

Earth on Fire

On March 19, volcanoes at Geldingadalur (GEL-din-ga-DAH-loor) and Fagradalsfjall (fah-grah-dahls-fyahk) in southwest Iceland began to erupt after 6,000 years of being dormant, or quiet. (Fagradalsfjall means “beautiful valley mountain” in Icelandic; Geldingadalur means “gelding valley.”)

The volcanoes are only about 25 miles away from the capital city of Reykjavik, but fortunately there are no homes or businesses nearby.

Let’s learn more about these dramatic earthly eruptions.

What are volcanoes?

Volcanoes are places where magma and hot gases push through the Earth’s surface. Volcanoes can erupt with violent explosions. Or the lava can spill out and flow quietly onto the surface.

The decay of radioactive elements within the Earth creates heat so high it partially melts rocks. Gases in this molten, or melted, rock build up pressure, like the pressure in a shaken can of carbonated soda. The pressure of the gas causes the molten rock to rise toward the Earth’s surface.



photo by Berserkur

Mini Fact: Earthquakes starting in December 2019 alerted geologists that an eruption in Iceland might be coming.

The magma and gases may collect in large underground chambers, or holding tanks. As more magma and gas collect, pressure builds up and forces the magma up to the surface.

Volcano destruction ...

Volcanoes can cause great damage. They can wipe out whole towns, killing thousands of people, plants and animals.

When lava erupts, it is red-hot, measuring more than 2,000 degrees Fahrenheit. An explosive eruption may throw out big rocks, known as bombs. These can weigh hundreds of pounds.

Volcanic rocks can cause dangerous mudflows if they mix with water. These mudflows might reach speeds of 10 to 30 miles per hour.

Winds can carry volcanic ash around the world many times. In 2010, for example, another Icelandic volcano erupted, with ash covering large parts of Europe and shutting down some air travel.

... and construction

Volcanoes have played a big role in forming the surface of our planet. More than 80% of the Earth’s surface was made by volcanoes, including much fertile soil. Many mountains and islands are really volcanoes that have built up layers of lava and ash.

The first oceans and the Earth’s atmosphere were created from the gases from volcanoes that erupted several billion years ago.

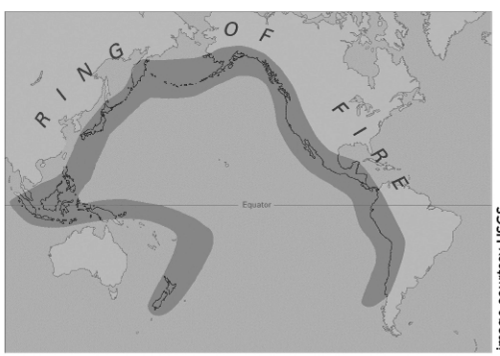


image courtesy USGS

Volcano sites

More than half of the active land volcanoes circle the Pacific Ocean in a “Ring of Fire.” In this area, parts of the Earth are slowly colliding with each other.

The Earth’s crust is broken into huge parts called plates. When one of these plates slides under another plate, they rub against each other. This is where rock melts to form magma.

Most active volcanoes border the edges of continents. Many are in or around the Mediterranean Sea. There are about 50 active volcanoes in the United States, in Hawaii, Alaska, Washington, Oregon and California.

The Kilauea (kee-lah-WAY-ah) volcano in Hawaii began erupting again on Dec. 20, 2020. It is one of the most active volcanoes in the world. “Kilauea” means spewing, or much spreading.

Resources

On the Web:

- youtu.be/SoJ8cRnbbps

At the library:

- “Life on Surtsey: Iceland’s Upstart Island” by Loree Griffin Burns
- “How Volcanoes Shape the Earth” by Megan Cuthbert and Jared Siemens



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:

ASH, BOMBS, DORMANT, EARTH, ERUPT, EXPLOSION, FIRE, GASES, ICELAND, LAVA, MAGMA, MOLTEN, MOUNTAIN, OCEAN, PLATES, PRESSURE, RING, ROCK, SPEW, SURFACE, VOLCANO.

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



Cook's Corner

Kiwi-Honeydew Smoothie

You'll need:

- 1 cup low-fat vanilla yogurt
- 1 kiwi, peeled and chopped
- 1 cup cubed honeydew melon
- 1 tablespoon honey
- zest and juice of 1 lemon
- 3 ice cubes

What to do:

1. In a blender, combine yogurt, kiwi, melon, honey, 1 tablespoon lemon juice, 1 teaspoon lemon zest and ice cubes.
2. Puree until smooth. Pour mixture into a tall glass. Serves 1.



Adapted from "The Robin Takes 5 Cookbook for Busy Families" with permission from Andrews McMeel Publishing (andrewsmcmeel.com).

You'll need an adult's help with this recipe.

7 Little Words for Kids

Use the letters in the boxes to make a word with the same meaning as the clue. The numbers in parentheses represent the number of letters in the solution. Each letter combination can be used only once, but all letter combinations will be necessary to complete the puzzle.

1. something in the way (8) _____

2. a mask, maybe (8) _____

3. reptile without legs (5) _____

4. food between bread slices (8) _____

5. ironed breakfast cakes (7) _____

6. fast horse pace (6) _____

7. pulled-back hairstyle (8) _____

SANAILDISGAL
LOPAKEYTAGLE
UISEPONFLESICH
WAFOBSTDWSN

Answers: obstacle, disguise, snake, sandwich, waffles, gallop, ponytail.



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Mini Jokes

Vinnie: What did one volcano say to the other?
Veronica: “I lava you!”



Eco Note

On April 9, La Soufriere, a volcano on the Caribbean island of St. Vincent, had an “explosive eruption,” officials there reported. A cloud of ash about 4 miles high spewed from the volcano, and glowing lava could be seen on the side of the mountain. Officials had asked residents in the danger zone to **evacuate**, or leave, in the days before the eruption. Cruise ships helped remove people from the area, and nearby islands offered to take in evacuees from St. Vincent.

adapted from The Washington Post



For later:

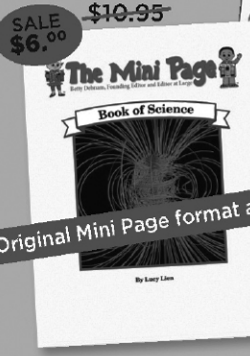
Look in your newspaper for articles about volcanoes and earthquakes.

Teachers:

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