

Exploring Science Through Multiple Perspectives

LESSON/PROJECT

“The Ripple and Response”

SUBJECT

Earth Science

GRADE(S)

7

watch the video



Voice and choice

In a science class covering natural hazards and mitigation, students move beyond a traditional prescribed project approach to instead choose an actual historical natural disaster and examine it through a specific analytical lens of their own choosing. Rather than following a set formula, **students decide for themselves how they will tell the story of their chosen disaster** and demonstrate their learning, with lenses ranging from a risk psychologist comparing statistical danger to public fear, to a time traveler placing a past event in conversation with a present-day parallel, to a systems analyst tracing cause and effect. Students choose a disaster that is of interest to them, including heat wave deaths in California, the eruption of Mount St. Helens, the Irish potato famine set

against the Ethiopian famine, and the 1918 Spanish flu pandemic.

Throughout the project, students pull from both curated articles and their own independent research, sending newly discovered sources back to their teacher so that the class builds its knowledge base together. **Journal prompts anchor their thinking along the way**, moving them from an initial reflection on what people are most afraid of, to who is actually affected by a given disaster and what often goes unseen, and finally to how their perspective shifted between the start and end of the project. Along the way, students uncover ideas that complicate their assumptions.

Constructive reflection prompts

(continued on the next page)

SEE IT IN ACTION: EXAMPLES FROM EDUCATORS

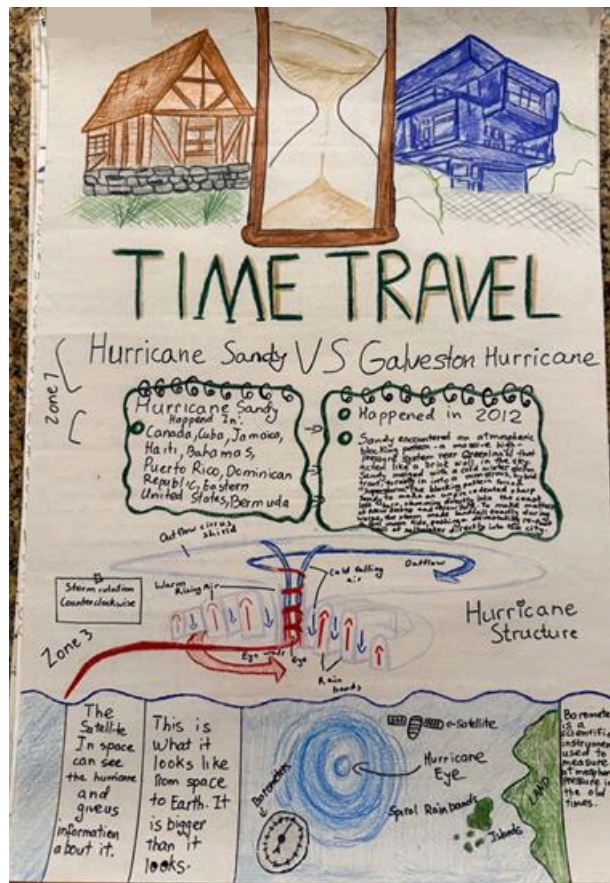
Multiple perspectives

Before presenting, students talk with classmates who studied the same disaster through a different lens, **discovering how much a shift in perspective changes the interpretation of the same event.** From these conversations and their own research, students arrive at a shared realization: that people across time and place are more connected than they initially assumed, and that comparing their own lives to those who lived through past crises, including drawing on their own memories

of living through COVID, deepens their sense of that connection. The teacher frames the project's success not in terms of polished presentations or fact-gathering, but in the meaning-making itself. Letting go of a more rigid, teacher-directed structure allowed students to genuinely construct their own understanding, and it is that human connection, more than any particular content focus, that the teacher sees as the lasting thread running through the work.

Student Work

Final poster for the natural disaster project:



Student journal response #1:

"The natural disaster I am afraid of are earthquakes. This is because earthquakes can range from level 1 to 9.4. They can cause buildings to break, causing people to get crushed and injured. People will need to find new houses. Everything you belong will be crushed and lost."

Student journal response #4:

"Now, I feel more prepared. I know that now we have tools that can keep us safe from earthquakes. We can track them, predict them, and model them...We know what to expect and we can be prepared to keep ourselves safe...Yes, we do have many earthquakes in my area. So, it is dangerous. But thanks to modern houses...we are safer to earthquakes now than in the past. By seeing the data I feel much more relieved..."