



EXPEDITIONARY  
LEARNING

# **Grade 6: Module 4: Unit 1: Lesson 12**

## **Interpreting, Integrating, and Sharing Information about DDT: Using Cascading Consequences and Fishbowl Protocol**



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

I can interpret information presented in different media and formats. (SL.6.2)  
I can explain how new information connects to a topic, text, or issue I am studying. (SL.6.2))

**Supporting Learning Targets**

- I can interpret information from cascading consequences about the use of DDT.
- I can integrate information from cascading consequences to grow my understanding of DDT.
- I can describe the expectations for a Fishbowl discussion.

**Ongoing Assessment**

- Learning from Frightful's Perspective: Chapter 11 (from homework)
- Interpretation of Benefits of DDT and Harmful Effects of DDT Cascading Consequences charts
- Fishbowl note-catcher



Agenda	Teaching Notes
<ol style="list-style-type: none"><li>1. Opening<ol style="list-style-type: none"><li>A. Engaging the Reader: Learning from Frightful's Perspective (8 minutes)</li><li>B. Unpacking Learning Targets (2 minutes)</li></ol></li><li>2. Work Time<ol style="list-style-type: none"><li>A. Interpreting Cascading Consequences Charts (15 minutes)</li><li>B. Preparing for a Fishbowl Discussion (15 minutes)</li></ol></li><li>3. Closing and Assessment<ol style="list-style-type: none"><li>A. Organizing Materials (5 minutes)</li></ol></li><li>4. Homework<ol style="list-style-type: none"><li>A. Review materials and prepare for tomorrow's Fishbowl discussion.</li><li>B. Make-up opportunity: Read <i>Frightful's Mountain</i> through Chapter 11.</li></ol></li></ol>	<ul style="list-style-type: none"><li>• At the end of the opening, collect students' Learning from Frightful's Perspective graphic organizers. Review students' responses to the focus questions and the vocabulary terms they have provided as an opportunity to notice what students are doing well and where they need support. Responding to the focus questions by using evidence becomes increasingly important as students do research in Unit 2.</li><li>• This lesson continues the series of lessons scaffolding students toward using arguments, claims, and evidence found in different resources to develop Cascading Consequences charts and sharing their knowledge in a Fishbowl discussion.</li><li>• This lesson helps students refine and interpret their Cascading Consequences charts as they prepare to discuss and advocate persuasively the benefits and harmful effects of DDT using the Fishbowl protocol.</li><li>• This lesson also gives students a chance to observe a Fishbowl protocol and to prepare for their participation in a Fishbowl discussion.</li><li>• Students work with many materials during the Fishbowl. Consider options for organizing Cascading Consequences charts, resources, and materials: folders, binders, etc.</li><li>• Because this is the first time students are engaging in this type of assessment, consider posting a Fishbowl protocol anchor chart (see supporting materials). This helps students follow the process.</li><li>• During this lesson, students revisit the same video of a Fishbowl discussion that they watched in Lesson 9. In Lesson 9, the purpose was simply to get oriented to the structure of a Fishbowl discussion. Now students watch the video again to focus on specific standards, such as use of materials, eye contact, voice level, etc.</li><li>• 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 <a href="http://www.safeshare.tv">www.safeshare.tv</a>, for actually viewing these links in the classroom.</li><li>• Post: Learning targets.</li></ul>



Lesson Vocabulary	Materials
interpret, integrate; embryos (125), protesters (132), detour (134), hatching (135)	<ul style="list-style-type: none"><li>• <i>Frightful's Mountain</i> (book; one per student)</li><li>• Equity sticks</li><li>• Document camera</li><li>• Links to images of bowstring bridges</li><li>• Benefits of DDT Cascading Consequences chart (from previous lessons)</li><li>• Harmful Effects of DDT Cascading Consequences chart (from previous lessons)</li><li>• Resource Reference sheet: Benefits of DDT Cascading Consequences chart (one per student)</li><li>• Resource Reference sheet: Harmful Effects of DDT Cascading Consequences chart (one per student)</li><li>• Fishbowl note-catcher (one per student)</li><li>• Fishbowl Assessment (one per student)</li><li>• Fishbowl Discussion Partner Scoring Log (from Lesson 9; one new blank copy per student)</li><li>• Fishbowl Discussion Protocol anchor chart (new; teacher-created; for teacher reference)</li><li>• Articles; Tracing an Argument graphic organizers; sidebar task cards; Interpreting Charts and Graphs graphic organizer (students' copies from previous lessons)</li></ul>



Opening	Meeting Students' Needs
<p><b>A. Engaging the Reader: Learning from Frightful's Perspective (8 minutes)</b></p> <ul style="list-style-type: none"> <li>• Be sure students have their text, <i>Frightful's Mountain</i>. Invite students to join their triads to share their responses to the focus question for Chapter 11: "The Kids Are Heard." Remind students that earlier in the book, the school kids learned about peregrine falcons when Jon and Susan brought Frightful and other birds to their school. At that time, Frightful was called Destiny. Many students wrote letters to the utility companies asking for changes to protect birds from electric shock. The kids are now in a position to protect Frightful as she nests on the iron bowstring bridge. Those students use their knowledge to protest the construction work.</li> <li>• Invite triad partners to discuss, with evidence from the chapter, how the kids protested to help Frightful.</li> <li>• Tell students to share one of the words they added to "Words I Found Difficult" with their triads, and then add the words, page numbers, and definitions they determined using context clues, prefixes or suffixes, or resources to their "Words I Found Difficult."</li> <li>• Circulate and listen in to gauge students' understanding as they share their evidence-based responses and their vocabulary. Ask probing questions and offer support as needed.</li> <li>• Use <b>equity sticks</b> to call on students to share:             <ul style="list-style-type: none"> <li>* "Where did Frightful build her aerie?"</li> <li>* "Is that decision helpful for Frightful's survival?"</li> <li>* "How does that decision relate to the Cascading Consequences chart ideas about Sam and Frightful?"</li> </ul> </li> <li>• Invite students to share how that location can be beneficial or harmful.</li> <li>• Use a document camera to share images of bowstring bridges:             <ul style="list-style-type: none"> <li>– <a href="http://www.eriecanalway.org/Gallery-Structures/gallery-pg11.htm">http://www.eriecanalway.org/Gallery-Structures/gallery-pg11.htm</a></li> <li>– <a href="http://farm4.staticflickr.com/3229/2658472524_06f5ba041d_b.jpg">http://farm4.staticflickr.com/3229/2658472524_06f5ba041d_b.jpg</a></li> </ul> </li> <li>• Ask students to identify parts of the bridge that have been described in the book. Invite students to point out parts of the bridge like the horizontal girder, the bowstring, and the vertical web.</li> <li>• Collect students' Learning from Frightful's Perspective: Chapter 11, which they completed for homework. Explain that this will be an opportunity to look closely at their responses to the focus questions and their vocabulary while they are preparing for the Fishbowl discussion.</li> </ul>	<ul style="list-style-type: none"> <li>• Some students may benefit from identifying one claim and the evidence that supports that claim from each of the Cascading Consequences charts.</li> <li>• Some students may benefit from having sentence starters to help contribute to discussion, share claims and evidence, and refer to resources.</li> <li>• Consider partnering ELL students with other students who speak the same language for discussion. This allows them to have more meaningful discussions in their native language.</li> </ul>



Opening (continued)	Meeting Students' Needs
<p><b>B. Unpacking Learning Targets (2 minutes)</b></p> <ul style="list-style-type: none"><li>• Focus students' attention on the learning targets. Read the targets aloud as students quietly read along:<ul style="list-style-type: none"><li>* "I can interpret information from cascading consequences about the use of DDT."</li><li>* "I can integrate information from cascading consequences to grow my understanding of DDT."</li><li>* "I can describe the expectations for a Fishbowl discussion."</li></ul></li><li>• Ask the students to identify important words in the learning targets. Circle the words <i>interpret</i>, <i>integrate</i>, and <i>describe</i>.</li><li>• Explain that this lesson will focus on using information about DDT that they have identified and written on their two Cascading Consequences charts.</li><li>• Explain that today they will use that information more deeply. They will <i>interpret</i> or explain the information they found in different resources and use it to <i>integrate</i> or combine different pieces of information to help form opinions or take positions on a topic. They will <i>describe</i> or share what they have learned. Define <i>interpret</i> (v) as a way "to explain the meaning of something." Define <i>integrate</i> (v) as a way "to combine (two or more things) to form or create something." Define <i>describe</i> (v) as a way to represent or give an account of something in words.</li><li>• Tell students that this is important as they use the knowledge they have acquired about the use of DDT in our world. This helps them decide how to address the issue and persuade others to consider their thoughts as they participate in a Fishbowl discussion.</li></ul>	



Work Time	Meeting Students' Needs
<p><b>A. Interpreting Cascading Consequences Charts (15 minutes)</b></p> <ul style="list-style-type: none"><li>• Focus students on their two charts: <b>Benefits of DDT Cascading Consequences Chart</b> and <b>Harmful Effects of DDT Cascading Consequences chart</b>.</li><li>• Explain that the information on the Cascading Consequences charts can be useful for interpreting and integrating claims and evidence for their discussion. Tell students that this information is helpful in developing opinions or ways to speak out about an important viewpoint.</li><li>• Use a document camera to model ways to determine if claims, evidence, and resources are cited on each of the Cascading Consequences charts.</li><li>• Identify the main topic on each Cascading Consequences chart: Benefits of DDT and Harmful Effects of DDT.</li><li>• Ask students to look for claims on each of their charts.</li><li>• Use equity sticks to ask students to identify and share a claim they have written. Demonstrate how an arrow should be drawn from the main topic to a claim.</li><li>• Invite students to now look for evidence that supports that claim. Continue to use equity sticks, asking students to share evidence they have included and how an arrow should be used to connect that evidence to the claim it supports.</li><li>• Encourage students to look at evidence from different resources. Ask if that evidence supports claims from other resources. Tell students to draw arrows to show how evidence from one resource may support a claim from another resource.</li><li>• Explain that the resources they have used to find both claims and evidence should be identified on the Cascading Consequences charts.</li><li>• Distribute a <b>Resource Reference Sheet: Benefits of DDT Cascading Consequences Chart</b> and <b>Resource Reference Sheet: Harmful Effects of DDT Cascading Consequences chart</b> to each student.</li><li>• Continue to use the document camera to demonstrate how the resources can be abbreviated. Briefly model how to identify each claim and evidence with a resource abbreviation. Explain that referring to the resources where information came from is an important part of determining if information is credible.</li><li>• Explain that students will now have time to look closely at both of their Benefits of DDT and the Harmful Effects of DDT Cascading Consequences charts. Tell them to look at the claims and evidence they have documented and to add arrows to connect evidence with the claims it supports.</li></ul>	



Work Time (continued)	Meeting Students' Needs
<ul style="list-style-type: none"><li>• In addition to drawing arrows, tell students to add resource abbreviations to the claims and evidence expressed in those resources.</li><li>• Invite students to work with the person next to them. Explain that they can help each other identify ways to improve their Cascading Consequences charts and practice sharing the information with their partners.</li><li>• Circulate and support students as they interpret and document the relationships between the claims and evidence and identify the resources that the information came from. Ask probing questions:<ul style="list-style-type: none"><li>* “Is this information a claim or evidence?”</li><li>* “Which claim does that evidence support?”</li><li>* “Which resource did you use to find this information?”</li><li>* “How could you share or describe this information?”</li></ul></li><li>• Commend students for their efforts to interpret and integrate the information they have used on their Cascading Consequences charts.</li><li>• Remind students that they will use their Cascading Consequences charts to participate in the Fishbowl discussion.</li></ul>	





Work Time (continued)	Meeting Students' Needs
<p><b>B. Interpreting Cascading Consequences Charts (15 minutes)</b></p> <ul style="list-style-type: none"><li>• Tell students that watching a Fishbowl discussion is helpful as they prepare for their participation in both the inner and outer circles of a Fishbowl discussion.</li><li>• Explain that they will watch a video (<a href="http://vimeo.com/54871334">http://vimeo.com/54871334</a>) of 10th-grade students who use a Fishbowl protocol to discuss a guided question. They will cite evidence from a text they have read and refer to resources where they have found that evidence.</li><li>• Distribute the <b>Fishbowl note-catcher</b> to each student.</li><li>• Use the document camera to model using the Fishbowl note-catcher. Explain that one column is to note the process, or things students do, in both the inner and outer circle. The other column is to note the purpose, or why, they do those things.</li><li>• Tell students to observe what both the inner circle and outer circle students are doing.</li><li>• Pause the video after the first 2 minutes. Direct students to note what materials both the inner- and outer-circle students use. In the purpose section, ask students to explain why those materials were important.</li><li>• Ask students to write notes about the eye contact and voice levels they observed. Tell them to explain how that contributed to the discussion in the purpose section.</li><li>• Explain that the teacher paused the discussion, shared some successes she observed, but she also identified goals that should be worked on.</li><li>• Ask students to reflect on the claims and evidence and share a success they noticed and a goal. Encourage students to note the importance of providing evidence and citing the resources in a Fishbowl discussion.</li><li>• Invite students to observe closely and add notes to the Fishbowl note-catcher as they watch the video. Explain that this helps them prepare for their own participation in the Fishbowl discussion.</li><li>• After the video, distribute copies of the <b>Fishbowl Assessment</b> and the <b>Fishbowl Discussion Partner Scoring Log</b> to each student. Explain that the Fishbowl Assessment is one way the teacher will evaluate their discussion in the inner circle. Encourage students to look carefully at that as they review their materials and prepare for the Fishbowl discussion.</li><li>• Tell students that during the Fishbowl discussion, they will complete the Fishbowl Discussion Partner Scoring Log while they are in the outer circle. They will use this to recognize and share feedback with their inner circle partners. They will also be assessed for the feedback they have recorded.</li></ul>	



Work Time (continued)	Meeting Students' Needs
<ul style="list-style-type: none"><li>• Point out to students the <b>Fishbowl Discussion Protocol Anchor Chart</b>. Review the roles of members of the inner and outer circle participants in a fishbowl discussion. Tell them you will leave this chart here to help support them during the assessment.</li><li>• Tell students they will now organize the materials they will use for the Fishbowl discussion and include both the Fishbowl Assessment and the Fishbowl Discussion Partner Scoring logs.</li></ul>	
Closing and Assessment	Meeting Students' Needs
<p><b>A Organizing Materials (5 minutes)</b></p> <ul style="list-style-type: none"><li>• Explain that the Cascading Consequences charts and materials will be organized into two groups. One group will include the Benefits of DDT Cascading Consequences chart and the resources used to create that chart. The other group will include the Harmful Effects of DDT Cascading Consequences chart and the resources used to create that chart.</li><li>• Tell students the resources for each Cascading Consequence chart includes articles, <b>Tracing an Argument graphic organizers, sidebar task cards</b>, and the <b>Interpreting Charts and Graphs graphic organizer</b>.</li><li>• Invite students to use the Resource Reference sheets to help determine which resources go with which Cascading Consequences chart. The resources for each Cascading Consequences chart can also be displayed on the document camera as they organize their materials and prepare for their homework review and Fishbowl discussion.</li><li>• Tell students that if they are behind on their reading, part of their homework is to finish reading <i>Frightful's Mountain</i> through Chapter 11 and respond to the focus questions in <i>Learning from Frightful's Perspective: Chapter 11</i>.</li></ul>	
Homework	Meeting Students' Needs
<ul style="list-style-type: none"><li>• Review materials and prepare for tomorrow's Fishbowl discussion.</li><li>• Make-up opportunity: Read <i>Frightful's Mountain</i> through Chapter 11.</li></ul>	



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## Supporting Materials



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**Resource Reference Sheet:**  
Benefits of DDT Cascading Consequences Chart

\_\_\_\_\_  
**Name:**

\_\_\_\_\_  
**Date:**

**Resources**

Article: “The Exterminator” (EX)  
“Double Whammy” (EX/D.W.)  
“Public Fear” (EX/P.F)  
“Seriously Sick” (EX/S.S.)  
“Killer Genes” (EX/K.G.)

Video:  
John Stossel DDT (V-J.S. DDT)

Graphs and Charts (G&C):  
“DDT Bad, Malaria Much Worse”—(world map)  
“Malaria Trends in South Africa”—(graph)  
“Increases in Malaria for South American Countries”—(graph)  
“DDT and Malaria in Ceylon”—(graph)



**Resource Reference Sheet:**  
Harmful Effects of DDT Cascading Consequences Chart

\_\_\_\_\_  
**Name:**

\_\_\_\_\_  
**Date:**

**Resources**

Article: “Welcome Back” (W.B.)

“Rachel Carson: Sounding the Alarm on Pollution” (R.C.)

Video:

“DDT dichloro-diphenyl-trichloroethane” (V-DDT)

Graphs, Tables, Charts, Diagrams, Maps (G&C):

“Lake Kariba, Africa DDT Levels” (diagram)

“DDT in Human Body Fat in U.S.” (table)

“DDT in Breast Milk” (graph)

“Changes in Thickness of Egg Shells” (graph)



Fishbowl Note-catcher

.....  
**Name:**  
.....

.....  
**Date:**  
.....

<b>Process</b> (Identify what inner and outer circle students do.)	<b>Purpose</b> (Why is this done?)
<b>Materials</b>  <b>Inner circle:</b>  <b>Outer circle:</b>	
<b>Claims and evidence:</b>	
<b>Resources:</b>	
<b>Voice and eye contact:</b>	
<b>Discussion and questions:</b>	



Fishbowl Assessment

Scoring	
Consistently Demonstrated	2 points
Somewhat Demonstrated	1 point
Not Demonstrated	0 points

Assessment	1 Asks Questions to Understand Different Perspectives	2 References Text and Refers to Evidence	3 Advocates Persuasively	4 Responds to Questions with Detail That Contributes to the Topic	Total Points
Name					

**Fishbowl Discussion Protocol Anchor Chart**  
For Teacher Reference

**Inner-circle students:**

1. Think about the focus question of the discussion.
2. Use evidence from your materials to help clarify or support your ideas.
3. Ask questions to understand other students' perspectives.
4. Respond to questions posed by other students, using evidence and concrete details.

**Outer-circle students:**

1. Continually pay attention to your discussion partner.
2. Take notes on the questions they ask and the comments they make.
3. Make tally marks for their comments and questions.
4. Give them specific and helpful feedback when appropriate to help them perform better in the discussion.