



EXPEDITIONARY
LEARNING

Grade 5: Module 4: Unit 1: Overview



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Unit 1: Building Background Knowledge: The Science Behind Natural Disasters

In this very short unit, students will build their background knowledge about the science behind natural disasters. They will read two informational articles, one about hurricanes and the other about earthquakes. Students will focus on the relationships between scientific concepts in these informational texts, specifically how hurricanes and earthquakes form and what happens when they occur. For the mid-unit assessment, students will read and answer text-dependent questions about one new informational text about hurricanes. Following the mid-unit

assessment, students will be read another new informational text, this one about earthquakes. They will then synthesize the information from both informational texts about hurricanes and earthquakes and organize their ideas in preparation for the end of unit assessment. For the end of unit on-demand assessment, students write an essay in which they explain how a hurricane is a natural disaster as well as participate in a Science Talk with peers about natural disasters. Students cite and organize evidence from multiple texts on the same topic.

Guiding Questions And Big Ideas

- **What is a natural disaster?**
- *Extreme natural events can have positive and negative effects on the environment and humans.*

Mid-Unit 1 Assessment

Text-Dependent Short-Answer Quiz—The Effects of Natural Disasters

This assessment centers on NYSP12 ELA Standards RI.5.1, RI.5.3, and RI.5.4. After reading one new text on hurricanes, students will answer text-dependent multiple-choice and short-answer questions that assess their knowledge of how the formation of hurricanes is a causal relationship. They will also be expected to use strategies for finding the meaning of academic and scientific vocabulary in context (a skill they have been practicing all year).

End of Unit 1 Assessment

On-Demand Essay “What Makes a Hurricane a Natural Disaster?”

This assessment has two parts. Part 1 of this assessment is an essay that centers on NYSP12 ELA CCLS W.5.2, W.5.4, and W.5.9b. Part 2 of this assessment is a Science Talk that centers on NYSP12 ELA CCLS SL.5.1a, b, c, d, and f. After reading two articles on hurricanes, students will write an essay that answers the prompt “What makes a hurricane a natural disaster?” Students will be expected to support their discussion with evidence from the text(s). They will write a well-developed explanatory essay that contains a topic statement, two body paragraphs, and a concluding statement. In Part 2, students will prepare for and participate in a Science Talk in which they discuss with peers what a natural disaster is.



Content Connections

This module is designed to address English Language Arts standards. However, the module intentionally incorporates Social Studies and Science content that many teachers may be teaching during other parts of the day. 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>

NYS Social Studies Core Curriculum:

- 2.1e Extreme natural events (floods, fires, earthquakes, volcanic eruptions, hurricanes, tornadoes, and other severe storms) may have positive or negative impacts on living things.
- 5.2g The health, growth, and development of organisms are affected by environmental conditions such as the availability of food, air, water, space, shelter, heat, and sunlight.

Texts

1. "Earthquake." The New Book of Knowledge. Grolier Online, 2013. Web.
2. "How Does a Hurricane Form?" as found at <http://scijinks.nasa.gov/hurricane>
3. Carr, Karen. "Earthquakes." Kidipede. Kidipede.com, Web. <<http://scienceforkids.kidipede.com/geology/earthquakes/>>.
4. "Hurricanes." Hurricanes. University Corporation for Atmospheric Research, n.d. Web.



This unit is approximately 1.5 weeks or 8 sessions of instruction.

Lesson	Lesson Title	Long-Term Targets	Supporting Targets	Ongoing Assessment	Anchor Charts & Protocols
Lesson 1	Building Background Knowledge and Making Inferences: What Is a Natural Disaster?	<ul style="list-style-type: none"> I can make inferences using quotes from the text. (RI.5.1) I can accurately synthesize information from multiple texts on the same topic. (RI.5.9) I can effectively engage in discussions with diverse partners about fifth-grade topics and texts. (SL.5.1) 	<ul style="list-style-type: none"> I can make inferences about natural disasters based on information from texts. I can draw conclusions about natural disasters following a discussion. 	<ul style="list-style-type: none"> Journal (What Do We Know About Natural Disasters, Hurricanes, and Earthquakes anchor charts, glossaries) 	<ul style="list-style-type: none"> What Do We Know about Natural Disasters? Gallery Walk protocol World Café protocol Hurricanes Earthquakes
Lesson 2	Relationships Between Key Scientific Concepts: What Causes Earthquakes?	<ul style="list-style-type: none"> I can explain what a text says using quotes from the text. (RI.5.1) I can explain important relationships between people, events, and ideas in a historical, scientific, or technical text using specific details in the text. (RI.5.3) I can determine the meaning of academic words or phrases in an informational text. (RI.5.4) I can determine the meaning of content words or phrases in an informational text. (RI.5.4) 	<ul style="list-style-type: none"> I can explain the relationship between scientific concepts about earthquakes using specific details from the text. I can use context clues to determine the meaning of new words in an article about earthquakes. 	<ul style="list-style-type: none"> Annotated “Earthquakes” article Earthquake Concepts note-catcher Glossaries (scientific and academic vocabulary) 	<ul style="list-style-type: none"> Give One, Get One, Move On protocol What Do We Know about Natural Disasters? Vocabulary Strategies Earthquakes



Lesson	Lesson Title	Long-Term Targets	Supporting Targets	Ongoing Assessment	Anchor Charts & Protocols
Lesson 3	Relationships Between Key Scientific Concepts: What Causes Hurricanes?	<ul style="list-style-type: none"> I can explain what a text says using quotes from the text. (RI.5.1) I can explain important relationships between people, events, and ideas in a historical, scientific, or technical text using specific details in the text. (RI.5.3) I can determine the meaning of academic words or phrases in an informational text. (RI.5.4) I can determine the meaning of content words or phrases in an informational text. (RI.5.4) 	<ul style="list-style-type: none"> I can explain the relationship between scientific concepts about hurricanes using specific details from the text. I can use context clues to determine the meaning of new words in an article about hurricanes. 	<ul style="list-style-type: none"> Annotated “Hurricanes” article Hurricane Concepts note-catcher Glossaries (scientific and academic vocabulary) 	<ul style="list-style-type: none"> What Do We Know about Natural Disasters? Vocabulary Strategies Hurricanes
Lesson 4	Mid-Unit Assessment: Text-Dependent Short-Answer Quiz—The Effects of Natural Disasters	<ul style="list-style-type: none"> I can explain what a text says using quotes from the text. (RI.5.1) I can explain important relationships between people, events, and ideas in a historical, scientific, or technical text using specific details in the text. (RI.5.3) I can determine the meaning of academic words or phrases in an informational text. (RI.5.4) I can determine the meaning of content words or phrases in an informational text. (RI.5.4) 	<ul style="list-style-type: none"> I can explain the relationship between scientific concepts about earthquakes and hurricanes using specific details from text. I can determine the meaning of new words from context about natural disasters. I can reflect on my learning. 	<ul style="list-style-type: none"> Mid-Unit 1 Assessment Mid-Unit 1 Assessment: Tracking My Progress 	<ul style="list-style-type: none"> Things Close Readers Do What Do We Know about Natural Disasters?



Lesson	Lesson Title	Long-Term Targets	Supporting Targets	Ongoing Assessment	Anchor Charts & Protocols
Lesson 5	Synthesizing Information from Texts about Natural Disasters: What Makes an Earthquake a Natural Disaster?	<ul style="list-style-type: none"> I can explain what a text says using quotes from the text. (RI.5.1) I can determine the meaning of academic words or phrases in an informational text. (RI.5.4) I can determine the meaning of content words or phrases in an informational text. (RI.5.4) I can accurately synthesize information from multiple texts on the same topic. (RI.5.9) 	<ul style="list-style-type: none"> I can synthesize information about earthquakes and hurricanes using details from several texts. I can determine the meaning of new words about earthquakes and hurricanes through context. 	<ul style="list-style-type: none"> Journal (Earthquakes and Hurricanes note-catchers, glossaries) Earthquake Concepts note-catcher (begun in Lesson 2, added to in Lesson 4 homework) Hurricane Concepts note-catcher (begun in Lesson 3, added to in Lesson 4 homework) 	<ul style="list-style-type: none"> Back-to-Back, Face-to-Face protocol Vocabulary Strategies Hurricanes What Do We Know about Natural Disasters?
Lesson 6	Organizing Evidence from Multiple Informational Texts to Prepare for Writing: What Makes an Earthquake a Natural Disaster?	<ul style="list-style-type: none"> I can write informative/explanatory texts that convey ideas and information clearly. (W.5.2) I can produce clear and coherent writing that is appropriate to task, purpose, and audience. (W.5.4) I can choose evidence from literary or informational texts to support analysis, reflection, and research. (W.5.9) 	<ul style="list-style-type: none"> I can group supporting details together about how earthquakes and hurricanes are a natural disaster. I can develop the topic with details and quotes from the texts. I can use accurate scientific vocabulary to explain earthquakes and hurricanes. 	<ul style="list-style-type: none"> Journal (glossaries) Writing about Hurricanes graphic organizer 	<ul style="list-style-type: none"> What Do We Know about Natural Disasters?



Lesson	Lesson Title	Long-Term Targets	Supporting Targets	Ongoing Assessment	Anchor Charts & Protocols
Lesson 7	End of Unit Assessment, Part I: On-Demand Essay “What Makes a Hurricane a Natural Disaster?”	<ul style="list-style-type: none"> • I can write informative/explanatory texts that convey ideas and information clearly. (W.5.2) • I can produce clear and coherent writing that is appropriate to task, purpose, and audience. (W.5.4) • I can choose evidence from literary or informational texts to support analysis, reflection, and research. (W.5.9) 	<ul style="list-style-type: none"> • I can write a topic sentence to introduce the topic of my essay. • I can develop the topic with details and quotes from the texts. • I can use accurate scientific vocabulary to explain hurricanes. • I can write a concluding statement for my essay. • I can reflect on my learning about how the relationships between science concepts in texts can help explain natural disasters. 	<ul style="list-style-type: none"> • Writing About Hurricanes graphic organizer (from Lesson 6 or homework) • End of Unit 1 Assessment • End-of-Unit 1 Tracking My Progress 	<ul style="list-style-type: none"> • What Do We Know about Natural Disasters?
Lesson 8	End of Unit Assessment Part II: Science Talk	<ul style="list-style-type: none"> • 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) 	<ul style="list-style-type: none"> • 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 in order to help inform my ideas about natural disasters. • I can gather evidence from informational texts in order to prepare for a Science Talk about natural disasters. • I can synthesize my ideas about natural disasters. 	<ul style="list-style-type: none"> • Science Talk Note-catcher • Journal: Synthesis Statement 	<ul style="list-style-type: none"> • What Do We Know About Natural Disasters? • Science Talk Protocol • Science Talk Norms



Optional: Experts, Fieldwork, And Service

Experts:

- Invite meteorologists, environmentalists, geologists, or other scientists to the class in order to further build background knowledge and clarify questions about natural disasters researched.

Fieldwork:

- Arrange for students to visit a weather station, disaster preparedness committee meeting, or geology (meteorology) department of a local higher education institution.

Service:

- Create natural disaster preparedness brochures or public service announcements to distribute in the community.

Preparation and Materials

- **Journals:** In this module students will keep notes in a journal, as they have done in previous modules; however if you prefer there is a “one for display” example of each of the note-catchers that you can prepare as student handouts. Decide if students have enough room in their current journals to complete the routine reading and writing for this module. If not, ensure that students each have a spiral-bound or composition notebook.
- **Independent Reading:** The homework throughout this unit involves independent reading on the topic of Unit 1 (natural disasters). Before Lesson 1, gather texts from the Unit 1 Recommended Texts list, or obtain other books and articles on this topic.