

Name:

Date:

## Activity Z.2 “Weather Wise 2000”

Several NOAA publications use an interesting graphic showing that the *cost* of hurricanes has grown throughout the 20<sup>th</sup> century while, thankfully, the *number of lives* lost has declined. By some estimates, a unnamed hurricane like the one which hit in 1926 might now cause some \$75 billion in damage (compared to the current “record”: \$30.5 billion from Andrew in 1992) and wipe a major coastal city like New Orleans off the map. The reason? More people now live in more expensive houses on the coast. Public safety, in other words, goes beyond the science of weather and climate, though still requiring detailed knowledge of severe storms.

One way of bringing this to life is to simulate the approach of a severe storm, and that’s what WEATHERWISE 2000 is all about. You’ll be working in teams to research and report on precautions that can and should be taken by various groups of citizens. The Suggested URLs provide a variety of extreme weather events from which you can choose, as appropriate for your region and what you think will excite and engage you students the most. Your teacher will have made a final decision about what weather event to prepare for (such as a hurricane, or tornado, or Nor’easter, etc.) and what roles you should take on but there will likely be teams of:

- WEATHER RESEARCHERS
- WEATHER FORECASTERS
- EMERGENCY MANAGERS
- LOCAL MEDIA (getting the word out to the public)
- SCHOOL ADMINISTRATION/PARENTS (developing specific precautions applying to students and their peers.)

Whichever team you’re in you’ll need to assign group members to:

- research the history of severe weather in your region
- survey current plans and emergency preparedness procedures
- check out the latest understanding which NOAA’s weather researchers have been able to provide (such as their “margin of error” for where hurricanes might make landfall) and what kinds of uncertainty still exist.

Your teacher may invite you to decide as a group on what format of report or simulation will work best for your class: you might consider a simulated “All Hands” meeting (paralleling the actual conference calls held twice daily from the National Hurricane Center), or researching and writing an emergency preparedness brochure for distribution in your community.

Just like the NOAA/FEMA/Red Cross publications available online in pdf format, such brochures should have:

- 1) scientific background: key facts about the storm
- 2) who's at risk, where
- 3) specific steps to take before a storm is imminent, and
- 4) actions to take when a storm approaches.

Focus on key issues, not all of which are uncontroversial. Perhaps you might debate restrictions on building homes in hurricane- or flood-prone regions. Should there be limits on freedom of individual choice?

These Suggested URLs provide links to the official publications of NOAA, FEMA and the Red Cross relating to the full range of weather emergencies.

<http://www.nssl.noaa.gov/edu/ltg/>

NSSL Lightning Information: questions and answers about lightning.

[http://ww2010.atmos.uiuc.edu/\(Gh\)/guides/mtr/svr/home.rxml](http://ww2010.atmos.uiuc.edu/(Gh)/guides/mtr/svr/home.rxml)

Severe Storms: online meteorology guide: how thunderstorms develop, types of thunderstorms and the dangers involved.

<http://www.fema.gov/library/tornadof.htm>

FEMA: Tornado Fact Sheet: information on what to have on hand and what to do in the case of a tornado.

<http://www.spc.noaa.gov/faq/tornado/>

The Online Tornado FAQ: the basic facts about tornadoes, tornado forecasting, safety, and tornado climatology are just some of the topics covered.

<http://www.nssl.noaa.gov/edu/tornado/>

NSSL Tornado Information: questions and answers about tornadoes.

<http://www.nssl.noaa.gov/NWSTornado/>

Tornadoes: Nature's Most Violent Storms: an explanation about how tornadoes form, where they occur and tips on how to develop a tornado preparedness plan for your family or school.

<http://www.fema.gov/library/lib07.htm>

FEMA Online Library: links to FEMA publications including "Against the Wind" and preparedness guides.

<http://www.nhc.noaa.gov/>

National Hurricane Centers web page with the latest warnings and information about hurricanes.