

Name _____

The New Madrid Fault

In 1812, an earthquake caused by the New Madrid fault caused such seismic activity that the Mississippi River actually flowed backwards. The first tremors began in 1811, giving warning that the New Madrid Fault was about to get interesting. This fault line, which is named after the city New Madrid and is located along the Mississippi River in the state of Arkansas, would soon produce an earthquake that would have likely measured well above an eight on the Richter scale.

Unlike the San Francisco earthquake of 1906, this area near the New Madrid fault was sparsely populated. However, some towns were totally wiped out when the tremors caused landslides that covered the areas below them. Then, in February of 1812, the largest of the earthquakes would strike the area.

The quake that hit the region in February of 1812 is estimated to have measured at a strength of 8.8 and is

undoubtedly one of the strongest earthquakes to ever hit this region. The tremors were so strong that church bells rang in Boston, Massachusetts, from the shaking of the earth. Waterfalls were created in the mighty Mississippi as the riverbed shifted and people unlucky enough to be on the water were killed instantly in the tumultuous waters. Reelfoot Lake in Tennessee was created as the earth shifted and water from the Mississippi poured into the new depressions of the ground.

The activity finally began to wane in March of the same year, but the landscape of the area had been permanently changed. Towns had been destroyed, fields were flooded, and new lakes were created. Historians estimate that the series of events eventually caused the deaths of over one thousand people.

Text Questions

- Based on the text, which statement is not true?
 - The New Madrid fault is located near the Mississippi River.
 - Tremors from the New Madrid fault were so strong that the effects were felt as far away as Boston, Massachusetts.
 - There were no serious injuries as a result of the earthquakes because there were no large towns.
 - At one point, the Mississippi River flowed backwards as a result of the earthquakes.
- Which would be the best source to learn more about the New Madrid Fault?
 - a book about major fault lines in the United States
 - a book about major earthquakes that have happened throughout the world
 - an online encyclopedia entry about major earthquakes in the United States
 - an online site about the history of the Mississippi River
- Which is an antonym for the word *sparsely* as it is used in the second paragraph?
 - barely
 - lightly
 - thinly
 - densely
- What is the main idea of this text?
 - In the past, the New Madrid fault caused major damage near the Mississippi River.
 - The earthquakes caused by the New Madrid fault were worse than the 1906 San Francisco earthquake.
 - People all over the world should know about the life-changing effects of earthquakes.
 - The New Madrid fault is still a serious threat in today's world.
- Using the information in the text, list two things that happened as a result of the earthquakes.
 - _____
 - _____

Name _____

Mount St. Helens: A Deadly Volcano

Modern history has had its share of deadly volcanic eruptions. Mount St. Helens, located in the state of Washington, was once called “the Smoking Mountain” by Native Americans. The once smoking mountain was becoming extremely active, and by March of 1980, the activity within the volcano had begun to increase significantly.

Because of the increased activity, those living near the mountain were encouraged to evacuate. Unfortunately, not everyone listened to the warnings and left the area. One can only assume that those who chose to stay did not realize just how dangerous the situation was about to become.

Then, on May 18, 1980, the area around the volcano was hit with an earthquake. Parts of the mountain

began to shift and one of the largest landslides ever recorded followed as a result of the earthquake. But the mountain wasn't finished. The volcano erupted with a blast that took out trees and leveled the area as far as twelve miles from the point of the blast. The explosion caused the debris from the landslide to become liquefied, and everything was propelled by the force of the explosion down the mountain at speeds surpassing one hundred miles an hour. The rush of debris, in turn, flooded the surrounding riverbanks, causing them to overflow and destroy everything in their path.

Despite the warnings, everyone did not reach safety. Fifty-seven people died as a result of this natural disaster. Scientists continue to monitor the still active volcano and hope such a catastrophe as what occurred in 1980 will not repeat itself in the near future.

Text Questions

1. Using information from the text, explain why people may not have evacuated the area around Mount St. Helens.

2. What was the author's purpose in writing this text?

- a. to explain c. to persuade
b. to entertain d. to inform

3. Which statement is an opinion?

- Mount St. Helens led to the deaths of fifty-seven people.
- The eruption in 1980 of Mount St. Helens is, without a doubt, the worst natural disaster to ever occur in North America.
- The state of Washington experienced an earthquake and a volcanic explosion on the same day.
- Mount St. Helens was called “the Smoking Mountain” by Native Americans.

4. Why were the residents of the mountain encouraged to evacuate?

- a. The volcano was showing signs of increased activity.
- b. The property around the volcano was being used by the government for an interstate highway.
- c. Animals trying to escape volcanic activity were causing a stampede.
- d. Secret government experiments were taking place near the mountain.

5. Which would be a good primary source about the 1980 volcanic eruption?

- a. a website about volcanic eruptions in South America
- b. an atlas with maps showing the Pacific Northwest
- c. a letter written about the volcanic explosion by a survivor from the area
- d. an encyclopedia entry about volcanoes

Name _____

Chernobyl: A Nuclear Disaster

In the 1970s, the Chernobyl nuclear plant, located in the Ukraine, was one of the largest nuclear power plants on the planet. In 1986, the facility would experience an explosion that would forever change how much of the world viewed nuclear power. The effects of one fateful day would change the surrounding area forever.

Not until years after the incident would those investigating the cause finally be able to understand the origins of the disaster. An explosion in the reactors created a power surge that eventually led to an explosion that blew the lid off the nuclear reactor. This explosion caused radioactive material to spread to

surrounding areas. Many of those areas were inhabited by civilians who were now exposed to dangerous levels of radiation.

Thirty-two people died as an immediate result of the explosion. The radiation that spread out from the facility would contaminate millions of acres. Eventually thousands of people died and thousands of others suffered from radiation poisoning and cancers caused from the nuclear explosion. Those people who lived near Chernobyl but did not die all lost their homes because of the contamination. Chernobyl was officially shut down in 2000, but the disastrous results of the nuclear meltdown remain even today.

Text Questions

- Which statement is true about the text?
 - Because of the Chernobyl disaster, nuclear power is no longer used today.
 - After the meltdown, scientists managed to contain radiation within the area of the nuclear facility.
 - Inhabitants of the area surrounding Chernobyl were not affected by the nuclear explosion.
 - Thirty-two people died as an immediate result of the explosion, but many more would die as a result of the nuclear meltdown.
- Which sentence in the first paragraph best foreshadows the fact that the nuclear meltdown would have long-term effects?
 - In the 1970s, the Chernobyl nuclear plant, located in the Ukraine, was one of the largest nuclear power plants on the planet.
 - In 1986, the facility would experience an explosion that would forever change how much of the world viewed nuclear power.
 - The effects of one fateful day would change the surrounding area forever.
 - Those people who lived near Chernobyl but did not die all lost their homes because of the contamination.
- According to the text, which event most likely caused the nuclear meltdown?
 - a loss of electricity in the facility
 - a bird flying into some electrical wires outside the plant
 - an unexpected freeze that caused a sudden drop in temperatures
 - an explosion in the reactors that caused a power surge
- After reading this text, what can one conclude about the nuclear plant at Chernobyl?
 - The plant will reopen within the next decade.
 - It will continue to provide power from the portions of the plant that were not affected by the explosion.
 - The people living in the area hope to see the facility providing nuclear power within the near future.
 - The plant is no longer in operation.
- Why were people outside of the plant affected by the explosion?
 - Nuclear radiation spread through the air.
 - People came to the site to see what had happened.
 - Vehicles leaving the plant unknowingly carried radiation outside of the facility.
 - Birds flying in the vicinity of the facility carried radiation to other areas.

Name _____

The Space Shuttle Catastrophe

On February 1, 2003, the space shuttle *Columbia* exploded. The mission was the twenty-eighth trip made by the space shuttle. The crew of seven would die in a fiery explosion as the ship attempted to reenter Earth's atmosphere.

The start of the demise of the shuttle and its crew actually began with the shuttle's liftoff. Within the beginning of the launch, a piece of insulation broke off from the propellant tank. The piece of foam hit the edge of the left wing of the shuttle. This damage to the wing would later prove disastrous.

The wings of the shuttle were protected by heat-resistant tiles. When the foam hit the wing, some of the tiles were dislodged. Without the protection of this equipment, heat and wind would enter the wing during its ascent into the atmosphere. The result would cause the wing to blow apart from the struggling shuttle.

At 8:58, witnesses began seeing the first debris from the shuttle hit the ground. By 9:00 a.m., the shuttle and its crew were gone. The space shuttle program remained grounded until a complete investigation could be done, and the program did not resume until July 2005.

Text Questions

- Which is most likely the reason the space shuttle exploded?
 - Bad weather caused lightning strikes that caused a fire on board the *Columbia*.
 - The space shuttle was blown off course from its original landing site.
 - The space shuttle missed its original take-off date.
 - Insulation broke off during liftoff and damaged the left wing.
- Why was the space shuttle program grounded until 2005?
 - to determine the cause of the accident
 - to allow time for the completion of a new space shuttle
 - to allow time to train new astronauts
 - to determine which space shuttle and crew would be used for the next mission
- What is this passage mostly about?
 - the importance of the space program
 - the explosion of the space shuttle *Columbia*
 - the end of the space shuttle program
 - the history of the United States' space program
- What was the author's purpose in writing this text?
 - to persuade
 - to entertain
 - to inform
 - to explain
- Which would be a good secondary source if someone wanted to know more about one of the astronauts on *Columbia*'s last mission?
 - an autobiography by one of the seven astronauts on the mission
 - a fiction book about space travel in the future
 - a biography about one of the seven astronauts on the mission
 - an almanac about space travel in the United States

Name _____

Hurricane Katrina

On August 29, 2005, Hurricane Katrina hit the United States' Gulf Coastal area. Winds from the hurricane struck land at 100 to 140 miles per hour. Katrina is estimated to have caused over one hundred billion dollars in damages to areas in the United States.

Why was this hurricane so catastrophic? One reason is the amount of area affected by the storm. The damaging winds reached over four hundred miles across the continent. People in Louisiana, Mississippi, and Alabama all felt the effects of Katrina's raging wind and rain. The storm also caused levees to fail, which led to massive flooding. After the storm, many were left without food, water, or shelter.

As the storm was predicted to approach New Orleans, the mayor issued a mandatory evacuation. For those

unable to leave, the city stadium—the Superdome—would be used as a temporary shelter. Despite the evacuation order, many people without funds or transportation were unable to leave. Eventually, some ten thousand people would seek shelter in the Superdome and still others chose to wait out the storm in their own homes despite the order to leave.

Although the aftermath of Hurricane Katrina was horrific, many heroes came out of such a terrible tragedy. People risked their lives to save others. People offered what they had to help those in need. Sadly, nearly two thousand people died. The effects of Hurricane Katrina can still be seen today despite the efforts of those hoping to rebuild what was lost.

Text Questions

1. Using information from the text, list two reasons people may have been unable to leave New Orleans once the mandatory evacuation order was given.
 - a. _____
 - b. _____
2. Using clues from the text, what is the purpose of a levee?
 - a. to direct traffic
 - b. to control floodwaters
 - c. to control levels of radiation
 - d. to mandate evacuations
3. Why did the mayor order a mandatory evacuation?
 - a. He felt that everyone needed to go on vacation.
 - b. He believed the city would be destroyed.
 - c. He wanted the city all to himself.
 - d. He felt conditions would become unsafe for the people there.
4. After reading this passage, what is one thing that could be done to protect the people of New Orleans in the event of future hurricanes?
 - a. Everyone could be given a car so they could more easily evacuate.
 - b. The levees could be strengthened to hold back floodwaters.
 - c. All people living in New Orleans should move to other cities.
 - d. There are no safety measures that could be done to protect from future hurricanes.
5. Which is a synonym for the word *catastrophic* as it is used in the second paragraph?
 - a. wonderful
 - b. satisfying
 - c. majestic
 - d. terrible