

Deadly, Destructive Natural Disasters

Ask students for examples of natural disasters and list them on the board. Examples might include earthquakes, hurricanes, fires, floods, and blizzards. Have any of your students lived through a natural disaster, or had relatives who did?

Tell your students that their challenge will be to find the 10 worst natural disasters in US history. You can also include world history, depending on what your class is studying—though this activity will focus on US history. Students will need to do online research to make their lists. Depending on school policy, you may want to assign this task as homework.

Ask students how they will make their lists. They can probably find lists online, but will all of the lists agree? Why or why not? What criteria will students use to determine the worst of the disasters? They should be able to come up with number of deaths and property damage as primary criteria. Property damage can be described in terms of monetary cost and in terms of what percent of a city was destroyed. Injuries are another criterion, but that information may be more difficult to come by.

You may want to have students split out earthquakes from hurricanes, fires, floods, and blizzards. A particular type of flood is the one resulting from a dam bursting. Floods are often associated with hurricanes, while fires can be associated with earthquakes, as are tsunamis. Why are these disasters sometimes connected?

Review the concept of finding reliable online sources. What makes a website reliable? Even if a site seems reliable, what is a strategy for making sure the information is accurate? (*Checking more than one site, preferably at least three.*) How far back in history will students be able to find this kind of information? When and how did people start recording the information? What scales are used to measure the size of earthquakes and hurricanes? When were these invented, and by whom?

Have students work in pairs or small groups to make charts to show the information they find. What will they put in the columns and rows? How will they make their charts clear and user friendly? You might want to have them make the charts on poster board and add printouts of photos showing damage to cities, buildings, and cars following natural disasters.

In going over student findings as a class, see if they can agree on the rankings of worst disasters. Note that historic events should be included. One interesting question is why many people know about the Great Chicago Fire (1871), but not the Peshtigo Fire, which happened at the same time and caused many more deaths. Another major US disaster was the Galveston hurricane of 1900.

A related question to address is disaster preparedness and response. Since the San Francisco earthquake and fire of 1906, what measures have cities taken to prevent fires associated with earthquakes? How have cities changed the way they require buildings to be constructed to minimize earthquake and related fire damage, and have these efforts helped? For example, why did freeways and other manmade structures collapse during the 1989 Loma Prieta earthquake, and what has been done to make sure it doesn't happen the same way next time an earthquake hits the region? (Bonus question: How did a World Series baseball game possibly prevent greater loss of life in that quake?) What other measures are currently taken to prevent extensive damage from natural disasters? How do weather forecasters help prevent worse damage, for example?

Also, when have such measures fallen short? What about responses following disasters? Do city, county, and state governments have plans for helping people and areas after a disaster? Why is Hurricane Katrina considered an example of what *not* to do in terms of both preparedness and response efforts? What parts of the response were successful? What type of natural disaster is most typical in your area, and what kind of government plans are in place?

EXTENSION: Discuss individual and family preparedness and work on a class project to make sure students all have emergency preparedness kits at home. There are many sources online for lists of items to go in the kits, such as these government sites: <http://emergency.cdc.gov/preparedness/> and <http://www.ready.gov/>.