

Previous Knowledge

Some rocks are formed as a result of volcanic eruptions or movement of the tectonic plates— Igneous and metamorphic rocks. Volcanoes are made from natural rock.

Project Hook or ‘Wow’ memory

Building and erupting a volcano and a structure to withstand an earthquake.

The key skills we want pupils to use during this topic:

Gather, record, sort and present data in a variety of ways to help in answering questions. Use clear scientific evidence to answer questions or to support my findings

Record findings using simple scientific language, drawings, labelled diagrams and tables.

Report findings from investigations, including explaining by talking and writing about them, displaying or presenting results and conclusions. Use results to draw simple conclusions.

Learning Steps

Key Knowledge (answers)

What is the best way to make a chemical reaction for an erupting volcano? Comparative testing
A chemical reaction between vinegar and baking soda creates a gas called carbon dioxide. Does the amount of water, vinegar or baking soda change the strength of the eruption?

Is there a pattern in where we find volcanoes on planet Earth? Pattern spotting
Volcanoes are found along the tectonic plate boundaries. They can be above ground or under the sea. The 'Ring of Fire' is a volcanic chain surrounding the Pacific Ocean. More than half of the world's active volcanoes above sea level form part of the ring.

Where are the largest and most active volcanoes in Europe? Research
There are currently over 60 active volcanoes located throughout Europe. The two most well known volcanoes in Europe are Mount Vesuvius and Mount Etna. **Mount Etna**, on the Italian island of Sicily, is not only the highest active volcano in Europe at 10,810 feet (3,295 meters), but is one of the most active in the world.

What are the different types of volcanoes in Italy? Sorting and classifying
Active volcanoes—Mount Etna, Versuvius and Stromboli.
Dormant volcanoes— dormant volcanoes have erupted during the last 10,000 years but are currently in a period of dormancy. Colli Albani, Phlegraen Fields, Ischia, Salina, Lipari, Vulcano, Ferdinandea Island and Pantelleria.
Extinct volcanoes— Volcanoes which last erupted over 10,000 years ago are defined as extinct. These include the Amiata, Vulsini, Cimini, Vico, Sabatini, Pontine Islands, Roccamonfina and Vulture volcanoes.

How can we stay safe during an earthquake? Research
Have a disaster plan. DROP, COVER AND HOLD ON. Bolt furniture to the wall. Prepare a disaster supplies kit. Stay indoors until the shaking stops. If outside, find a clear spot away from buildings, trees and power lines. Then, drop to the ground. If you're in a car, slow down and drive to a safe place. Stay in the car until the shaking stops. After the shaking stops, Eliminate fire hazards, so turn off the gas if you think its leaking. Expect aftershocks. Each time you feel one, DROP, COVER AND HOLD ON.

Do the most powerful earthquakes cause the greatest number of fatalities? Pattern spotting
The number of fatalities depends on the structural damage of the buildings and how densely populated the area is. There are often follow on hazards like landslides, mud flows, fires and tsunamis.

Key vocabulary

Chemical reaction It is a process in which one or more substances are converted to one or more different substances.

Active volcano An active volcano has erupted recently or is expected to erupt quite soon.

Dormant volcano A dormant volcano is not active but is capable of becoming active later on.

Extinct volcano A volcano that has erupted in the past but will no longer erupt.

Ring of Fire It is the meeting point of many tectonic plates. It is home to 75% of the world volcanoes and 90% of its earthquakes. It surrounds part of the Pacific Ocean.

Population The number of people in an area.

Tectonic plates Seen major and eight minor segments of the earth's crust that move.

Statutory Requirements

This work support the Geography topic on Mountains, Volcanoes and earthquakes. It uses different skills of scientific enquiry that are listed above.

