

COURSE: ELA 9–12 Station-Based Learning

STREAMING PLUS LESSON: Finding Strength: Rebuilding After a Natural Disaster

ESSENTIAL QUESTION:

- How do we prepare for disasters?
- What are some emotional, physical, mental, and financial effects of disasters?
- What role do human strength and resilience play in recovering from disasters?

CUMULATIVE GOAL:

Students use the information they learn from the stations about natural disaster preparedness and recovery to create an interactive assignment using Board Builder that directly relates to the Essential Questions.

WHOLE GROUP OPENER (ENGAGEMENT ACTIVITY)

1) To evaluate students' prior knowledge of natural disasters, the teacher organizes students into groups and has each group complete an acrostic for the word *disaster*. Example:

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Groups post their acrostics and volunteers read them for the class. The teacher uses the acrostics to invite students to discuss personal experiences or observations related to specific natural disasters.

2) Without sound, the teacher shows the brief video segment “[Natural Disasters](#)” [2:13], which presents primary source footage of natural disasters. Pausing at 1:05, teacher asks students what types of natural disasters they have seen in the imagery. Teacher plays the remaining portion of the video segment and leads a follow up discussion upon completion.

3) The teacher posts a wordle containing vocabulary that describes human emotion and experience with natural disasters. In teams of 3-4, students use the wordle to help them generate their own list of descriptive words.

The teacher draws a two-column chart on the board and labels the columns: “Experiencing a Natural Disaster” and “Recovering from a Natural Disaster.” Students copy the chart and classify the words into the appropriate categories. Afterward, volunteers share their work.

Students discuss how natural disasters not only destroy the physical environment, as shown in the video segment, but also have a profound emotional effect, as shown by their charts.

The teacher then tells students: **According to the American Psychological Association, resilience, which is the process of adapting positively when confronted with adversity, is an ordinary, not extraordinary, human quality.** The teacher invites students to describe what they think this means, providing examples to support their responses.

4) The teacher previews the culminating activity, explaining that in their exploration of the stations, students will read, view, and analyze a variety of information that speaks to the resilience and power of the human spirit in the face of disaster. With this in mind, students will ultimately create a student board that answers the following question: How might understanding what is necessary to prepare for and recover from a disaster enable one to find personal strength? Students must choose of variety of media and offer an explanation of each choice to support their responses. See “Culminating Task Requirements” for a detailed list of assignment guidelines, requirements, and rubric.

STATIONS:

Station 1: An Ecologist’s Perspective

Note: All reading passages and handouts are printed out.

- 1) Students read the text “[Primary and Secondary Succession](#)” to gain an understanding of scientific terminology necessary to read the core informational text of this station. After reading, students collaborate to find key details in the reading to complete the Venn diagram on the Station 1 Student Sheet.
- 2) Students read the text “[Repairing the Post-Tsunami Landscape: An Ecologist’s Perspective](#)” and complete the central idea and key details graphic organizer on the Station 1 Student Sheet.
- 3) Students answer questions that help them synthesize information read and draw conclusions about both texts.

Station 2: Magnitude Math

Note: This is a computer-based station. A digital assignment was created for this station using Assignment Builder. It is called “Magnitude Math” and can be found in the ELA 9-12 Stations folder under the My School folder.

- 1) Students preview the handout “Vocabulary Study.” Next, they watch [Logarithms: Seismic Activity](#) [1:15-04:19]. After students watch the video, they define the words *magnitude* and *amplitude* and explain their connection to earthquakes on the Station 2 Student Sheet.
- 2) Students watch a video segment explaining the logarithmic Richter and Moment Magnitude Scales to measure earthquakes, including the Japanese earthquake in 2011. http://www.khanacademy.org/math/algebra/logarithms-tutorial/logarithm_properties/v/richter-scale#!
- 3) Students cut apart a set of flashcards found in step 2 of Station 2’s Student Sheet (The cards are labeled with the 14 epistations identified in the DE image: “[Map, Major California Earthquakes.](#)”) Students shuffle the cards, draw two, and use the online scientific calculator at <http://web2.0calc.com/> to determine how much greater one earthquake’s magnitude was to the other.

Station 3: After the Storm

Note: All images and handouts are printed out.

- 1) Students examine images, “[A Hurricane in Galveston, Texas](#)”, “[Damaged House from Hurricane](#)”, “[Hurricane Katrina Aftermath](#)”, and “[Hurricane Andrew; Flood Damage.](#)”

- 2) Students analyze the images, recording both explicit details they observe as well as inferences they make from those details on the graphic organizer on Station 3 Student Sheet.
- 3) Students conduct a text-based discussion of all images with their group.
- 4) Students draw conclusions to answer the question provided in Step 4 of the Station 3 Student Sheet.

Station 4: “The Flood”: Physical and Mental Preparedness

Note: This is a computer-based station. All reading passages and handouts are printed for participants.

- 1) Students read Parts I and II of the story “The Flood” by Émile Zola and list adjectives that describe both Roubien and the flood on Station 4 Student Sheet. Students must also provide textual evidence from the story to support the adjectives they chose.
- 2) Students complete the culminating question on their graphic organizer in order to further analyze text, make predictions, and connect it to information they’ve gathered in other stations.

Station 5: Rebuilding After a Natural Disaster

Note: This is a computer-based station.

- 1) Students watch two video segments, “[Architecture in the Lower Ninth Ward](#)” and “[Introduction: Hurricane Sandy](#)” and complete the T-chart on the Station 5 Student Sheet. Then, they answer the summary questions in preparation for taking a position on whether or not rebuilding should always be a part of natural disaster recovery.
- 2) Students are told to write a brief editorial in which they express an opinion about rebuilding in disaster prone areas. They consider the question: In urban areas, should rebuilding always be a part of natural disaster recovery? Students use the graphic organizer found on the Station 5 Student Sheet to collect evidence from the video segments to support their argument and address counterarguments.

WHOLE GROUP CLOSING ACTIVITY

- 1) Students create a digital assignment using Board Builder. The assignment must answer the following question: *How might understanding what is necessary to prepare for and recover from a disaster enable one to find personal strength?*
- 2) Volunteers share their writing with the class.