

2.3 Extreme Weather

TECHTREK

myNGconnect.com For a map and photos of extreme weather and a diagram of tornado formation

Maps and
GraphsDigital
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Resources

Main Idea Extreme weather can cause great destruction, but scientists are lessening its effect.

On August 29, 2005, Hurricane Katrina raced toward New Orleans, Louisiana. The water level in the Gulf of Mexico rose 34 feet and flooded 80 percent of the city. Thousands of people lost their homes and many businesses were destroyed.

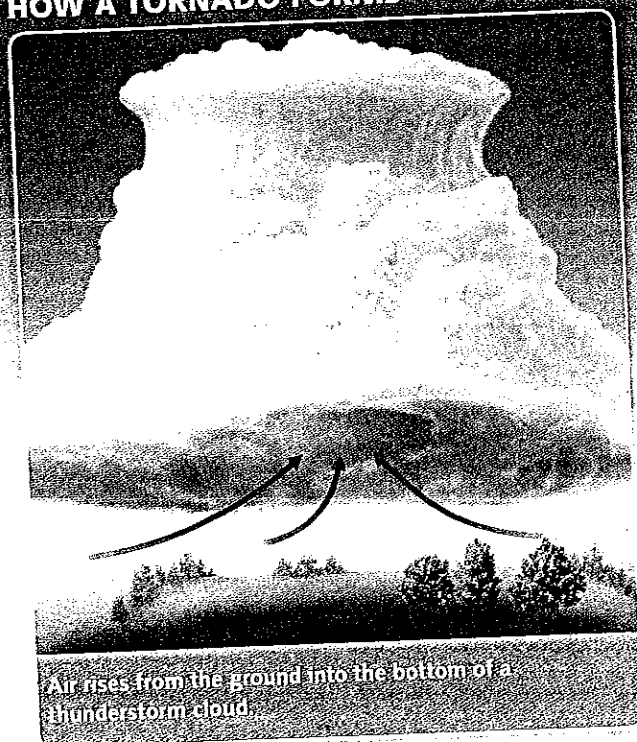
Wild Weather

Katrina is an example of extreme weather, which is weather so powerful it can deeply affect human lives. A **hurricane** such as Katrina is a strong storm with swirling winds and heavy rainfall. Winds rotate fiercely and can reach 200 miles per hour. A hurricane is a type of **cyclone**, which is a storm with rotating winds. In the Eastern Hemisphere, a cyclone is called a typhoon.

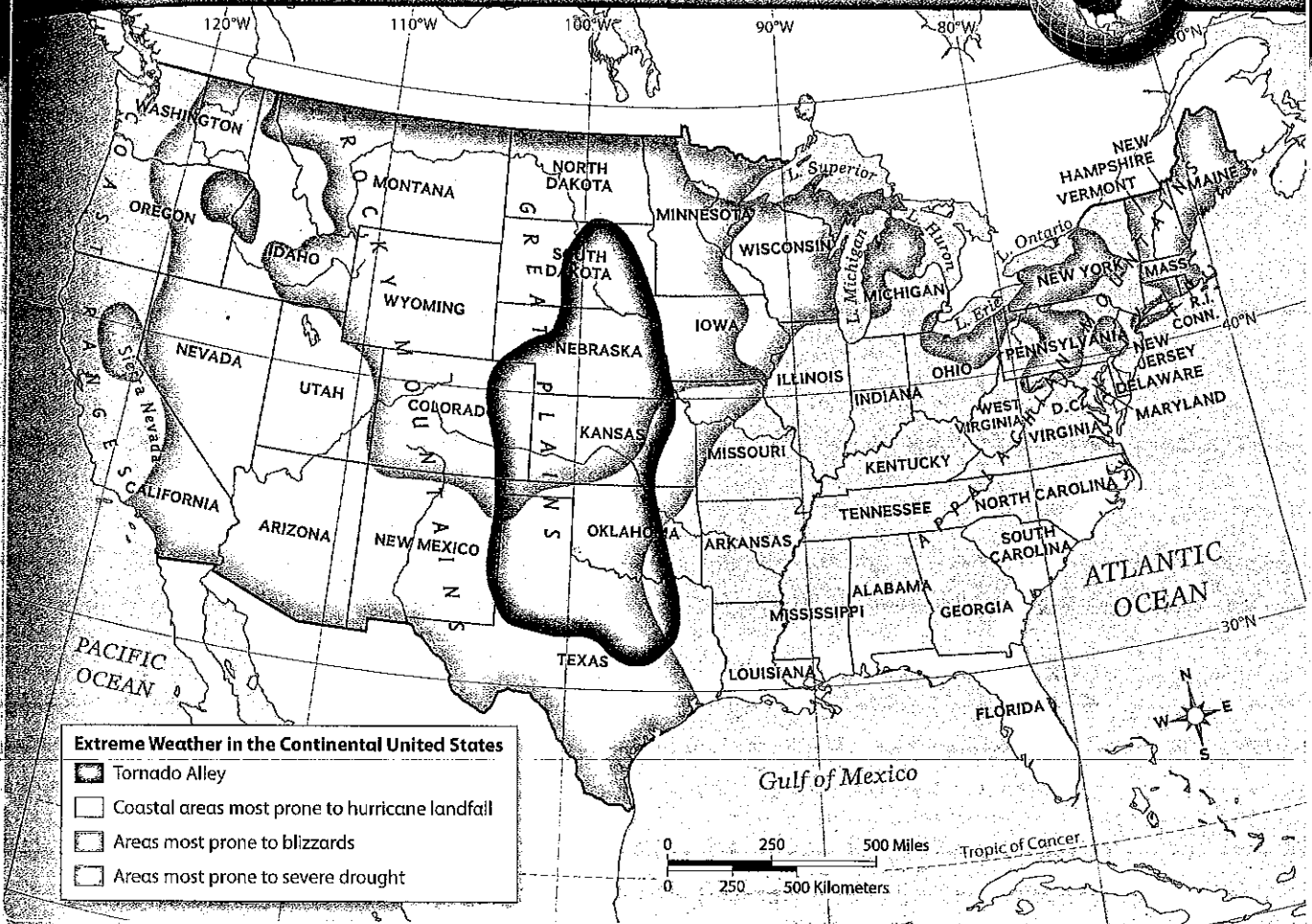
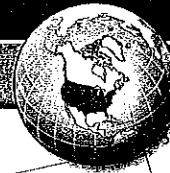
A **tornado** is a smaller storm than a cyclone, but it has even more powerful winds that can reach 300 miles per hour. A tornado follows an unpredictable path and can rip buildings from their foundations. Tornadoes occur all over the world, but most of them form in the United States, east of the Rocky Mountains.

Other types of extreme weather are not as dangerous as cyclones or tornadoes, but they still put people at risk. A flood occurs when water covers an area of land that is usually dry. Floods often occur after a cyclone. A blizzard is a heavy snowstorm with strong winds and very cold temperatures. A drought results when the amount of rainfall drops far below the average amount. It is sometimes accompanied by a heat wave, or unusually high temperatures over a period of time.

HOW A TORNADO FORMS



EXTREME WEATHER IN THE UNITED STATES



Scientific Solutions

Scientists are working to lessen the effects of extreme weather on humans. For example, they can often predict the path of a hurricane. They have also worked with engineers to design levees, or walls to hold back floodwaters. Many residents of New Orleans believe that better levees might have limited the damage caused by flooding after Hurricane Katrina.

The ability to predict tornadoes has also improved. Today, the National Weather Service uses radar and satellite imagery, as well as a network of “spotters,” to track big storms. Today’s instant communications technology makes it possible to broadcast warnings before a storm strikes.

Before You Move On

Summarize How are scientists helping to lessen the impact of extreme weather?

ONGOING ASSESSMENT

VIEWING LAB



GeoJournal

- Analyze Visuals** What happens in each stage of tornado formation?
- Interpret Maps** According to the map, which state is at risk for all four types of extreme weather?
- Draw Conclusions** Even though scientists can predict when and where tornadoes may occur, why do these storms still catch people by surprise?
- Human-Environment Interaction** How might a severe drought affect people who live in the Great Plains area of the United States?