that supports my claim.” Check in with students to see how they are using the graphic organizer to support their writing.• Refocus the class after 18 minutes. Thank them for their cooperation in providing a quiet classroom for all students to write.	



Closing and Assessment	Meeting Students' Needs
<p>A. Sharing and Revising Your Claim (8 minutes)</p> <ul style="list-style-type: none">• Tell students they will use Concentric Circles to share their claim and evidence with their peers and also to get feedback. Explain that after they present their claim and evidence, their partner will share a “star,” something that was really clear, and a “step,” something they have a question about or a suggestion.• Give students a minute to look over their claim and evidence. Invite students to bring their graphic organizer, a folder/text to use as a writing surface, and a pencil to the activity.• Concentric Circles:<ol style="list-style-type: none">1. Divide the group in half.2. Have half make a circle.3. Have the other half make a circle around them.4. Tell the inside circle to face the students in the outside circle.5. Give students 2 minutes each to share their claim and evidence with the person facing them. Invite each partner to share a star and a step.6. Invite students to thank each other and then tell the inside circle to move two people to the right.7. Give students 1 minute to each share their claim and evidence with the person facing them. Invite each partner to share a star and a step.8. Invite students to thank each other.• Invite students to consider their stars and step feedback and write a revised claim at the bottom of their graphic organizer in the claim section. Explain if they are not making changes to their claim, they should rewrite their initial claim in the box.• Pause to give students time to write their claim.• Congratulate students on writing their position and finding relevant evidence to support their claim.	<ul style="list-style-type: none">• Use of protocols allows for total participation of students. It encourages critical thinking, collaboration, and social construction of knowledge. It also helps students to practice their speaking and listening skills.
Homework	Meeting Students' Needs
<ul style="list-style-type: none">• Read your independent book for 30 minutes. Complete the Reading Tracker and Reviewer's Notes.	



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Grade 6: Module 4: Unit 2: Lesson 12

Supporting Materials



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Forming Evidence-Based Claim Graphic Organizer

Name: _____

Date: _____

Finding Details	Detail 1 (Reference:)	Detail 2 (Reference:)	Detail 3 (Reference:)
I find interesting details that are related and that stand out to me from reading the text closely.			

Connecting the Details	What I think about detail 1:	What I think about detail 2:	What I think about detail 3:
I reread and think about the details, and explain the connections I find among them.			
How I connect the details:			

Making a Claim	My claim about the text:
I state a conclusion that I have come to and can support with evidence from the text after reading and thinking about it closely.	

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Types of Claims and Evidence Anchor Chart

A **claim** is a sentence that:

- presents an issue.
- is a statement that can be argued.
- is specific and clear.
- is something you believe.
- is something you can support with evidence.

Four Types of Claims	Example
Claims of Fact or Definition: This claim gives facts or defines the issue.	What some people refer to as global warming is actually nothing more than normal, long-term cycles of climate change.
Claims of Cause and Effect: This claim argues one person, thing, or event caused another thing or event to occur.	The popularity of SUVs in America has caused pollution to increase.
Claims of Value: This claim is made based on our personal values; it is how we personally rate or categorize something.	Global warming is the most pressing challenge facing the world today.
Claims about Solutions or Policies: This claim argues for or against a certain solution or policy approach to a problem.	Instead of drilling for oil in Alaska, we should be focusing on ways to reduce all consumption, such as researching renewable energy sources.

Types of evidence can be:

- concrete details.
- relevant facts.
- quotations from text.
- examples from text.
- an anecdote.
- an expert's opinion.

Source: <http://owl.english.purdue.edu/owl/resource/588/01>



Checklist for Forming an Evidence-Based Claim

Claim:

- ☐ The claim is a sentence that presents an issue.
- ☐ The claim is clear and specific.
- ☐ The claim gives the author's point of view or belief.
- ☐ The claim is something you can support with a solid argument.
- ☐ The claim uses domain-specific vocabulary.

Evidence:

- ☐ The evidence is relevant.
- ☐ The evidence is factual and descriptive.
- ☐ The evidence is in a logical order.
- ☐ The evidence uses domain-specific vocabulary.



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Grade 6: Module 4: Unit 2: Lesson 13

Presenting a Research-Based Claim: Effective Speaking Techniques



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

I can use effective speaking techniques (appropriate eye contact, adequate volume, and clear pronunciation). (SL.6.4)
I can present claims and findings in a logical order. (SL.6.4)
I can support my main points with description, facts, and details. (SL.6.4)
I can include multimedia components and visual displays in a presentation to clarify information. (SL.6.5)

Supporting Learning Targets

- I can choose a visual aid that supports my claim and findings.
- I can identify the qualities of good speaking.
- I can use feedback from my teacher and peers to revise my claim and findings.

Ongoing Assessment

- Visual Aid selected to support personal claim
- Claim and Findings revision
- Video Critique



Agenda	Teaching Notes
<ol style="list-style-type: none"> 1. Opening <ol style="list-style-type: none"> A. Unpacking Learning Targets (5 minutes) B. Choosing a Visual: What Part of My Cascading Consequences Charts or Stakeholders Impacts Chart Best Represents My Claims? (10 minutes) 2. Work Time <ol style="list-style-type: none"> A. Revising the Claim and Findings (15 minutes) B. Effective Speaking Techniques: Video Presentation and Critique (10 minutes) 3. Closing and Assessment <ol style="list-style-type: none"> A. Exit Ticket: Share Listener Feedback Back-to-Back, Face-to-Face (5 minutes) 4. Homework <ol style="list-style-type: none"> A. Read your independent book for 30 minutes. Add to the Reading Tracker and Reviewer's Notes. 	<ul style="list-style-type: none"> • At this point, students have completed the drafts of their personal claims or positions. Students' personal thoughts about the effects of DDT in our environment are influenced by their research and the claims and evidence that different authors shared. Students have selected evidence such as descriptions, facts, and details from other authors to support their personal position in their drafts. Students have identified their personal claim and are now ready to prepare for their presentation. • In advance: Create a target image to use as they unpack today's learning targets. Prepare quarter- or half-size pieces of paper for goal setting, sharing, and tossing. • In this lesson, students work with partners to revise their drafts. With specific guidelines on editing and critiquing, students use partner interaction to help achieve clear, logical, descriptive claims. Before partners begin, provide feedback from your review of students' drafts. Guide students with detailed revision critique suggestions. • In advance: Review student drafts to identify criteria they can strengthen. Look for: <ul style="list-style-type: none"> – At least three details that can be turned into personal positions, – Position is expressed in the form of a personal position or "I believe ..." statement. – Each detail relates to and supports the claim. • In this lesson, students observe a model of good speaking techniques by watching a video of a 12-year-old girl speaking to the United Nations Conference about concerns that some children who participate in ECO, the Environmental Children's Organization, have about the environment and the development of children. • In advance: Watch the video, The Best Speech—Severn Suzuki, http://www.youtube.com/watch?v=xPx5r35Aymc. Look for speaking techniques such as eye contact, volume, word pronunciation, appropriate vocabulary, and visual aids used by the presenter. Listen for the speaker's possible position and information used to support that idea. • 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.



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GRADE 6: MODULE 4: UNIT 2: LESSON 13

Presenting a Research-Based Claim: Effective Speaking Techniques



Lesson Vocabulary	Materials
visual aid, critique, academic and domain-specific vocabulary, formal English	<ul style="list-style-type: none">• Pencils (one per student)• Half- or quarter-size sheets of paper (one per student)• Image of a target (one copy, large enough to see clearly and serve as a target to toss at)• Benefits of DDT Cascading Consequences chart (from Unit 1; in research folder)• Harmful Consequences of DDT Cascading Consequences chart (from Unit 1; in research folder)• Stakeholders Impacts chart (from Lesson 11; in research folder)• Forming Evidence-Based Claims graphic organizer (from Lesson 12)• Self and Peer Critique graphic organizer (one per student; to place in research folder)• Checklist for Forming an Evidence-Based Claim (from Lesson 12)• Document camera• Notecards (four per student)• Video—"The Best Speech—Severn Suzuki" http://www.youtube.com/watch?v=xPx5r35Aymc• Tune in to Good Speaking: Video Critique graphic organizer (one per student and one for display; in research folder)



Opening	Meeting Students' Needs
<p>A. Unpacking Learning Targets (5 minutes)</p> <ul style="list-style-type: none"> • Have the learning targets posted where all students can see them. • Direct students to stand in a circle. • Tell students to pick up a pencil and half- or quarter-size piece of paper as they take a place in the circle. • Have an image of a target placed on the floor in the center of the circle. The image could be on paper, a dry-erase board, poster board, or cardboard. • Invite students to look at and read the learning targets aloud with you. <ul style="list-style-type: none"> * “I can choose a visual aid that supports my claim and findings.” * “I can identify the qualities of good speaking.” * “I can use feedback from my teacher and peers to revise my claim and findings.” • Explain that these targets are important goals as they prepare to share their personal claims and findings—along with a visual aid—about the use of DDT with a listening audience for their End of Unit 2 Assessment. • Tell students to look closely at the targets and choose one or all of the targets toward which they would like to aim. • Ask students to write key words, or main words, they notice in those targets that identify their goals or what they feel is important to work on. Explain that key words include “visual aid,” “good speaking,” and/or “revise my claim and findings.” • Tell students to write their key word or words on their paper and fold the paper into a small square to be tossed at the target. • Ask for a volunteer to be the first to share their target goal as they make their toss at the target. Go around the circle and have each student share their goal and toss. • Remind students that when you know where you are headed and you follow that path, you can reach your destination successfully. 	<p>Some students may benefit from working in small groups as they select an appropriate chart that supports their claim and can be used to develop a visual aid.</p>
<p>B. Choosing a Visual: What Part of My Cascading Consequences Charts or Stakeholders Impacts Chart Best Represents My Claims? (10 minutes)</p> <ul style="list-style-type: none"> • Tell students that a <i>visual aid</i> is something the audience can look at to understand something. The visual aid is part of the presentation they will make to share their personal claim and the findings that support it. The visual aid helps explain their research-based claim to their audience. 	



Opening (continued)	Meeting Students' Needs
<ul style="list-style-type: none">• Explain that the Cascading Consequences chart that supports their claim (either the Benefits of DDT Cascading Consequences chart or the Harmful Consequences of DDT Cascading Consequences chart and/or the Stakeholders Impacts chart can be used to develop their visual display).• Tell students they will select the chart that has information that best supports their personal claim.• Ask students to gather the following items from their research folder:<ul style="list-style-type: none">* Cascading Consequences chart that supports their claim (either the “Benefits of DDT” or the “Harmful Consequences of DDT”)* Stakeholders Impacts chart• Distribute the Forming Evidence-Based Claims graphic organizer drafts from the last lesson to each student or ask students to retrieve them from their research folder.• Use a Think-Pair-Share to help students select the chart and information they will use to create their visual aid in the next lesson.• Ask students to take 1 minute to reread the draft they wrote on their own of their personal claim and findings.• When they finish reading, students should look at their selected Cascading Consequences chart and their Stakeholders Impacts chart and choose information that helps explain information in their presentation to their audience. Encourage students to look closely for information that relates well to their personal claim and can help listeners understand their message.• Tell students to share both their claim and the visual they selected with their partner. Ask partners to explain their reason for choosing their visual. Their explanation should include information on the chart and how it relates to their personal claim. Invite listening partners to provide feedback.• Circulate to support students as they make their selections.• Refocus the whole class and cold call a few partners to share whole group the visual and the reason for choosing it.• Commend students for selecting a chart and information that relates to their claim. Explain that they will use that to create their visual aid in the next lesson.	



Work Time	Meeting Students' Needs
<p>A. Revising the Claim and Findings (15 minutes)</p> <ul style="list-style-type: none"> Remind students that in the last lesson, they drafted their personal claim and findings in their Forming Evidence-Based Claims graphic organizer. They shared their claims and findings or evidence with their peers in a Concentric Circle and then revised and wrote their claim at the bottom of the graphic organizer in the Making a Claim section. Tell students that today they will review and revise their claim and findings again. As they work towards achieving their best work, point out the following steps they will take: <ol style="list-style-type: none"> Review and revise their own personal claim and findings. Critique their writing partner's personal claim and findings. Document their personal claim and findings on notecards to use for their presentation. Ask students to get their Forming Evidence-Based Claims graphic organizer from their research folder. Distribute the Self and Peer Critique graphic organizer to each student. Ask students to also get their Checklist for Forming an Evidence-Based Claim (from Lesson 12) from their research folder. Use the document camera to introduce the Self and Peer Critique graphic organizer. Point out the writer's claim and findings components on the graphic organizer that students should look for as they <i>critique</i>, or evaluate carefully, to give feedback. Recommend that students also refer to the Checklist for Forming an Evidence-Based Claim to help them critique and revise their own work. This will also help when they critique their partner's work. Determine writing partners. Tell students they have 2 minutes to review their drafts and make changes. Students then exchange drafts with their writing partners. Give students the next 6 minutes to carefully read their partner's claim and provide helpful feedback on the Self and Peer Critique graphic organizer. Circulate and support students as they work. Provide support and directions as needed. Refocus class whole group. Thank students for their close look at their own writing and their partner's writing. Explain that they will now use their revised claims and finding to create notecards to use when they present their personal claim and supporting findings. 	<ul style="list-style-type: none"> Asking students to provide feedback to their peers helps them clarify and strengthen their writing. Consider providing students with several ways to start personal statements that express their claims. Consider providing examples of notecards to guide students as they create their own.



Work Time (continued)	Meeting Students' Needs
<ul style="list-style-type: none">• Distribute four notecards to each student. Explain that they will now write their claim on a notecard and each of the three pieces of evidence on separate notecards. Tell students they may use their notecards for reference when they present to their audience.• Instruct students that the first notecard expresses their personal claim. That can be written as a sentence that clearly presents their issue and point of view. The other three notecards can be notes that they can refer to as they present and refer to their visual aid.• Allow students the next 8 minutes to work independently to create their notecards.• Refocus the group. Explain that their well-written claims and findings is an important part of sharing their position with an audience. Tell students another important part of a presentation is speaking.	
<p>B. Effective Speaking Techniques: Video Presentation and Critique (10 minutes)</p> <ul style="list-style-type: none">• Tell students they are now going to watch a Video—“The Best Speech—Severn Suzuki” in which a 12-year-old girl named Severn Suzuki gives a presentation. She is a member of the Environmental Children’s Organization speaking to a group of adults at the United Nations Conference on the environment and development. Explain that she expresses her concerns about children losing important things in the environment and how that will affect their futures (her claim).• Before starting the video, ask students to look at the criteria in the left column of the Tune in to Good Speaking: Video Critique graphic organizer in their research folder.• Use a document camera to display the graphic organizer and point out the <i>criteria</i>, or standards that a presentation may be judged on.• Inform students that these are the same criteria they will strive for in their presentations.	



Work Time (continued)	Meeting Students' Needs
<ul style="list-style-type: none">Review the first five criteria listed as students follow along:<ul style="list-style-type: none">* "The speaker makes eye contact with the audience."* "The speaker uses appropriate volume."* "The speaker clearly pronounces and expresses words."* "The speaker includes visual aids or displays that clarify information in the presentation."* "The speaker uses formal English: <i>Academic and domain-specific vocabulary</i>; language that expresses ideas precisely, eliminating wordiness and redundancy."Ask students to watch and listen for those speaking techniques. Explain that it is helpful to hear and observe others when preparing to speak to an audience.As they watch, tell students to write their critique or feedback comments in the right-hand column by the criteria that they notice on the graphic organizer. Feedback should be specific.Play the first 2 to 3 minutes of the video. Pause and ask students to share what they noticed. Probe for responses that address the presentation criteria such as:<ul style="list-style-type: none">* "What did you notice about the girl's voice?"* "How would you describe her eye contact with her audience?"* "What '<i>formal English</i>' did you notice?"* "How did she pronounce her words?"* "What visual aids did you notice? How were they helpful?"Remind students to write their feedback on the Tune in to Good Speaking: Video Critique graphic organizer.Before watching the rest of the video, ask students to also watch for how information is presented. Listen to see if information is clearly presented in a logical order and includes descriptions, facts, and details.Ask students to refer to their Tune in to Good Speaking: Video Critique graphic organizer to critique the girl's presentation.At the end of the video, recognize students' attentive listening and critique work. Explain that they will now share their observations with others.	



Closing and Assessment	Meeting Students' Needs
<p>A. Exit Ticket: Share Listener Feedback Back-to-Back, Face-to-Face (5 minutes)</p> <ul style="list-style-type: none">• Direct students to take their Video Critiques and form two equal lines and stand across from each other.• Explain that their partner is the person standing across from them. Instruct students to turn around so they are facing away from each other. As they are facing away, ask students to select two critique comments they included in their listener feedback to share with their partner. Ask students to also think of one goal they have for their own presentation. Allow 1 minute to think of what they would like to share.• Invite students to turn around, face their partner, and share their critique comments and their goal.• Collect students' Video Critiques as their exit ticket.	
Homework	Meeting Students' Needs
<ul style="list-style-type: none">• Read your independent book for 30 minutes. Add to the Reading Tracker and Reviewer's Notes.	



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Grade 6: Module 4: Unit 2: Lesson 13

Supporting Materials



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Self and Peer Critique

Writer:

Critique Partner:

Date:

Claim	Yes or No	Comments
The claim presents an issue.		
The claim is expressed as the writer's belief or point of view.		
The first detail relates to the text or videos. The detail supports the claim.		
The second detail relates to the text or videos. The detail supports the claim.		
The third detail relates to the text or videos. The detail supports the claim.		
The claim is restated in a different way at the end.		



Tune in to Good Speaking: Video Critique

Name:

Date:

Criteria	Listener Feedback (Include Stars and Steps)
The speaker made eye contact with the audience.	
The speaker used appropriate volume and pace.	
The speaker clearly pronounced and expressed words.	
The speaker included visual aids or displays that clarified information in the presentation.	
The speaker used formal English. Academic and domain-specific vocabulary Language expresses ideas clearly, without redundancy	
The speaker presented the claim/s clearly.	
The speaker presented information in a logical order or way that made sense and was easy to understand.	
The speaker used descriptions, facts, and details to support the claim.	



EXPEDITIONARY
LEARNING

Grade 6: Module 4: Unit 2: Lesson 14

Presenting a Research-Based Claim: Visual Aid and Peer Critique



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

I can include multimedia components and visual displays in a presentation to clarify information. (SL.6.5)

I can use effective speaking techniques (appropriate eye contact, adequate volume, and clear pronunciation). (SL.6.4)

I can adapt my speech for a variety of contexts and tasks, using formal English when indicated or appropriate. (SL.6.6)

Supporting Learning Targets

- I can create a visual that clarifies information in my presentation.
- I can participate in a peer critique of my presentation.

Ongoing Assessment

- Visual aid for presentation
- Presentation notecards
- Presenting a Claim and Findings Peer Critique form



Agenda	Teaching Notes
<ol style="list-style-type: none">1. Opening<ol style="list-style-type: none">A. Unpacking Learning Targets (2 minutes)2. Work Time<ol style="list-style-type: none">A. Creating a Visual (20 minutes)B. Good Speaking Techniques: Partner Practice (20 minutes)3. Closing and Assessment<ol style="list-style-type: none">A. Exit Ticket: Preparing for My Presentation (3 minutes)4. Homework<ol style="list-style-type: none">A. Prepare for the End of Unit 2 Assessment. Finish the visual and practice the presentation.	<ul style="list-style-type: none">• In Lesson 13, students started to prepare for their End of Unit 2 Assessment. They were asked to consider each of their visuals, the Cascading Consequences chart or the Stakeholders Impacts chart and select one that would help clarify their claim and best represent their position. Students also participated in a Peer Critique of their claim and findings. After the critique, time was given to make revisions. To model how to advocate persuasively, students observed good speaking techniques by analyzing a video of a 12-year-old student of ECO, the Environmental Children’s Organization. Together, students identified criteria of good speaking techniques and developed a checklist of criteria.• In today’s lesson, students continue preparing for their presentations. This lesson focuses on creating a visual aid to support the claim and findings, preparing their notecards for the presentation, and practicing their presentation with a peer.• Viewing the video and creating their visual aid will help students understand how the use of their visual aid, coupled with good speaking skills, work hand-in-hand to create an effective presentation.• In this lesson, students continue to work on notecards that include their claim, three pieces of relevant and supporting evidence, and information about their reasoning and point of view for their presentations. Students will be asked to put their evidence in a logical order, considering each piece of evidence so that they can advocate persuasively their position on DDT.• Students partner with a peer to practice presentations and effective speaking techniques. Working with peers helps develop their skills. As presenters, they practice and improve the criteria they are being assessed on. As listeners, they build on their understanding of the criteria, allowing them to improve their own presentation.• In Lesson 15, students will present their positions on DDT and the balance of human needs and the condition of the natural world. They will share their claim and supporting evidence to peers in a hosted Gallery Walk as an End of Unit 2 Assessment.• In advance: Form student partnerships. Students will present their position to a peer.• Post: Learning targets and the two guiding questions: “Do the benefits of DDT outweigh its harmful consequences?” and “How do we balance the needs of humans with the conditions of the natural world?”



Lesson Vocabulary	Materials
visual, clarify, peer critique, logical	<ul style="list-style-type: none">• Stakeholders Impacts Chart (from Lesson 11; in research folder)• Benefits of DDT Cascading Consequences chart (from Unit 1; in research folder)• Harmful Consequences of DDT Cascading Consequences chart (from Unit 1; in research folder)• Research folder• Task Card for Creating a Visual Aid (one per student)• Plain white paper (one piece per student)• Document camera• A Visual to Support My Claim (one per student and one to display)• Black fine-tip marker (one per student)• Ruler (one per student)• Compass (one per student)• Box of colored pencils (one per student)• Criteria for the Cascading Consequences Chart Visual (one per student)• Criteria for the Stakeholders Impacts Chart Visual (one per student)• Notecards (four per student)• Forming Evidence-Based Claims graphic organizer (from Lesson 12; in research folder)• Presenting a Claim and Findings Criteria Peer Critique (one per student)• Exit Ticket: Preparing for My Presentation (one per student; one for display)



Opening	Meeting Students' Needs
<p>A. Unpacking Learning Targets (2 minutes)</p> <ul style="list-style-type: none">• Invite students to read along with you as you read the learning targets aloud:<ul style="list-style-type: none">* “I can create a visual that clarifies information in my presentation.”* “I can participate in a peer critique of my presentation.”• Ask triads to discuss:<ul style="list-style-type: none">* “What is a <i>visual</i>, and how can a visual help <i>clarify</i> information?”* “Can you think of visuals you have created in Units 1 and Unit 2?”• Pause to give students time.• Cold call triads and listen for: A visual is something that enhances a presentation; it creates an image for the audience to view. A visual helps explain information in a different manner and highlights the content of the presentation. The Cascading Consequences charts and the Stakeholders Impacts chart are examples of visuals created in Unit 1 and Unit 2.• Explain that in this lesson, students will create their own visual for their presentation.• Ask triads to discuss:<ul style="list-style-type: none">* “What is a <i>peer critique</i>?”* “Why is this an important step in the process of preparing for a presentation?”• Pause to give triads time to discuss.• Cold call and listen for: A peer critique is when a peer or classmate provides feedback on something. This step is important because it gives the presenter an opportunity to make changes and improve his/her presentation.• Remind students that working with peers will help develop both the presenter’s and the listener’s skills. Tell students their primary audience for this activity will be their peers. Therefore, this is a really great chance to practice before their assessment. As presenters, they practice and improve criteria they are being assessed on. As listeners, they build on their understanding of the criteria allowing them to makes changes improve their own presentations.	<ul style="list-style-type: none">• Discussing and clarifying the language of learning targets helps build academic vocabulary.• Posting learning targets allows students to reference them throughout the lesson to check students’ understanding. The learning targets also provide a reminder to students and teachers about the intended learning behind a given lesson or activity.



Work Time	Meeting Students' Needs
<p>A. Creating a Visual (20 minutes)</p> <ul style="list-style-type: none">• Explain that effective presentations have visuals to clarify information. Share that a visual provides an image and will increase the audience's level of understanding of the material. When visuals are used, it encourages the presenter to use gestures and movement during the presentation. As a result, visuals are mutually beneficial to both the audience and the presenter.• Invite students to find their Stakeholders Impacts chart, Benefits of DDT Cascading Consequences chart, and Harmful Consequences of DDT Cascading Consequences chart in their research folder.• Distribute the Task Card for Creating a Visual Aid and plain white paper. Read through the instructions on the task card for creating each visual.• Using a document camera, display and/or distribute the model: A Visual to Support My Claim. Share with students they will choose either their Cascading Consequences chart as their visual or their Stakeholders Impacts chart. If they choose to use their Cascading Consequences chart as the visual, they need to select one aspect that will best highlight and support their claim. Explain the example could serve as a model. Tell them if they choose the Stakeholders Impacts chart, they need to select the part that best represents their position and draw that part of the chart and include text headings for clarity.• Distribute other supplies as needed to each student such as a black fine-tip marker to highlight all pencil marks, a ruler to construct draft lines, a compass for the claim circle, and a box of colored pencils to lightly shade the background of text to draw attention to important information. Tell students they will have 20 minutes to work on their visuals.• Circulate and support students needing help with choosing the best visual to clarify their claim.• Refocus the class.• Distribute either the Criteria for the Cascading Consequences Chart Visual or the Criteria for the Stakeholders Impacts Chart Visual. Ask students to use the Checklist Criteria to help determine their next steps.• Commend students for all they accomplished in the time given. Point out highlights of their visuals such as neat writing, using draft lines, and the spacing of images for page layout.	



Work Time (continued)	Meeting Students' Needs
<p>B. Good Speaking Techniques: Partner Practice (20 minutes)</p> <ul style="list-style-type: none"> Form student partnerships. Point out an effective presentation has visual aids and establishes an objective or an end goal. Ask partners to Think-Pair-Share: <ul style="list-style-type: none"> * “What is the objective or end goal of your presentation?” Call on volunteers. Listen for: Our goal is to inform our audience about DDT issues by sharing facts and details. Explain that they are also asking the audience to consider adopting a new perspective on the use of DDT after hearing their facts and listening to their supporting details. Remind students they are using their research to advocate persuasively on their position. Invite students to take out the notecards from Lesson 13. They will now have time to complete any they may have left unfinished. Ask students to find the Forming Evidence-Based Claims graphic organizer in their research folder. Remind students to think about the two questions written at the top of this organizer: “Do the benefits of DDT outweigh its harmful consequences?” and “How do we balance the needs of humans with the condition of the natural world?” Ask them to carefully consider how to advocate persuasively as they complete their four notecards. Remind students that the first notecard will state their claim, and each of the other three notecards should have a supporting piece of evidence and their reasoning about the supporting information. Explain students should also cite the source of their evidence. Tell students they have 5 minutes to complete their notecards, and then they will have their first opportunity to share their position and get partner feedback. Circulate and support students needing help with transferring their claim and evidence onto notecards. Compliment students for being productive. Refocus the class after 5 minutes. Distribute Presenting a Claim and Findings Criteria Peer Critique form to students. Using a document camera, display the Peer Critique form. Invite students to read along as you read the criteria list aloud. Explain each of the criteria so students understand how they will be assessed. Invite students to think about the order in which they present their evidence. Ask them to think about a <i>logical</i> order, an order that seems reasonable. Explain sometimes it’s best to put the most important piece of evidence last. Give students a few minutes to prepare. Circulate to support. 	<ul style="list-style-type: none"> When reviewing graphic organizers or recording forms, consider using a document camera to display the document for students who struggle with auditory processing. Providing models of expected work supports all students, especially challenged learners.



Work Time (continued)	Meeting Students' Needs
<ul style="list-style-type: none">• Ask the partners to determine who should present first. Remind listeners to be supportive and provide stars and a wish or next step to the presenter.• As students present, circulate and take notes on the criteria students are meeting successfully and on the criteria needing attention.• Reconvene the class after partners have finished. Ask partners to finish completing the peer critique and give it to their partner.• Using the document camera, display the Presenting a Claim and Findings Criteria Peer Critique form. Point out criteria you observed students doing successfully and criteria students may want to focus on for their hosted Gallery Walk.• Commend students for their focused work preparing for their End of Unit 2 Assessment. Share that it will be exciting to see all of their research presented in the hosted Gallery Walk.	
Closing and Assessment	Meeting Students' Needs
<p>A. Exit Ticket: Preparing for My Presentation (3 minutes)</p> <ul style="list-style-type: none">• Read the two guiding questions to the class: “Do the benefits of DDT outweigh its harmful consequences?” and “How do we balance the needs humans with the conditions of the natural world?” Ask students to think about these questions and the goal of their presentation.• Distribute the Exit Ticket: Preparing for My Presentation. Invite students to think about the learning targets and about presenting their position persuasively to peers. Ask them what they need to accomplish to be prepared for the Gallery Walk.	
Homework	Meeting Students' Needs
<ul style="list-style-type: none">• Prepare for the End of Unit 2 Assessment. Finish the visual and notecards, and practice the presentation.	



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Grade 6: Module 4: Unit 2: Lesson 14

Supporting Materials



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Task Card for Creating a Visual Aid

Creating the Cascading Consequences Chart Visual

1. Using a ruler, construct a draft line lightly in pencil for the title of the visual.
2. Write the title lightly in pencil using capital letters for the first word and last word and every important word in between.
3. Using a ruler, construct two draft lines lightly in pencil for the subtitles: Claim and Supporting Evidence.
4. Write the two subtitles lightly in pencil.
5. Using a ruler, construct draft lines lightly in pencil in the upper half of the paper for the claim.
6. Write the claim lightly in pencil.
7. Construct a circle around the claim using a compass or another larger object.
8. Using a ruler, construct draft lines lightly in pencil in the lower half of the paper for the three supporting pieces of evidence.
9. Neatly write the three supporting pieces of evidence lightly in pencil.
10. Use a ruler to construct three boxes around each piece of supporting evidence.
11. Go over the text, circle, and boxes with a black fine-tip marker.
12. Neatly erase all pencil marks.
13. Consider choosing four different colored pencils to shade the background of the text.

Creating the Stakeholders Impacts Chart Visual

1. Using a ruler, construct a draft line lightly in pencil for the title of the visual.
2. Write the title lightly in pencil using capital letters for the first word and last word and every important word in between.
3. Using a ruler and pencil, construct the stakeholders chart that best highlights your claim. Include the text headings as part of the visual.
4. Using a ruler, construct draft lines for text. Neatly copy the text from the stakeholders draft.
5. Outline all pencil marks with a black fine-tip marker.
6. Neatly erase all pencil marks.
7. Consider choosing different colored pencils to shade the background of the text.

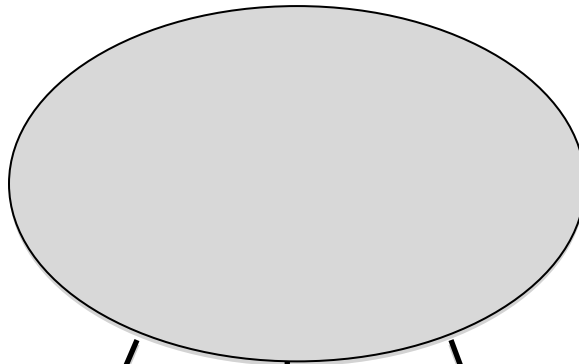


A Visual to Support My Claim

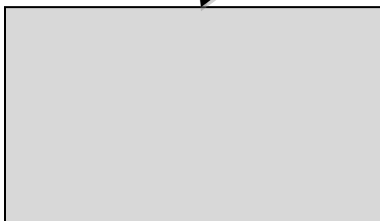
Name: _____

Date: _____

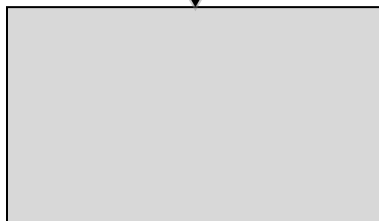
Claim:



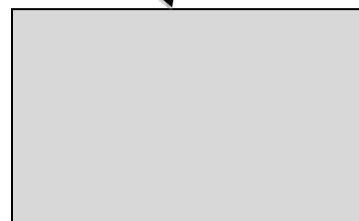
**Supporting
Evidence:**



1



2



3



A Visual to Support My Claim

Name: _____

Date: _____

What happens when DDT is used?

Stakeholder					
How is the stakeholder affected by DDT?					
Is this positive (+) or negative(-)?					
If the consequence is negative, do you feel it is offset by greater good elsewhere?					
How important is the stakeholder to you?					
1 = very; 2 = somewhat; 3 = not much					

Criteria for Cascading Consequences Chart Visual

Name: _____

Date: _____

		Yes	Not Yet
Content:	The claim is a sentence that states the issue and presents my belief or point of view.	_____	_____
	Three pieces of evidence provide descriptions, facts, and details that support my claim.	_____	_____
	Academic and domain-specific vocabulary are used.	_____	_____
Visual appeal:	Text is free of spelling errors.	_____	_____
	Text is free of mechanical and grammar errors.	_____	_____
	Color adds to the interest.	_____	_____
	Draft lines were used to guide text writing.	_____	_____
	A ruler was used to construct three boxes for supporting evidence.	_____	_____
	A compass was used to construct a circle for the claim.	_____	_____
	All draft lines were neatly erased.	_____	_____

Criteria for Stakeholders Impacts Chart Visual

Name: _____

Date: _____

		Yes	Not Yet
Content:	Four stakeholders are identified.	_____	_____
	An explanation defines how each stakeholder is affected by the position or option chosen.	_____	_____
	The effect for each stakeholder is indicated as intentional or a side effect.	_____	_____
	Academic and domain-specific vocabulary is used (10 words).	_____	_____
Visual appeal:	Text is free of spelling errors.	_____	_____
	Text is free of mechanical and grammar errors.	_____	_____
	Color adds to the interest.	_____	_____
	Draft lines were used to guide text writing.	_____	_____
	A ruler was used to construct three boxes for supporting evidence.	_____	_____
	All draft lines were neatly erased.	_____	_____



Presenting a Claim and Findings Criteria Peer Critique Form

Speaker's Name:

Listener's Name:

Speaker's Criteria	Partner Feedback—(Including 1 star and 1 wish)
The claim was clearly presented, stating the issue and speaker's point of view.	
Findings were presented in logical order.	
Descriptions, facts, and details supported the claim.	
Eye contact was made with the audience.	
Appropriate volume made it easy to hear.	
Words were pronounced clearly.	
A visual display was used and clarified information in the presentation.	
Formal English enhanced the presentation.	
Academic and domain-specific vocabulary (at least 10).	
Language that expressed ideas precisely, eliminating wordiness and redundancy.	



Exit Ticket: Preparing for My Presentation

Name:

Date:

1. What do I need to do to prepare for the End of Unit 2 Assessment on my:

a. Visual aid?

b. Note cards?

c. Speaking techniques?

2. What are my priorities in order to be prepared?

3. What do I feel most confident about?



EXPEDITIONARY
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Grade 6: Module 4: Unit 2: Lesson 15

End of Unit 2 Assessment: A Hosted Gallery Walk



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

I can use my experience and knowledge of language and logic, as well as culture, to think analytically, address problems creatively and advocate persuasively. (RI.6.9a)
I can present claims and findings in a logical order. (SL.6.4)
I can support my main points with descriptions, facts, and details. (SL.6.4)
I can use effective speaking techniques (appropriate eye contact, adequate volume, and clear pronunciation). (SL.6.4)
I can include multimedia components and visual displays in a presentation to clarify information (SL.6.5)
I can adapt my speech for a variety of contexts and tasks, using formal English when indicated or appropriate. (SL.6.6)

Supporting Learning Targets

- I can advocate persuasively my position on the use of DDT to an audience.
- I can use my visual to clarify my presentation.

Ongoing Assessment

- Presentation Checklist for the Gallery Walk
- End of Unit 2 Assessment: Presenting a Claim and Findings



Agenda	Teaching Notes
<ol style="list-style-type: none">1. Opening<ol style="list-style-type: none">A. Prepare for the Unit 2 Assessment (5 minutes)2. Work Time<ol style="list-style-type: none">A. End of Unit 2 Assessment: Hosted Gallery Walk (37 minutes)3. Closing and Assessment<ol style="list-style-type: none">A. Self-Assessing Using the Criteria List (3 minutes)4. Homework<ol style="list-style-type: none">A. Read your independent reading book for 30 minutes. Complete the Reading Tracker and Reviewer's Notes.	<ul style="list-style-type: none">• In Lessons 12 through 14, students prepared for the End of Unit 2 Assessment. They wrote a research-based claim, created a visual aid, and practiced their presentation advocating persuasively for their position on the use of DDT to their peers.• In this lesson, students participate in a hosted Gallery Walk. Students formally present their research-based claim during the class to their audience using their visual aid (a part of their Cascading Consequences chart or their Stakeholders Impacts chart) to answer the overarching research question: “Do the benefits of DDT outweigh its harmful consequences?” Students must provide relevant and sufficient evidence and use sound reasoning to support their claim.• In advance: Prepare the room for student presentations (as many “stations” as you need when students are grouped into triads). Provide a way for students to display their visual aid at these areas. Because their visual aid will become part of a larger visual aid or poster in Unit 3, it is important to ask students to be careful when posting it for the audience to view. Possible suggestions to display the visual would be to either use a bulletin board or possibly paper clip the visual to an object that would stand on a desk or table.• Form student triads and number each member 1, 2, and 3. Consider the group that you may want to join for the Gallery Walk.• Post: Learning targets; a list of materials for students to use during class.• This is built as a one-day lesson; however, if you have a large class, this hosted Gallery Walk may take two days of instruction. If this is the case, you could pair this assessment with an independent reading review.



Lesson Vocabulary	Materials
	<ul style="list-style-type: none">• Visual aid (homework from Lesson 14)• Four notecards (homework from Lesson 14)• Pencil (one per student)• Hard surface to write on (one per student)• Document camera• Presenting a Claim and Findings Criteria (one per student and one to display)• Presentation Checklist for the Gallery Walk (one per student)• End of Unit 2 Assessment: Presenting a Claim and Findings (one per student)



Opening	Meeting Students' Needs
<p>A. Prepare for the Unit 2 Assessment (5 minutes)</p> <ul style="list-style-type: none">• Welcome students to the hosted Gallery Walk. Share your excitement for them to present their hard work to an audience in a formal presentation.• Check in with students to see if they have all their needed materials: their visual aid and their four notecards for their presentations, a pencil, and a hard surface to write on during the Gallery Walk.• Using a document camera, display and/or distribute the Presenting a Claim and Findings Criteria for all students to see. Read through the criteria to remind students of how they will be assessed.• Distribute the Presentation Checklist for the Gallery Walk.• Using the document camera, display the checklist. Invite a volunteer to read the text in the boxes at the top of the sheet. Explain to students that as listeners, they will write the name of the speaker presenting and check the speaker's successful criteria boxes. Then, ask listeners to share a "star," or something the speaker did well.• Share that students will be grouped in triads for the Gallery Walk, and each member of the triad will be numbered 1, 2, or 3. Point out the different areas in the room where students will present. Explain students numbered 1 will present first, and students' numbered 2 and 3 will be the audience, standing or sitting, facing the presenter.• Explain that when triads get assigned to their presentation area, they need to quickly prepare for the presentation. Tell the speaker to display his/her visual and organize the four notecards. Tell listeners while the speaker is posting their visual for viewing and organizing their notecards, they should write the name of student number 1 in the first box under "speaker" on the Presentation Checklist for the Gallery Walk. This is a good time to remind students to be careful with their visual because this will be used as part of a poster in Unit 3.• Share that when the speaker has finished presenting, listeners should finish completing the checklist and write a star. Then, students' numbered 2 and 3 move to the right to the next speaker.• Remind students the importance of being a good audience for the speaker.	<ul style="list-style-type: none">• Some students may need an alternative presentation opportunity, such as a smaller group setting.• Set up peer critiquing very carefully to ensure students feel safe giving and receiving feedback. Students must be given a set of clear guidelines for behavior, and consider modeling the Gallery Walk successfully.• Asking students to provide feedback to their peers based on explicit criteria benefits both students. They can learn from both strengths and weaknesses that they notice in the work of peers.



Work Time	Meeting Students' Needs
<p>A. End of Unit 2 Assessment: Hosted Gallery Walk (37 minutes)</p> <ul style="list-style-type: none">• When students appear ready for the first presentation, tell them they should stay in their triad group until you signal them to move.• Invite the first speaker to present. Ask the audience, or listeners, to be courteous and watch for success criteria.• After the first presenter has finished in all triads, ask students numbered 2 and 3 to move to the right to the next speaker. Then, the students numbered 1 present again to a different audience.• Follow this pattern or routine until you have heard every student numbered 1 present.• After all students numbered 1 have presented, ask them to carefully take down their visual and put it on their desk with their notecards. Then, ask them to get a pencil, a hard surface to write on, and their Presentation Checklist for the Gallery Walk and become a listener. Ask students numbered 2 to put their pencil, folder, and Presentation Checklist for the Gallery Walk on their desk. Ask them to get their visual and four notecards and prepare to present. Students numbered 3 should patiently wait for the next presentation.• When students are prepared, invite students numbered 2 to present. Again, ask the audience, or listeners, to be courteous and watch for success criteria.• After all students numbered 2 have finished presenting, ask the audience or listeners to move to the right to the next speaker. Then, the students numbered 2 present again to a different audience.• Again, follow this pattern or routine until you have heard every student numbered 2 present.• Continue this pattern and routine until all students numbered 3 have presented.• When everyone has finished presenting, ask students to be seated.• Tell students to take a minute to finish their Presentation Checklist for the Gallery Walk for all students.• Circulate and notice successful criteria students have checked.• Congratulate students for being a supportive triad member and a courteous audience.	



Closing and Assessment	Meeting Students' Needs
<p>A. Self-Assessing Using the Criteria List (3 minutes)</p> <ul style="list-style-type: none">• Invite each student to add his/her name to the bottom of their Presentation Checklist for the Gallery Walk. Ask them to self-assess using the criteria listed. Also ask them to share a star, something they were proud of, or a highlight.• Circulate and encourage students to share their successes.• Collect students' visuals and their Presentation Checklists for the Gallery Walk. <p>[Based on the End of Unit 2 Assessment in the supporting materials section, I suggest replacing the top three bullets with those below. I assume this is the intent of that End of Unit 2 Assessment. If I've got this wrong, that's fine. Just delete the assessment from the mats list and the supporting mats because it's not referenced anywhere else in the lesson.]</p> <ul style="list-style-type: none">• Invite each student to fill out the End of Unit 2 Assessment: Presenting a Claim and Findings self-assessment form. Ask them to self-assess using the criteria listed.• Circulate and encourage students to share their successes.• Collect students' visuals, Presentation Checklists for the Gallery Walk, and End of Unit 2 Assessments: Presenting a Claim and Findings.	
Homework	Meeting Students' Needs
<ul style="list-style-type: none">• Read your independent reading book for 30 minutes. Complete the Reading Tracker and Reviewer's Notes.	



EXPEDITIONARY
LEARNING

Grade 6: Module 4: Unit 2: Lesson 15

Supporting Materials



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Presenting a Claim and Findings Criteria

Name: _____

Date: _____

When preparing for and practicing your presentation, keep the criteria below in mind.

Presenter's Criteria	Partner Feedback (Including 1 star and 1 wish)
I present my claim clearly.	
I present my findings in logical order.	
I use descriptions, facts, and details to support my claim.	
I make eye contact with my audience.	
I use appropriate volume.	
I clearly pronounce my words.	
I include a visual display that clarifies information in my presentation.	
I use formal English. Academic and domain-specific vocabulary Language that expresses ideas precisely, eliminating wordiness and redundancy.	



Presentation Checklist for the Gallery Walk

Listener's Name:

Date:

Speaker's Name	Had a claim and three pieces of evidence	Made eye contact and used clear pronunciation	Had a clarifying visual and used it	Share a STAR!



Presentation Checklist for the Gallery Walk

Listener's Name:

Date:

Speaker's Name	Had a claim and three pieces of evidence	Made eye contact and used clear pronunciation	Had a clarifying visual and used it	Share a STAR!



End of Unit 2 Assessment: Presenting a Claim and Findings

Name: _____

Date: _____

Long-Term Learning Targets

- I can use my experience and knowledge of language and logic, as well as culture, to think analytically, address problems creatively, and advocate persuasively. (RI.6.9a)
- I can present claims and findings in a logical order. (SL.6.4)
- I can support my main points with descriptions, facts, and details. (SL.6.4)
- I can use effective speaking techniques (appropriate eye contact, adequate volume, and clear pronunciation). (SL.6.4)
- I can include multimedia components and visual displays in a presentation to clarify information. (SL.6.5)
- I can adapt my speech for a variety of contexts and tasks, using formal English when indicated or appropriate. (SL.6.6)

Criteria	✓
I presented my claim clearly.	
I presented my findings in a logical order.	
I used descriptions, facts, and details to support my claim.	
I made eye contact with my audience.	
I used appropriate volume.	
I clearly pronounced my words.	
I included a visual display that clarifies information in my presentation.	



End of Unit 2 Assessment: Presenting a Claim and Findings

Criteria	✓
I used formal English. Academic and domain-specific vocabulary Language that expresses ideas precisely, eliminating wordiness and redundancy	
I persuasively advocated my position about DDT by using all of the criteria.	