

Name: _____

Date: _____

SELECTION 1: The San Francisco Earthquake, 1906

At 5:12 A.M. on Wednesday, April 18, 1906, an **earthquake** woke up residents of **San Francisco** and tossed them from their beds. Little did they know that it was going to be one of the deadliest natural disasters in the history of the United States.

The earthquake itself only lasted about 45 seconds, but it was estimated to have been between 7.8 and 8.3 on the Richter scale, which wasn't invented until 1935. When the earth stopped shaking, few people realized that San Francisco's cataclysm had only just begun. Almost immediately, downed power lines, broken gas lines, and damaged chimneys ignited widespread fires. Worse, the quake had cracked the city's massive clay water mains, leaving firefighters virtually without water.

The Fire Vibrated

The fire burned for 72 hours, at times consuming one city block every 30 minutes and eventually charring more than four square miles. Towers of smoke billowed a mile high. The flames reached 2,700°F; even using saltwater lines from the bay and wearing protective wet bags, firefighters couldn't get near the fire. Some observers claimed that the fire could actually be felt as "vibrations like the rumbling of a steam boiler or the passing of several streetcars."

Dynamite Fueled the Flames

City and military authorities attempted to create a firebreak using dynamite and gunpowder. But, inexperienced with explosives, they sometimes failed to check the wind or anticipate the direction of the fire before blasting buildings. Instead of creating a firebreak, they often sent flaming debris to neighboring blocks, spreading the fire faster and farther.



Half the city's population—over 200,000 people—fled their homes. Refugees packed into every public square, cemetery, and park, with an estimated 50,000 to 90,000 in Golden Gate Park alone. At first

people of different classes and ethnicities crowded together on park benches and rubbed elbows in bread lines.

In Conclusion

The terrifying rumble of an earthquake shattered the early morning silence of April 18 at 5:15 AM. The quake lasted only a minute but caused the worst natural disaster in the nation's history. Modern analysis estimates it registered 8.25 on the Richter scale (By comparison, the quake that hit San Francisco on October 17, 1989 registered 6.7).

The greatest destruction came from the fires the quake ignited. These ravaged the city for three days before burning themselves out. The maelstrom destroyed 490 city blocks, a total of 25,000 buildings, made over 250,000 homeless and killed between 450 and 700. Damage estimates topped \$350,000,000.



When Time Stands Still

Each year on April 18th, at exactly 5:12 A.M., hundreds gather to commemorate the 1906 earthquake with a moment of silence at Lotta's Fountain on Market Street.

SELECTION 2: A Narrow Escape

The quake awoke G.A. Raymond as he slept in his room at the Palace Hotel. He describes his escape:

"I had \$600.00 in gold under my pillow. I awoke as I was thrown out of bed. Attempting to walk, the floor shook so that I fell. I grabbed my clothing and rushed down into the office, where dozens were already **congregated**. Suddenly the lights went out, and every one rushed for the door.

Outside I witnessed a sight I never want to see again. It was dawn and light. I looked up. The air was filled with falling stones. People around me were crushed to death on all sides. All around the huge buildings were shaking and waving. Every moment there were reports like 100 cannons going off at one time. Then streams of fire would shoot out, and other reports followed.

I asked a man standing next to me what happened. Before he could answer a thousand bricks fell on him and he was killed. A woman threw her arms around my neck. I pushed her away and fled. All around me buildings were rocking and flames shooting. As I ran people on all sides were crying, praying and calling for help. I thought the end of the world had come.

I met a Catholic priest, and he said: 'We must get to the ferry.' He knew the way, and we rushed down Market Street. Men, women and children were crawling from the debris. Hundreds were rushing down the street and every minute people were felled by debris.

At places the streets had cracked and opened. Chasms extended in all directions. I saw a drove of cattle, wild with fright, rushing up Market Street. I crouched beside a swaying building. As they came nearer they disappeared, seeming to drop out into the earth. When the last had gone I went nearer and found they had indeed been precipitated into the earth, a wide fissure having swallowed them. I was crazy with fear and the horrible sights.

How I reached the ferry I cannot say. It was bedlam, pandemonium and hell rolled into one. There must have been 10,000 people trying to get on that boat. Men and women fought like wildcats to push their way aboard. Clothes were torn from the backs of men and women and children indiscriminately. Women fainted, and there was no water at hand with which to revive them. Men lost their reason at those awful moments. One big, strong man, beat his head against one of the iron pillars on the dock, and cried out in a loud voice: 'This fire must be put out! The city must be saved!' It was awful."

References: Bronson, William, *The Earth Shook, the Sky Burned* (1986); Thomas, Gordon and Witts, Max, *The San Francisco Earthquake* (1971); Morris, Charles (ed.), *The San Francisco Calamity by Earthquake and Fire* (1906).

Selection 3: World's Largest Recorded Earthquake

"The Great Chilean Earthquake"

9.5 Magnitude - May 22, 1960 near Valdivia, Chile

The world's largest earthquake with an instrumentally documented magnitude occurred on May 22, 1960 near Valdivia, in southern Chile. It has been assigned a magnitude of 9.5 by the United States Geological Survey. It is referred to as the "Great Chilean Earthquake" and the "1960 Valdivia Earthquake."

The United States Geological Survey reports this event as the "largest earthquake of the 20th Century". Other earthquakes in recorded history may have been larger; however this is the largest earthquake that has occurred since accurate estimates of magnitude became possible in the early 1900's.



Local Damage from Ground Motion and Tsunamis

The earthquake occurred beneath the Pacific Ocean off the coast of Chile. Ground motion from this earthquake destroyed and damaged many buildings. The Chilean government estimated that about 2,000,000 people were left homeless. It was fortunate that the earthquake occurred in the middle of the afternoon and was preceded by a powerful foreshock. That foreshock frightened everyone from their buildings, placing them outside when the main earthquake occurred.

Most of the damage and deaths were caused by a series of tsunamis that were generated by the earthquake. These waves swept over coastal areas moments after the earthquake occurred. They tore buildings from their foundations and drowned many people.

There are many different casualty estimates for this earthquake. They range from a low of 490 to a

high of "approximately 6000". Most of the casualties were caused by tsunamis in Chile and from ground motion. However, people as far away as the Philippines were killed by this event.

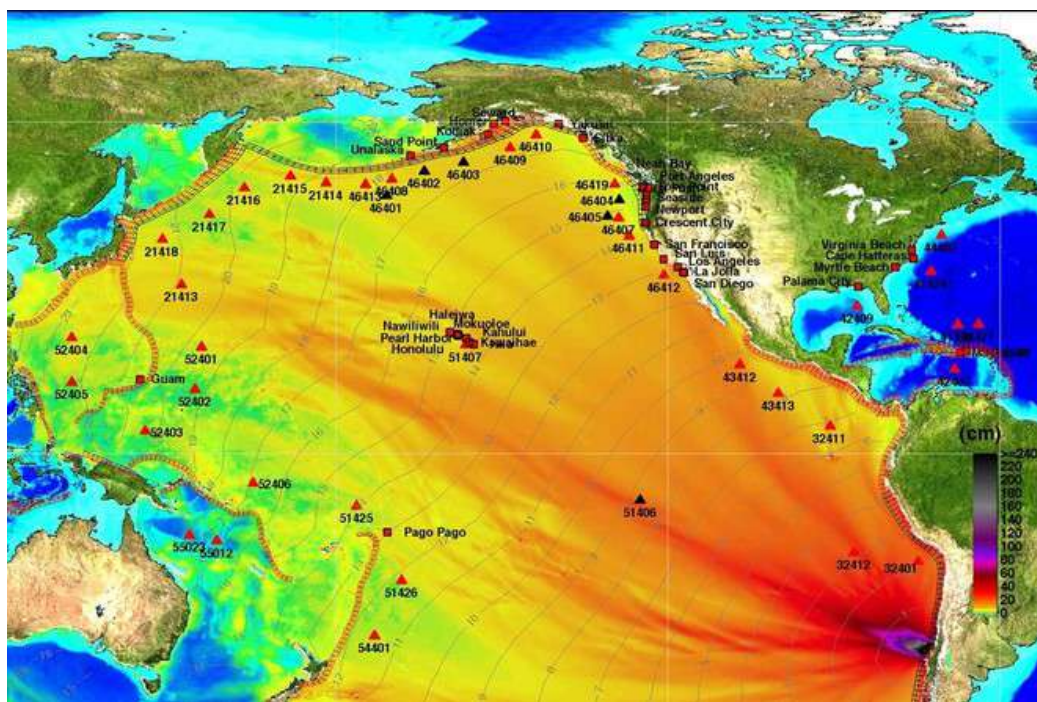
Tsunami Damage

This is one of the few earthquakes that has killed large numbers of people at distant locations. Tsunamis generated by the earthquake traveled across the Pacific Ocean at a speed of over 200 miles per hour. Changes in sea-level were noticed all around the Pacific Ocean basin.

Fifteen hours after the earthquake a tsunami with a run-up of 35 feet swept over coastal areas of Hawaii. Many shoreline facilities and buildings near coastal areas were destroyed. Near Hilo, Hawaii, 61 people were reported killed by the waves.

In California, many small boats were damaged as the waves swept through marinas. At Crescent City, a wave had a run-up of about 5 feet and caused damage to shoreline structures and small boats.

Waves up to 18 feet high hit the island of Honshu, Japan about 22 hours after the earthquake. There it destroyed more than 1600 homes and left 185 people dead or missing. Another 32 people were killed in the Philippines about 24 hours after the earthquake. Damage also occurred on Easter Island and Samoa.



SELECTION 4: This poem was written by a child named Katie of Saint Benedict's Catholic School.

My Lost Child

My child's lost amongst the rubble.

My voice calls out but to no avail, no reply reaches my ears.

My hands are searching, forever searching,

but I feel nothing but the roughness of broken bricks, no soft skin, no smooth hair, just rough bricks.

Thoughts are running through my mind.

Thoughts of sorrow, of times gone by and most of all thoughts of despair.

Where's my daughter, will I see her again? Will I hear her voice calling my name? Will I hear her laugh again, will I feel the warmth of her skin against mine as I hug her,

The softness of her face as I kiss her goodnight, or will I ever get to see her cry when she's fallen over?

I need to find my daughter so I can hold her, comfort her make her laugh.

I need her to be here so she will know how much she's loved, how much she's missed when she is gone.

I need her to look after me as I grow old and to brighten my day when she visits me after she's moved out of my house to build a new home for herself and her family.

I see a shining in the darkness under the rubble.

Is it my daughter's eyes or just my tears? I can't tell.

I search deeper, hope rising inside me, then I see my daughters face. ~

My heart grows lighter with joy, and with renewed energy, I dig my daughter free. I wipe the dust from her face as she lies so still. I hold her close to me, one thought going through my mind.

Then I see her eyelids flutter, and her chest slowly rise - she's alive!