

# The Life of a Volcano

## Nonfiction

Planet Earth has secrets. Underneath the surface is a fiery danger of **magma** and gas. The earth has openings on the surface. Eruptions occur in these vents. They burst from the crater releasing lava, gas, and ash. Eventually, the lava hardens. This creates a mound that forms some volcanoes. It can take millions of years for the lava to build.

There are tectonic plates under the earth's surface. These plates are **slabs** of giant rocks. They allow the earth to move. The vents in the earth's surface are found where the tectonic plates move toward each other. These plates form a ring around the Pacific Ocean, where most of the volcanoes form. This ring is called The Ring of Fire.

There are different types of volcanic eruptions. The Hawaiian eruption is a fountain type with a burst of lava. This eruption lasts for hours or even weeks. The lava explosions are recorded to reach over a thousand feet high. The Strombolian eruption is the least dangerous. They are bursts of lava from exploding gas bubbles. It produces little or no flowing lava. The Vulcanian eruption is short, but it is a violent explosion. These explosions can cause rock and lava to travel faster than 350 miles per second. They can last for days, months or years. They create giant ash clouds. These **billowing** clouds of gas and rocks linger for a long time. The Plinian eruption is the most violent. This eruption of rock, ash, and gas rocket into the atmosphere and destroy everything around.

An eruption is more violent if there are crystals near the **fracture** in the surface. A large amount of crystal means there will be an explosion instead of a flow of lava. Gases can be violent. They can also find a way out without any kind of explosion. The hotter the magma, the less chance it will explode. High temperatures allow the magma to flow easily.

240,000 people have died in the last 300 years from volcanic eruptions. Entire cities have been **demolished**. A volcano can cause mudflows. They can be so bad that homes are buried underneath. Lava is very hot. It can get to temperatures of 2,000 degrees Fahrenheit. Nothing can survive. Plinian eruptions can make boulders of hard lava destroy villages like bombs. Ash and gases can cause breathing problems for humans. They can damage lungs.

There are 1,900 active volcanoes in the world. Active means they show no sign of movement, but they are likely to erupt again. Dormant volcanoes show no signs of life. There is not a big risk of eruption. Dormant eruptions can become active in the future. Extinct volcanoes won't ever erupt again.

Millions of people live near active volcanoes. Their lives are at risk. In order to keep people safe, scientists study volcanoes. They are getting better at predicting when an eruption might happen. Scientists have learned the warning signs. When magma moves beneath the volcano and collects in a chamber, it is in the danger zone. As magma gets close to the surface, more gas is released. There may be clues, but nothing is for sure. No one knows exactly when an eruption might happen.

## The Life of a Volcano

### Nonfiction – Graphic Organizer

Use the graphic organizer to write information based on the text.

3 new things I learned


2 interesting facts


1 question I still have


## The Life of a Volcano

### Nonfiction - Comprehension

1. Which type of eruption is the most violent? 2. Where do eruptions occur?

- |                                      |  |
|--------------------------------------|--|
| <input type="radio"/> A. Hawaiian    | <input type="radio"/> A. vents           |
| <input type="radio"/> B. Strombolian | <input type="radio"/> B. ash             |
| <input type="radio"/> C. Vulcanian   | <input type="radio"/> C. tectonic plates |
| <input type="radio"/> D. Plinian     | <input type="radio"/> D. fountain        |

3. The \_\_\_\_\_ the magma, the less chance it will explode. 4. Eruptions are more violent if what is near the fracture?

- |                                   |                                   |
|-----------------------------------|-----------------------------------|
| <input type="radio"/> A. crater   | <input type="radio"/> A. lava     |
| <input type="radio"/> B. fracture | <input type="radio"/> B. crystals |
| <input type="radio"/> C. rocks    | <input type="radio"/> C. magma    |
| <input type="radio"/> D. water    | <input type="radio"/> D. ash      |

5. How are volcanic eruptions dangerous for humans?


6. Where are volcanoes usually found?


## The Life of a Volcano

### Nonfiction – Read Closely and Critically

Determine the author's purpose for writing the poem.

1. What phrases or words does the author use to help you imagine what an erupting volcano looks like?


2. Why do you think the author included the paragraph about Iceland, Iceland? How is it important to the rest of the text?


3. If you had made a volcano, which would you choose to live by and why?


4. Why is it important for scientists to study volcanoes?


## The Life of a Volcano

### Nonfiction - Vocabulary

WATCHING – Draw a line to match the vocabulary word with its definition. Use the correct lines in the text for help.

imagine	to pull or knock down
ash	smoke or steam that comes out from a volcano
billowing	A crack in a hard object or material
fracture	A large, thick, hot piece of rock, sometimes of wood
demolish	to fall below or within the earth's crust

CLOSE – Fill in the blank with the correct vocabulary word.

magma	ash	billowing	fracture	demolished
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1. James has a small \_\_\_\_\_ in his arm, which required a cast.

2. The old building needed to be \_\_\_\_\_ before anyone can be built.

3. Dad picked \_\_\_\_\_ of stone in the yard to create a walkway.

4. The \_\_\_\_\_ below the earth is very hot and thick.

5. Smoke was \_\_\_\_\_ from the chimney.

# Volcano Marshmallows

## Fiction

Joyce linked arms with her sister, Dana. They skipped along the trail singing songs quietly to themselves. Up ahead, their parents walked with the guide. Joyce was glad she stayed back with Dana. Their guide loved to talk. On and on he went about the nature of volcanoes. Joyce had **exhausted** all her questions after a half an hour, and now she wanted to hike in peace. Their guide never seemed to run out of information.

Joyce thought of the marshmallows in her backpack. She wasn't sure why the guide had given them to her and Dana. She was tempted to get them out now. Hiking was hard work and she was **famished**. Dana must have read her mind. She asked if they could have a snack.

"Keep walking. I think we're almost there," Joyce tugged her sister along a little faster. She was thankful for the walking stick she'd bought from the village children earlier. It was coming in handy now that the hike was getting more difficult.

A little while later, the green, misted forest was behind them. Joyce and Dana hurried to catch up to their parents.

"It's like we're walking on the moon," said Dana. Joyce nodded in agreement. All around them was grey, dusty rock.

"We must be getting close to the top of the volcano," Joyce's mother said. Her face was lit with excitement. She squeezed Joyce's hand when their guide nodded.

"Very close," he agreed. "Stay close now. Walking soon will be more difficult."

He was right. Joyce stumbled along. She slipped and even fell a few times despite her walking stick. It was the most **peculiar** summer vacation she'd ever had. She thought about her friends enjoying the beach and felt a little jealous.

"We are now walking on lava rocks," said the guide. He slipped and fell to his knees. When he got to his feet, his legs were bright red.

Joyce bent down and felt the ground. It was very hot. She kept walking despite feeling more **tense**. Volcanoes were dangerous after all. Should they really be hiking to an active one?

The landscape changed once more. Glowing red could be seen through the cracks of the black lava rocks. Joyce's feet started to get very hot. Dana began to cry.

# Volcano Marshmallows

## Fiction - Comprehension

1. What did their guide love to do?
  - A eat
  - B hike
  - C talk
  - D sell outdoors
2. What did Joyce buy from the village children?
  - A marshmallows
  - B a souvenir
  - C a walking stick
  - D a backpack
3. Why did the guide tell them to stay close?
  - A walking would become difficult
  - B a volcano could erupt
  - C there was lava on the ground
  - D he wanted to make sure they knew him
4. Why did Dana begin to cry?
  - A she wanted to go to the beach
  - B she got lost
  - C she was afraid
  - D her feet were hot

5. Why did Joyce and Dana like staying back from their parents and guide?

\_\_\_\_\_

\_\_\_\_\_

6. Why did Dana say it felt like they were walking on the moon?

\_\_\_\_\_

\_\_\_\_\_

# Volcano Marshmallows

## Nonfiction - Vocabulary

**MATCHING**—Draw a line to match the vocabulary word with its definition. Use the context clues in the text to help.

exhausted	extremely hungry
famished	change of water or food
peculiar	to completely set up
tense	to occur before ending or doing something
hesitated	hanging around or hesitating

**CLOSE**—Fill in the blank with the correct vocabulary word.

exhausted    famished    peculiar    tense    hesitated

1. If they keep spending their money like this, they will \_\_\_\_\_ all of their savings.
2. She \_\_\_\_\_ when she was unsure of what to do next.
3. We will be a few \_\_\_\_\_ moments before the speaking show started.
4. What did she do first? I'm \_\_\_\_\_.
5. I \_\_\_\_\_ that he left town without telling anyone.

# Volcano Marshmallows

## Fiction - Graphic Organizer

Use the graphic organizer to write about important aspects of the text.

SOMEBODY		WANTED		BUT	
Who was the main character?	What did the main character want?	What is the problem?			
_____	_____	_____			
_____	_____	_____			
_____	_____	_____			
SO		THEN			
How was the problem solved?		What was the resolution to the story?			
_____		_____			
_____		_____			
_____		_____			

# Volcano Marshmallows

## Fiction - Read Closely and Critically

Describe the main character in the story and explain how his actions contributed to the sequence of events in the story.

1. The author mentioned marshmallows at the beginning of the story, but didn't write about it again until the end of the story. Why do you think she did that?
2. How did Joyce's feeling about the vacation change throughout the text?
3. The author wrote, "We must be getting close to the top of the volcano," Joyce's mother said. Her face was lit with excitement. She squeezed Joyce's hand when their guide nodded. Why did Joyce's mom squeeze her hand?
4. What parts of the trip did Joyce like? How do you know?

# Volcanoes

## Poetry

The earth is a mystery  
There's much we do not know,  
She hides her secrets carefully  
Until she's ready to show.

Red, flowing molten lava  
Constructed to destroy,  
Sulfur scented gushing geysers  
Exploding with **primal** joy.

A crack, a **crevice** a peek inside  
The earth's seam under stress  
Stinky gas, ash, and hot magma  
Waiting to make a mess.

Extraordinary beauty  
Spectacular eruptions  
A sky full of wonder  
Nothing but disruption

Different shapes and sizes  
Resting on tectonic plates  
The Pacific Ring of Fire  
**Epic** disaster it creates.

Hot rock or mantle **plumes**  
Hotspots underground,  
Hiding all over the globe  
Just waiting to be found.

It's magma when in the earth  
But lava once released,  
Hot, flowing liquid fire  
A monstrous, angry beast.

Volcanoes reside on Earth  
Destroying the human race,  
But the biggest one of all time  
Rests in outer space.

Volcanoes come in all sizes,  
Not all their shapes are cones,  
Some are merely cracks  
Others are lava **domes**.

## Volcanoes

### Poetry - Comprehension

- What do the geysers reveal about?
  - a) sure
  - b) safe
  - c) nothing-would
  - d) fun
- What's waiting to be found?
  - a) volcanoes
  - b) craters
  - c) hotspots
  - d) geysers
- Where is the biggest volcano?
  - a) South American
  - b) under water
  - c) Africa
  - d) outer space
- What burning pattern does the poem portray?
  - a) AHB
  - b) ABCB
  - c) ABAB
  - d) AABA
- What is the difference between magma and lava?
 

\_\_\_\_\_

\_\_\_\_\_
- What creates an epic disaster? Why?
 

\_\_\_\_\_

\_\_\_\_\_

## Volcanoes

### Poetry - Graphic Organizer

Use the vocabulary words in the poem to complete the graphic organizer.

WORD	YOUR OWN SENTENCE	SKETCH OF YOUR SENTENCE
PRIMAL		
CREVICE		
EPIC		
PLUME		
DOMES		

## Volcanoes

### Nonfiction - Vocabulary

**MATCHING**—Draw a line to match the vocabulary word with its definition. Use the correct clues in the text for help.

primal	Very great or large in measure
crevice	A narrow opening or crack, especially in rock
epic	A structure with a rounded top
plumes	Very large and powerful
domes	Something (such as smoke or steam) that rises into the air in a tall, thin shape

**CLUE**—Fill in the blank with the correct vocabulary word.

1. I'm back on \_\_\_\_\_ country around the world.
2. The snake poked its tail into a tiny \_\_\_\_\_ crevice to get into our house.
3. She had a \_\_\_\_\_ urge to write a book.
4. The Atlantic volcano plays in a \_\_\_\_\_ as the plumes don't get wet when it rains.
5. A \_\_\_\_\_ of smoke rose from the fire.

## Volcanoes

### Poetry - Read Closely and Critically

Determine the author's purpose for writing the poem.

- In the first stanza, the author mentions the earth hides secrets. What secret could it be hiding?
 

\_\_\_\_\_

\_\_\_\_\_
- What does the author mean when she writes, "A sky full of wonder, nothing but disruption"?
 

\_\_\_\_\_

\_\_\_\_\_
- The author uses words to help appeal to your senses. What are some of those words and how do they help you picture a volcano?
 

\_\_\_\_\_

\_\_\_\_\_
- What is one new fact you learned from the poem? Why is it important to know that?
 

\_\_\_\_\_

\_\_\_\_\_