

PINK- MARIA  
GREEN-CHLOE

INTRO:

On 24, 79 AD in Pompeii, Italy, Mount Vesuvius erupted causing about 2,000 people to die from being covered in a thick layer of ash. Pompeii's victims are still preserved in hardened ash, which depicts how and where they died. The eruption of Mount Vesuvius was one of the most lethal in European history. All the information we know about what exactly happened prior and during the eruption was documented by a Roman administrator and poet.

BEFORE:

17 years before Mt Vesuvius erupted, on February 5th 62 A.D., a 7.5 magnitude earthquake occurred. The Latin philosopher and dramatist Seneca the Younger wrote a description of the event: This tremor was on 5 February, in the consulship of Regulus and Verginius, and it inflicted great devastation on Campania... Sheep died and statues split. Some people have lost their minds and wander about in their madness. Sixth book of his *Naturales quaestiones* entitled *De Terrae Motu* (Concerning Earthquakes).

Pompeii, a city of 20,000 people, built in a fashion that could not withstand earthquakes, suffered severe damage. Herculaneum, another city, had damage as well. Thousands of people were killed. The earthquake triggered a tsunami. The reconstruction was slow. This earthquake may have been a precursor to the eruption. Seismic activity was so common in the area, no one paid attention to the several earthquakes that happened days before the volcano. A factor of the disaster is the fact that under Vesuvius, there is a tear in the African plate. The tear lets the extreme heat from the Earth's mantle to melt the rock on the plate, causing built-up pressure and thus, violent eruptions.

DURING:

On an August day in the year 79 A.D., sixteen years after the earthquake, Mount Vesuvius erupted again, sending ash, pumice, rocks, and volcanic gases people hundreds of miles away could see. When the debris started falling back to the ground, conditions for the citizens who did not leave the city started to get worse. The ash made it hard to breathe, and many buildings collapsed. Then, a river of poison gas and pulverized rock flowed down the mountain and drowned everything that it encountered. When the eruption stopped the next day, 16,000 people were dead, and the city was buried under millions of tons of volcanic ash. Thus, Pompeii was abandoned for centuries.

## AFTER:

In 1748, Pompeii was found by explorers searching for ancient artifacts. Digging, they found that underneath the dust, Pompeii was almost exactly as it looked before. The ash preserved the city so well, people can still find its intact buildings, frozen skeletons, everyday objects, household goods, and even food, all from 2000 years ago.

## WHAT IF:

Mt Vesuvius is still active today. It's last eruption was in 1944, having killed 26 people. Naples, a city of 3 million people, is only 12 km away from the volcano. In the red zone, a place where they are in direct path of the lava, lives about 600,000 people. On the Volcanic Explosivity Index, each number being an eruption ten times more powerful than the last, Pompeii was at a 5, while Vesuvius' last major eruption was at a 4, having killed 6000 people. Pompeii was 10 times more deadly than Vesuvius' last major eruption. If the volcano erupted today, the damage would depend on how big the eruption is. Experts estimate that an eruption at a 4 or a 5 might kill more than ten thousand people and cost more than \$20 billion. This will negatively impact Italy's citizens, costing them as much as the eruption will cost the government. Depending on the direction of the wind, Pompeii and Naples will be covered in meters of ash.

## CONNECTION:

When the volcanic eruption occurred all the volcanic ash from the geosphere entered the atmosphere. The volcanic ash from the geosphere covered all plants from the biosphere. The volcanic ash from the geosphere killed humans from the biosphere. The debris from the volcano in the geosphere also collapsed buildings built by humans from the biosphere. The volcanic ash from the geosphere entered the Mediterranean Sea, which is the hydrosphere. After the debris from the volcano, poison gas and pulverized rock surged from the volcano in the geosphere causing even more damage to the city and its surroundings from the biosphere, preserving the city for centuries. After the eruption from the geosphere, many tsunamis from the hydrosphere and earthquakes from the geosphere occurred in the area. The eruption also affected neighbouring cities to Pompeii, including Naples and Herculaneum. The biggest theory why the eruption happened is a tear in the African plate, which caused a series of reactions to occur. Before the eruption, Pompeii had very rich and fertile soil, but due to all the harmful gases and debris which covered the city and caused the soil to no longer be fertile. Pompeii was an important place for

trade and since the eruption the trade stopped. The gases from the eruption spread all over Italy. Pompeii, as well as nearby nearby cities to it, often experienced seismic activity, and when the eruption happened there was no signal for the people to find safety.

#### CONCLUSION:

Mount Vesuvius is still considered one of the most dangerous active volcanoes in the world. It's eruption in 79 A.D. was both a disaster and a phenomenon. It destroyed Pompeii, damaged Herculaneum, and killed many of its citizens, but it also performed a wonder by preserving the city in ash for centuries. The city is still here today, and if Mount Vesuvius erupted again, Naples would be in danger, the city and its neighbouring cities would be covered in ash depending on the wind, and the Italian economy and its citizens would suffer.