



EXPEDITIONARY  
LEARNING

# **Grade 5: Module 4: Unit 1: Lesson 8**

## **End of Unit Assessment, Part II: Science Talk**



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

- I can prepare myself to participate in discussions. (SL.5.1)
- I can draw on information to explore ideas in the discussion. (SL.5.1)
- I can follow our class norms when I participate in a conversation. (SL.5.1)
- I can ask questions that are on the topic being discussed. (SL.5.1)
- I can connect my questions and responses to what others say. (SL.5.1)
- After a discussion, I can explain key ideas about the topic being discussed. (SL.5.1)

**Supporting Learning Targets**

- I can ask questions of my peers that are relevant to natural disasters.
- I can share my ideas about natural disasters with my peers during a Science Talk.
- I can use the ideas of my peers to help inform my ideas about natural disasters.
- I can gather evidence from informational texts to prepare for a Science Talk about natural disasters.
- I can synthesize my ideas about natural disasters.

**Ongoing Assessment**

- Science Talk note-catcher
- Journal: Synthesis Statement



Agenda	Teaching Notes
<p>1. Opening</p> <ul style="list-style-type: none"><li>A. Engaging the Speaker and Listener: Communicating Like Scientists (3 minutes)</li><li>B. Introducing Learning Targets: What Are Relevant Questions? (7 minutes)</li></ul> <p>2. Work Time</p> <ul style="list-style-type: none"><li>A. Reviewing Criteria for High-Quality Speaking and Listening: Establishing Norms For a Science Talk” (10 minutes)</li><li>B. Preparing for and Participating in a Science Talk (20 minutes)</li><li>C. Synthesizing Information from a Science Talk (10minutes)</li></ul> <p>3. Closing and Assessment</p> <ul style="list-style-type: none"><li>A. Debrief (8 minutes)</li><li>B. Review Learning Targets (2 minutes)</li></ul> <p>4. Homework</p> <ul style="list-style-type: none"><li>A. Continue reading in your independent reading book for this unit at home.</li></ul>	<ul style="list-style-type: none"><li>• If students experienced Module 2A, they will be familiar with the Science Talk protocol, which they participated in during Unit 1 of that module. Familiarize yourself and the students once more with the protocol (Appendix 1). The purpose is to give the students an experience that allows them to practice and be assessed on the Speaking and Listening standards.</li><li>• Consider the suggested compelling questions in the lesson; feel free to craft a different question if students have become interested in some other compelling angle on this topic. Just be sure that the question is provocative and open ended.</li><li>• Envision the process for Work Time Part B: Orchestrating a Science Talk can be a bit complex. Students begin in two concentric circles (an inner circle of students facing an outer circle of students).</li><li>• At the end of this lesson, build students’ excitement about Unit 2. They will read two central texts, <i>Eight Days</i> and <i>Dark Water Rising</i>, fictional novels about characters who experience natural disasters. Unit 2 emphasizes CCLS RL.5.6 and RL.5.7.</li></ul>



Lesson Vocabulary	Materials
<p>relevant, share, use, inform, evidence, synthesize</p>	<ul style="list-style-type: none"> <li>• End of Unit 1 Assessment, Part I: On-Demand Essay “What Makes a Hurricane a Natural Disaster?” (from Lesson 7; students’ completed on-demand essays)</li> <li>• Journals</li> <li>• Students’ Earthquake Concepts note-catcher (from Lessons 2–6)</li> <li>• Students’ Hurricane Concepts note-catcher (from Lessons 3–7)</li> <li>• What Do We Know about Natural Disasters? anchor chart (from Lessons 1–7)</li> <li>• Science Talk Norms anchor chart (Module 2A, Unit 1, Lesson 10)</li> <li>• Science Talk note-catcher (one per student)</li> <li>• End of Unit Assessment, Part II: Science Talk Scoring Guide (one per student for teacher scoring)</li> <li>• Sticky notes</li> </ul>

Opening	Meeting Students’ Needs
<p><b>A. Engaging the Speaker and Listener: Communicating Like Scientists (2 minutes)</b></p> <ul style="list-style-type: none"> <li>• Congratulate students on all the learning they have done about natural disasters. Remind them that they have also been focusing on how scientists determine how earthquakes and hurricanes become natural disasters.</li> <li>• Tell students that today they are going to demonstrate how scientists think and discuss, or communicate, their ideas with other scientists by participating in a Science Talk. Remind them of the Science Talk that they participated in during Module 2A, when they were learning about biodiversity in the rainforest. Say: “Now we are going to do what scientists do when they get together.”</li> </ul>	<ul style="list-style-type: none"> <li>• Some students may need to focus on only one piece of evidence to add to the anchor chart instead of several at once.</li> </ul>



Opening (continued)	Meeting Students' Needs
<p><b>B. Introduce Learning Targets: What Are Relevant Questions? (8 minutes)</b></p> <ul style="list-style-type: none"> <li>• Introduce the first learning target:               <ul style="list-style-type: none"> <li>* “I can ask questions of my peers that are relevant to natural disasters.”</li> </ul> </li> <li>• Focus students’ attention on the word <i>relevant</i> in the learning target. Ask what it means to ask relevant questions about natural resources. Listen for students to share ideas like: “Related to what we have read/viewed,” “Connected to natural disasters,” “Important to help us understand more about natural disasters,” etc.</li> <li>• Remind students of the guiding question by asking a student to read it aloud:               <ul style="list-style-type: none"> <li>* “What is a natural disaster?”</li> </ul> </li> <li>• Focus the class on resources that they have to help them think about relevant questions associated with the guiding question. Redistribute students’ completed <b>End of Unit 1 Assessment, Part I: On-Demand Essay “What Makes a Hurricane a Natural Disaster?”</b> (collected at the end of Lesson 7).</li> <li>• Orient students to their other resources: their <b>journals</b> (specifically their <b>Earthquake Concepts and Hurricane Concepts note-catchers</b>) and the <b>What Do We Know about Natural Disasters? anchor chart</b> (posted).</li> <li>• Ask students to briefly review all the resources available to them and think about possible questions they would like to ask their peers about natural disasters.</li> <li>• Direct them to write down at least three questions on the next blank sheet in their journal.</li> <li>• Ask students to share their questions with a partner, reminding them to listen to whether the questions are relevant to natural disasters.</li> </ul>	<ul style="list-style-type: none"> <li>• Consider highlighting, or pointing out, sections of the resources that would be helpful in formulating questions for students who struggle with large amounts of information at once.</li> <li>• Consider allowing students who struggle with writing the opportunity to dictate their questions to a peer or teacher.</li> </ul>



Work Time	Meeting Students' Needs
<p><b>A. Reviewing Criteria for High-Quality Speaking and Listening: Establishing Norms for a Science Talk (10 minutes)</b></p> <ul style="list-style-type: none"> <li>• Say to students: “Remember that a Science Talk is a discussion about a question scientists have. While scientists discuss these big questions with one another, it is important for them to create a set of rules, or norms, that they will all follow so everyone’s ideas can be heard and considered.”</li> <li>• Introduce the next two learning targets by reading them aloud:           <ul style="list-style-type: none"> <li>* “I can share my ideas about natural disasters with my peers during a Science Talk.”</li> <li>* “I can use the ideas of my peers to help inform my ideas about natural disasters.”</li> </ul> </li> <li>• Review the <b>Science Talk Norms anchor chart</b> and focus students’ attention on the phrases: “share my ideas” and “use the ideas of my peers to help inform.” Ask students to read with a partner what it says for what it looks/sounds like to “share my ideas” with peers.</li> <li>• Cold call a few students to share out what they read, listening for ideas such as: “Wait my turn to speak, so I am heard,” “Don’t shout/speak too loudly,” “Make sure everyone gets a turn to speak,” “No one person does most/all of the speaking,” and “Use information from the text to support my ideas,” etc. Invite students to share any other ideas they may have thought of that are not listed. Add students’ ideas to the anchor chart.</li> <li>• Ask students to recall what it looks/sounds like to “use the ideas of my peers to help inform my ideas,” by asking them to read with their partner what is listed. Invite a few students to share aloud, listening for thoughts like: “Not thinking I have the one/right answer to the question,” “Listening to what other people say,” “Considering evidence others use when discussing questions—does it match my own/make me think about the question differently?” or similar suggestions. Record any new ideas students may have on the anchor chart.</li> <li>• Give students a moment to consider which one they think will be most useful during a Science Talk with their peers, and why.</li> <li>• Ask students to turn to a partner and share their thinking. Then invite several students to share with the whole group.</li> </ul>	<ul style="list-style-type: none"> <li>• Display and review the directions for a Science Talk for students to refer to during the protocol.</li> <li>• Consider providing certain norms for students who struggle with collaboration and discussion to focus on during the Science Talk.</li> </ul>



Work Time (continued)	Meeting Students' Needs
<p><b>B. Preparing for and Participating in a Science Talk (20 minutes)</b></p> <ul style="list-style-type: none"> <li>• Introduce the fourth learning target by reading it aloud:           <ul style="list-style-type: none"> <li>* “I can gather evidence from informational texts to prepare for a Science Talk about natural disasters.”</li> </ul> </li> <li>• Invite several students to define the word <i>evidence</i> (facts or details from the text that support a point, an answer, or a discussion) and share some examples of evidence from the resources they have available.</li> <li>• Remind students that they can refer to all the resources listed in the opening of this lesson: note-catchers, their End of Unit 1 Assessment On-Demand Essay, and the informational texts used within this unit.</li> <li>• Tell students they are now going to participate in a Science Talk, like real scientists do. Remind students to refer to the Science Talk Norms anchor chart as they participate in a Science Talk with their peers in order to ensure that all ideas are heard.</li> <li>• Distribute the <b>Science Talk note-catcher</b> to students. Point out the three columns they will need to make notations in during the Science Talk:           <ul style="list-style-type: none"> <li>– Question: Record the question they are discussing.</li> <li>– Evidence: Record the evidence—from articles, journal notes, or anchor charts—that they refer to during their discussion of the question.</li> <li>– Gist: Write a brief statement of what their partner said.</li> </ul> </li> <li>• Have students gather in two concentric circles with their chairs and resources (their journals, texts, essay, and note-catcher). Be sure each student in the inner circle is facing a partner in the outer circle.</li> <li>• Remind students of the guiding question:           <ul style="list-style-type: none"> <li>* “What is a natural disaster?”</li> </ul> </li> <li>• Ask students to refer to the questions they wrote in their journal that were relevant to natural disasters and write them in the Question column in their Science Talk note-catchers.</li> <li>• Remind students that as they discuss their ideas about the questions, they will need to use evidence from their resources to support their thinking and follow the norms established for the Science Talk.</li> <li>• Invite students to begin the Science Talk, taking turns to ask each other questions they have written down.</li> </ul>	<ul style="list-style-type: none"> <li>• Model the Science Talk protocol by choosing a student to have a discussion with around a predetermined question, being sure to model norms listed.</li> <li>• Strategically place students in circles so that stronger readers and writers are in one circle and those students who struggle with complex text or language are in another one.</li> </ul>



Work Time (continued)	Meeting Students' Needs
<ul style="list-style-type: none"><li>• Use <b>the End of Unit Assessment, Part II: Science Talk Scoring Guide</b> to monitor student progression toward the learning targets. Be sure to listen to all student conversations briefly specifically to assess students on the learning target about sharing their ideas. Redirect and support students briefly if needed, but avoid leading the conversation.</li><li>• Approximately every 5 minutes, ask students in the inner circle to move two places to the left. They now will be facing a new partner.</li><li>• Ask these new pairs to discuss another question.</li><li>• Students will move three times, so they have the opportunity to discuss the questions and make notations with three of their peers.</li><li>• As students talk in pairs, circulate to note which students are speaking and what ideas they are sharing. Record on <b>sticky notes</b> any particularly intriguing comments made by students and additional questions that may arise during student discussions. These will be used during Work Time Part C and added to the class What Do We Know about Natural Disasters? anchor chart.</li><li>• If specific pairs are losing momentum, offer additional probing questions to ensure that they remain on topic and explore the question fully.</li></ul>	



Work Time (continued)	Meeting Students' Needs
<p><b>C. Synthesizing Information from a Science Talk (10 minutes)</b></p> <ul style="list-style-type: none"><li>• Place students in triads.</li><li>• Introduce the day's final learning target by reading it aloud:<ul style="list-style-type: none"><li>* "I can synthesize my ideas about natural disasters."</li></ul></li><li>• Focus students' attention on the word synthesize. Invite students to share what they remember about the meaning of this word from previous lessons, and listen for them to share ideas such as:<ul style="list-style-type: none"><li>– "Put all the ideas together" and "Summarize ideas/thoughts/information."</li></ul></li><li>• Tell students: "You just had an opportunity to participate in a Science Talk around one of our guiding questions about natural disasters. Here are some of the ideas I heard from the class ..." (Read aloud the intriguing questions/comments recorded onto sticky notes while listening to student conversations during the Science Talk.)</li><li>• As you read aloud each comment/question, ask students why it is a compelling comment/question, and place sticky notes onto the class What Do We Know about Natural Disasters? anchor chart, for ongoing reference throughout this module.</li><li>• Ask students to discuss the following questions with their triad partners:<ul style="list-style-type: none"><li>* "What questions and answers did you and your peers discuss?"</li><li>* "What evidence from your resources did you and/or your peers use to support your thinking?"</li></ul></li><li>• After 5 minutes, invite triads to share out with the whole group.</li><li>• Ask students to start a new page in their journals. Tell them that they will write a synthesis statement responding to the guiding question they discussed during the Science Talk. For this statement they are to write their answer to the following question:<ul style="list-style-type: none"><li>* "What is a natural disaster?"</li></ul></li><li>• Remind them to use evidence and details from the discussions they just had during the Science Talk. They will have an opportunity to continue synthesizing, or thinking about all that they have learned, in future lessons as well.</li></ul>	<ul style="list-style-type: none"><li>• Allow students who struggle with writing to dictate their synthesis statement to a peer or teacher.</li></ul>



Closing and Assessment	Meeting Students' Needs
<p><b>A. Debrief (5 minutes)</b></p> <ul style="list-style-type: none"> <li>• Ask students to share their synthesis statements with their triads, being sure to listen for new ideas and thoughts about natural disasters.</li> <li>• Invite several students to share their synthesis statements with the whole group.</li> <li>• Add any new ideas to the What Do We Know about Natural Disasters? anchor chart.</li> </ul>	<ul style="list-style-type: none"> <li>• Consider reading aloud students' synthesis statements for those who struggle with language.</li> </ul>
<p><b>B. Review Learning Targets (2 minutes)</b></p> <ul style="list-style-type: none"> <li>• Read aloud the following learning target:           <ul style="list-style-type: none"> <li>* "I can share my ideas about natural disasters with my peers during a Science Talk."</li> </ul> </li> <li>• Ask students to give a thumbs-up to show they met the target or a thumbs-down to show they still need to work on the target. Call on several students to share why they gave themselves a thumbs-up or thumbs-down, prompting them to refer to the norms they determined for the Science Talk Norms anchor chart as a way to support their self-assessment.</li> <li>• Repeat for this target:           <ul style="list-style-type: none"> <li>* "I can use the ideas of my peers to help inform my ideas about natural disasters."</li> </ul> </li> <li>• Collect students' Science Talk note-catcher and journals to review their synthesis statement as a component of Part 2 of their End of Unit 1 Assessment.</li> </ul>	
Homework	Meeting Students' Needs
<ul style="list-style-type: none"> <li>• Continue reading in your independent reading book for this unit at home.</li> </ul> <p><i>Note: Students will begin reading one of the central texts, Eight Days, in the next lesson to start Unit 2. Each student will need access to the text for the first few lessons of Unit 2.</i></p>	<ul style="list-style-type: none"> <li>• Consider providing audio recordings of independent reading books to students who struggle with reading complex text.</li> </ul>



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## Supporting Materials



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Science Talk Note-Catcher

Question	Evidence	GIST What my partner said...



Science Talk Scoring Guide

Learning Target	0	1	2	3	Teacher Comments
I can ask questions of my peers that are relevant to natural disasters.	There were no questions listed or questions were not about natural disasters.	There were some questions listed and some of them were about natural disasters.	There were at least three questions listed and they were about natural disasters.	There were several detailed questions listed and all were about natural disasters.	
I can share my ideas about natural disasters with my peers during a Science Talk.	Did not participate in the Science Talk.	Shared one or two ideas with their partners but had to be prompted to do so.	Independently shared ideas with their partners, without prompting from the teacher or their partner.	Independently shared ideas with their partner and probed for deeper understanding by paraphrasing, sharing more details, and asking further questions.	



Science Talk Scoring Guide

Learning Target	0	1	2	3	Teacher Comments
I can use the ideas of my peers to help inform my ideas about natural disasters.	Did not complete a synthesis statement or it was not about natural disasters.	Synthesis statement was about natural disasters; however, it contains few details about how their ideas have changed or stayed the same.	Synthesis statement has some details about how their ideas about natural disasters have stayed the same or changed.	Synthesis statement contains details and elaborations about how their ideas about natural disasters have either changed or stayed the same.	
I can gather evidence from informational texts to prepare for a Science Talk about natural disasters.	There was no evidence listed or evidence was not from texts read.	There was some evidence listed and some of it was from the texts read.	There was evidenced listed for each question from texts read.	There were multiple pieces of evidence listed from the texts read.	