

Volcanoes

Hardly a week goes by, it seems, without people's lives being disrupted by volcanic activity. Recent eruptions in Chile have led to the displacement of thousands of people and the closure of Argentinean airports and ski fields which were blanketed with volcanic ash. Huge clouds of this volcanic ash have caused vivid sunsets and flight cancellations as far away as Australia and New Zealand. Likewise in Europe, where the eruption of volcanoes in Iceland has caused widespread disruption to air traffic. But that's nothing to the devastation wrought in more densely populated areas, such as the Indonesian islands of Sumatra and Java, where eruptions have displaced hundreds of thousands of people in the last year alone.

Couldn't we at least notify people of impending eruptions? To some extent, the Earth itself does, in the form of earthquakes under the volcano and the emission of gases. This is what happened in Southern Italy back in AD 79 before the violent eruption of Mt Vesuvius, which buried the cities of Pompeii and Herculaneum. If they could only have read the signs, they would surely have fled to safety. But even today, volcanology is an inexact science. Why did Mt Sinabung in Sumatra erupt last year after 400 years of inactivity? No one really knows.

What we do know is that volcanoes form along the edges of the tectonic plates. This is why so many of them are found in the so-called 'Ring of Fire', where the Pacific Plate meets a number of other plates. More than half of the world's volcanoes above sea level are found in this zone. Chile, at one end, and Indonesia, at the other end, both have dozens of volcanoes which have erupted in historical times – some of them with regular and awe-inspiring intensity. These eruptions are generally the result of pressures caused by plate movements which tear open the Earth's top layer and force up molten rock, known as magma, together with gas and ash.

You might think the world would be a much better place without the unpredictable destruction that volcanoes can cause. But the fact is that the countries which suffer the effects of volcanoes today would hardly have existed without them. What is more, over time, volcanic materials form fertile soils, which allow for the cultivation of healthy crops. And if it wasn't for volcanoes, what would we know about the complex and fascinating world beneath our feet?

1 Which paragraph of the text best matches the title below?

- 1 Causes paragraph _____ 2 Prediction paragraph _____
 3 Benefits paragraph _____ 4 Effects paragraph _____

2 Decide if the sentences are true (T) or false (F). Circle the correct statements and correct those that are false.

- 1 Skiing was affected by eruptions which took place in Iceland and Argentina. T/F
 2 Volcanic eruptions can have effects in distant continents. T/F
 3 Indonesia has suffered more than one significant eruption in the last 12 months. T/F
 4 Local people could read the signs that Mt Vesuvius was about to erupt. T/F
 5 Volcanologists cannot always predict eruptions accurately. T/F
 6 Most of the world's volcanoes are found in Chile and Indonesia. T/F
 7 Volcanic eruptions are associated with tectonic plate movements. T/F
 8 Volcanic eruptions have positive long-term impacts on food production. T/F

3 The table below contains verbs and nouns from the text. Complete the missing forms.

verb	noun
disrupt	
	displacement
	devastation
notify	

verb	noun
	emission
bury	
	destruction
exist	

4 *Flee / fled* (paragraph 2) is one of many irregular verbs, which though uncommon in everyday English, do occur frequently in specific contexts. For instance, *flee* is often found in newspaper reports of disasters. Complete the table below with the forms and meanings of some other less common irregular verbs – use your dictionary if necessary.

infinitive	past simple	past participle	meaning
cling			
creep			
dwell			
flee			
strive			
withstand			

5 Complete the sentences below with the most appropriate verb forms from exercise 4.

- The cat _____ slowly upstairs and slipped, unnoticed, into the bedroom.
- Do not _____ in the past; live for the present.
- The home team _____ intense pressure in the second half to hang onto their lead.
- She _____ in vain to change his mind, but he simply refused to go.
- She _____ firmly to her chair until the floor stopped shaking.
- Police are searching for the driver who had _____ the scene of the accident.

6 Discuss these questions with your partner(s).

- What other famous volcanoes have you heard of from around the world?
- Can you think of any other benefits of volcanic activity?
- How well do you think you and your community are prepared to deal with natural disasters?

Glossary

disrupt (*verb*) - to cause a large amount of disorder or inconvenience

displace (*verb*) - force a person or thing out of its usual place

eruption (*noun*) - when a volcano becomes active

wrought (*verb*) - caused

impending (*adjective*) - about to happen

emission (*noun*) - the process of sending out of gases, particles, signals etc

fled (*verb*) - past simple and past participle of *flee* meaning *run away from danger*

tectonic plate (*noun*) - huge areas of rock which make up the surface of the Earth, supporting the seabed and the continents

awe-inspiring (*adjective*) - very impressive

molten (*adjective*) - in hot, liquid form because it has melted

vivid (*adjective*) - very bright and colourful

fertile (*adjective*) - rich in the necessary elements to support growth

soil (*noun*) - the substance on the surface of the earth in which plants grow

cultivation (*noun*) - the process of growing plants in farms etc

crop (*noun*) - plants grown on farms for food, eg wheat and rice