



# The Mini Page

**Next Week:**  
Turtle Day

Issue 19, 2022

Founded by Betty Debnam

## Erupting Volcanoes



photo by Nicolas Renac

### Mini Fact:

There are volcanoes on land and in the ocean, including under ice caps.

With their powerful eruptions, gushing lava and billowing smoke, volcanoes look quite powerful, but have you ever wondered exactly what a volcano is and what makes it form? Today The Mini Page takes a look at volcanoes.

### Volcano terms

Let's start by getting familiar with some basic volcano terms.

**Magma** is rock that is so hot that it is liquid, or **molten**. It is underground.

A **volcano** is a place where the magma reaches the Earth's surface.

**Lava** is magma that is no longer underground. Instead, it flows over the Earth's surface in the form of semifluid rock.

A **vent** is the opening in the Earth where volcanic materials and gas erupt.

A **crater** is the circular **depression**, or lowered part of the Earth, that is created when a volcano explodes.

An **active volcano** is a volcano that is erupting or showing signs of activity.



photo by Scot Nelson

### Rising magma in Oregon

In early 2022, scientists noticed an increase in ground lift at the Three Sisters volcanic region of Oregon. Scientists discovered an increase in the region near one of the volcanoes, South Sister. Data show that the ground rose .09 inch from June 2020 to July 2021, which means magma is moving beneath the volcano. The United States Geological Survey (USGS) says it should not erupt in the near future, however.

### Ring of Fire

The most active area of volcanoes is the Ring of Fire, which is in the Pacific Ocean. National Geographic says, "Seventy-five percent of Earth's volcanoes — more than 450 volcanoes — are located along the Ring of Fire. Ninety percent of Earth's earthquakes occur along its path."

The movement of **tectonic plates**, or pieces of the Earth's crust, along the Ring of Fire is responsible for all this activity.

Volcán Atitlán in Guatemala (pictured here) is one of the many volcanoes making up the Ring of Fire. It most recently erupted in 1853.



photo by Daniel Mennerich

### Hunga Tonga-Hunga Ha'apai eruption

On Jan. 15, 2022, the Hunga Tonga-Hunga Ha'apai volcano erupted in Tonga, an island nation in the South Pacific. This volcano is **submarine**, or underwater. After the eruption, ash covered the region, tsunami waves traveled across the ocean, and the **ionosphere**, which is the section of the Earth's atmosphere that stretches from about 50 to 600 miles above the surface of the Earth, was disturbed.

The eruption contaminated much of Tonga's drinking water, especially with all the ash that spewed, and it also severed the only fiber-optic cable connecting Tongan citizens to the outside world through the internet.

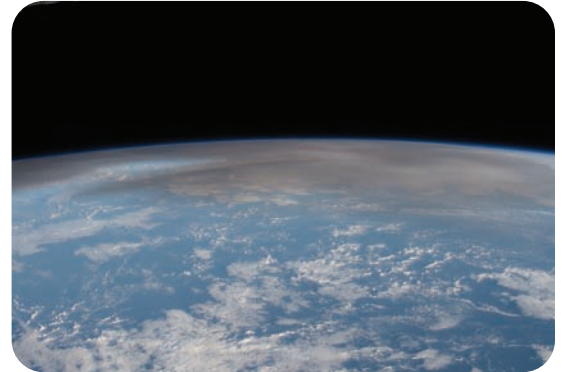


photo by NASA Johnson

The atmospheric plume of the underwater volcano eruption in Tonga was pictured from the International Space Station.

### Resources



#### On the Web:

- [go.nasa.gov/3B90B9E](https://go.nasa.gov/3B90B9E)

#### At the library:

- "Volcanoes!" by Anne Schreiber
- "Vladimir The Volcano: A Tale of an Unforeseen Eruption" by Rana Boulos

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## Try 'n' Find

Words that remind us of volcanoes are hidden in this puzzle. Some words are hidden backward or diagonally, and some letters are used twice. See if you can find:



- ACTIVE, BLAST, CRATER, ERUPT, FIRE, GASES, LAVA, MAGMA, OREGON, PLATES, SMOKE, SUBMARINE, SURFACE, TECTONIC, TONGA, VENT, VOLCANO.

F W T D S J O C S U R F A C E  
I D Y E B A T N E V L S G B G  
R M D N C L C F R A M A G M A  
E O D I S T A T J U F H S G O  
G O N R T N O S I W L T E J R  
A U R A S P O N T V P O T A E  
S Q Q M C H U G I X E N A V T  
E K O B A L G R E C Q G L A A  
S K G U N N O X E R D A P L R  
E Z N S N V T V H X O T G M C

## Mini Spy Classics

Mini Spy and Alpha Mouse are hiking near a smoking volcano. See if you can find the hidden pictures. Then color the picture.



Mini Spy Classics appear in the first issue of each month.

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- lips
- frog
- sleeping cat
- alligator
- cherry
- word MINI
- fish
- bird
- number 7
- lizard
- snake
- elephant
- eel
- net
- safety pin
- giraffe
- bucket

## Mini Jokes



**Bev:** Why was the volcano bad-mannered?  
**Bernie:** It kept interrupting!

## Eco Note



The most powerful volcanic blast anywhere on the planet for more than 30 years was heard thousands of miles away and created a humanitarian disaster in Tonga. Tsunamis from the Hunga Tonga volcano blast rushed across the Pacific Ocean. The ocean surges also caused "significant damage" in Tonga as falling ash poisoned the landscape, including the rainwater supplies that most Tongans collect on their roofs.

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### For later:

Look in your newspaper for articles about recent volcanic eruptions.

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