SAVVAS

When Mountains Stop Traffic

Volcanoes

Hook & Inspire! Connections to Today

Ignite students' interest by sharing these resources, which demonstrate connections between the past and present. Please be sure to preview all resources.

Volcanoes

In 2010 Iceland's Eyjafjallajokull volcano erupted at such a force it stopped air travel in the Northern Hemisphere. This once inactive volcano changed life in Iceland and parts of the United Kingdom and beyond. The ash and smoke was so thick flights were canceled even into Northern Europe. Earthquakes continued for months in Iceland, from large to small in size. To this day, other volcanoes continue to show seismic activity and gasses prove not all of the volcanoes on Iceland's island are inactive.

There are thousands of volcanoes across the globe, some active, others inactive. Volcanoes are produced when tectonic plates begin rubbing against each other. The plates create friction which leads to lava and gasses forming in small or large numbers. The larger the amount of lava, the greater the chance that the lava will move to the surface, creating an erupting volcano. Iceland has over 100 volcanic mountains but the volcanic systems make up a third of that covering almost the entire island.

Mount Vesuvius in Pompeii erupted thousands of years ago burying the entire city in minutes. The ash and debris fossilized many artifacts and even human remains. There was no warning concerning the eruption. Many years later the city excavated and showed preserved remains of the city.

Today we have more technology that enables scientists to give better warning. Iceland's Mount Fagradalsfjall erupted in 2021 with little casualties. Scientists tracked the seismic activity prior to the eruption. The eruption became a world event, increasing tourist travel to the country. Many people from around the world. This natural occurrence continues to terrify and increase people's curiosity at the same time.

DISCUSSION QUESTIONS

1). Why would it be necessary to reroute or cancel airline flights if a volcanic eruption occurred?

Student answers may vary depending on prior knowledge. Volcanoes produce a large amount of ash and debris which make it impossible for air travel. Ash has tiny particles of glass in it, created by the hot molten temperatures. This glass can get in an engine and completely shut it down. This makes it very dangerous for any air travel that would be in the path of the ash or debris.

2). What is the difference between an active, inactive, and extinct volcano?

Student answers may vary depending on past knowledge. An active volcano is one that is currently erupting or having lava flow out of it. An inactive volcano is one that is showing seismic activity or has gasses in or on the surface, but is not actively erupting. An extinct volcano is one that has erupted, but is no longer showing signs of lava or gasses.

3). Why were the citizens of Pompeii not able to evacuate in time? Why was there no warning?

Student answers may vary depending on experiences. Pompeii did not have the technology to be able to warn its citizens. Although it appears to have been a very advanced society and city for that time period, the citizens were still unaware when the actual eruption occurred. The smoke was so bad that many citizens died of smoke inhalation before they could leave the city.

4). Why would Iceland be known to have so many volcanoes but only have a few erupt within the past ten to fifteen years?

Student answers may vary depending on experiences. The actual volcanic activity occurs on the tectonic plates. The more frequency of the friction on the tectonic plates, the more likely the area will become an active volcano. The friction can occur for miles without ever showing signs on the surface.

5). Why do scientists need to track seismic activity and map the paths of the lava fields?

Student answers may vary depending on experiences. It is important to track seismic activity in order to determine if the volcano is continuing to grow in size or magma. It's important to map out the lava fields to be able to warn the public of the possible impact on their property or area.

Share the online resources below with your class to stimulate discussion on these questions. Be sure to preview the clips before showing or sharing them in class to ensure the content is appropriate for your students.

LINKS TO RESOURCES

Videos

1). The Volcano that Stopped the World: This video is a series of videos discussing the volcano and how it stopped travel.
2). Volcanoes for Kids: This video discusses the basics concerning volcanoes.
3). 5 INCREDIBLE Volcano Eruptions Caught On Camera: This video shows actual footage of erupting volcanoes.
4). Volcano: This is a very kid-friendly video concerning volcanoes.
5). Monthly update of activity at Yellowstone Volcano for July 2022: This video tracks the monthly volcanic activity at Yellowstone National Park.

Media

1). Mapping a Volcanic Eruption in the Backyard of Iceland's Capital: This article discusses Iceland's volcano and why it's important to map the extent of the lava flow.
2). Flying Through Volcanic Ash: It Could Happen To You: This article discusses the impact of ash and debris on an airplane.
3). What Happens When A Volcano Erupts?: This website has a detailed map of the parts of a volcano.
4). What is Earth's Ring of Fire?: This article discusses New Zealand's location on the ring of fire.
5). Volcanoes: Facts: This website gives more details concerning volcanoes.

Websites

1). Pompeii: This website gives detailed events concerning the volcano and destruction of the city of Pompeii.
2). What is a volcano?: This website gives details concerning volcanoes and pictures of various volcanoes active and extinct.
3). What Is a Volcano?: This website gives details concerning volcanoes and also shows volcanoes on other planets.
4). About Volcanoes: This website gives detailed information concerning the types of volcanoes.
5). What Is a Volcano?: This website gives information concerning volcanoes and ways to experiment to see the way pressure builds up in a volcano.

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