VOLCANOES

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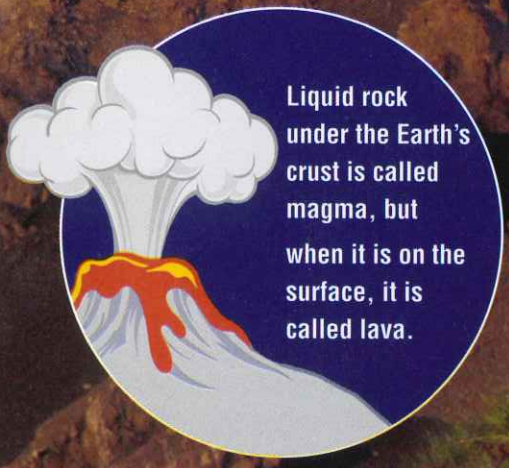
Contents

The Fire Erupts

A group of tourists climb up the steep slope of Pacaya, an active volcano in Guatemala. As they ascend, the trees start to thin and the soil gives way to slabs of thick, black rock. The sun begins to set as they reach the volcano's peak. Steam rises in a large column just ahead of them. A soft, red glow emanates from the bottoms of the bulging mounds of fluid rock that slowly flow past. The group snap photos with their cameras and chat excitedly about the amazing experience they are sharing.

Deep beneath the tourists' feet, miles underground, much hotter liquid rock churns. Under the Earth's crust, superheated rock is constantly flowing. This swirling mass is the source of the fire, smoke, and lava that pour out of Pacaya Volcano. But how does the fire within erupt from the Earth's surface? To understand this, we must go back to the beginning: to the birth of a volcano.



Liquid rock under the Earth's crust is called magma, but when it is on the surface, it is called lava.

Word Bank & Activities pp. 36-37 ▶

The Fire Erupts

Word Bank

(pp. 4-5)

erupt (v) = to explode because of built up pressure

steep (adj) = very sharply slanted

slope (n) = the slanted side of a mountain

active (adj) = (of a volcano) currently erupting

ascend (v) = to climb; to move upward

thin (v) = to become less dense; to have less of sth than before

give way (phr v) = to be replaced or covered by sth

slab (n) = a long, thick, flat piece of rock

peak (n) = the top part of a mountain

steam (n) = water that has been heated to become vapor

rise (v) = to move upward

glow (n) = a softly shining light

emanate (v) = to radiate from

bulging (adj) = pushing out in a curved shape

mound (n) = a rounded pile

fluid (adj) = liquid

flow (v) = to move in a consistent course; to stream

snap (v) = to take a picture

chat (v) = to talk about sth

excitedly (adv) = eagerly

experience (n) = an activity from which you gain knowledge or skills

beneath (adj) = under

underground (adj) = beneath the ground

churn (v) = to stir rapidly

crust (n) = (of the Earth) the outer layer

constantly (adv) = continually

swirl (v) = to stir in a twisting motion

mass (n) = a quantity of matter without a clearly defined form

source (n) = the place where sth comes from

lava (n) = magma that has escaped from under Earth's crust

pour (v) = to flow out of sth

within (adv) = inside

surface (n) = the top part of sth

birth (n) = the beginning of sb's/sth's existence

magma (n) = hot liquid rock under the Earth's surface

Pre-Reading activities

1 **a) Decide if the following sentences are *T* (true) or *F* (false).**

1 Pacaya is a volcano located in Guatemala. .....

2 Volcanoes are unpopular with tourists in Guatemala. .....

3 An active volcano produces fire, smoke, and lava. .....

4 Extremely hot rock under the Earth's crust is continuously moving. .....

5 Both underground and on the Earth's surface, liquid rock is referred to as lava. .....

6 The tourists that visited Pacaya were disappointed when they arrived at the peak. .....

7 The steam that rises from a volcano is shaped like a column. .....

8 Pacaya Volcano is only active at night. .....

b) Listen, read, and check to see if your answers were right. Correct the false statements.

While-Reading activities

2 **Read the text and choose the best answers from A, B, C, or D.**

1 How can someone reach Pacaya Volcano?

A by hiking up the side of a mountain

B by traveling underground

C by going through the experience with others

D by breaking through the Earth's surface

2 Which of the following is NOT produced by active volcanoes?

A amazing experiences

B fire and smoke

C columns of steam

D flowing lava

3 How can someone better understand how volcanoes work?

A by visiting Pacaya, Guatemala

B by taking pictures of a volcano

C by studying the birth of a volcano

D by going miles beneath the Earth's crust

4 Which of the following best describes magma?

A thick, dark slabs of rock

B a flow of rock softly glowing red

C bulging mounds of fluid rock

D a hot, swirling mass of liquid rock

3 **Match the beginnings of the sentences to their endings.**

1 ☐	Trees appear less frequently	**A**	emit a faint, red glow.
2 ☐	Near the top of Pacaya, there are	**B**	enjoyed their time on Pacaya.
3 ☐	Slow-moving mounds of lava	**C**	large dark rocks instead of soil.
4 ☐	Hotter liquid rock can be found	**D**	near the peak of a volcano.
5 ☐	The group of tourists	**E**	deep under the volcano's peak.

4 **SUBJECT-SPECIFIC VOCABULARY: Choose the correct word in bold to complete each sentence.**

1 A group of tourists **emanated/ascended** the volcano.

2 Magma is always **churning/bulging** miles underground.

3 Liquid rock can **swirl/flow** quickly or slowly depending on its temperature.

4 The tourists approached Pacaya's peak by climbing the **fluid/steep** side of the volcano.

After-Reading activities

5 **Which point (A, B, or C) best summarizes each paragraph?**

1 (Paragraph 1)

A A band of explorers went on an expedition to explore the last undiscovered active volcano.

B A group of people went on a hike to take pictures of an active volcano in Guatemala.

C A group of tourists traveled to Guatemala to witness the effects of active volcanoes on the environment.

2 (Paragraph 2)

A A volcano's source is found not at its peak, but a long way beneath the Earth's exterior.

B Active volcanoes produce enough fire and smoke to affect the environment.

C In Pacaya, Guatemala, you can travel under the Earth's surface to see the magma swirling underground.

6 ICT **Collect more information about Pacaya Volcano to complete the fact file below.**

Pacaya Volcano

- Location: .....
- Type of Volcano: .....
- Size: .....
- Frequency of Eruptions: .....
- Age of Volcano: .....