

Paired Passages

Volcanoes

with text based evidence questions



Name: _____

Volcanoes



A volcano is a vent or opening in Earth's outer layer or crust where lava, ash, debris and gases are forced out from underground magma chambers onto the surface and/or into the atmosphere. Magma chambers are pressurized pockets of gasses as well as heated melted rock. When these pockets of magma are super heated and squeezed by extreme underground pressure, the least dense or thinnest magma is pushed to the surface through fissures or cracks in our planet's outer crust. When magma breaks through to the surface it is then called lava.

Earth's rocky outer crust is broken into approximately 17 large and small tectonic plates that fit together like puzzle pieces. Below the outer crust and above the inner core is a layer called the mantle. These plates float on top of currents of mantle, a thick layer of slow moving molten rock that stirs, rising when heated and sinking when cooled. Convergent plates move together and overlap creating mountain ranges and trenches while divergent plates pull apart making rift valleys. Most, but not all, of Earth's volcanoes form along the edge of our planet's tectonic plates.

Name: _____

Volcanoes- Nonfiction

There are three types of volcanoes: cinder cone, shield and composite. Cinder cone volcanoes have steep sides while shield volcanoes are dome-shaped like a warrior's shield. Composite volcanoes are shield shaped at the base and cone shaped at the top.

In the Pacific Ocean, along the edges of a horseshoe-shaped meeting of very large tectonic plates is the infamous "Ring of Fire," home to 75% of our planet's most active and deadly composite volcanoes. In contrast, the Hawaiian Island chain of primarily less violent shield volcanoes formed above hotspots where mantle is superheated to produce excess magma that is pushed up through cracks in the middle of tectonic plates.

Volcanoes are both destructive and constructive geological forces. Lava flows which are tremendous fire hazards due to their intense heat burn everything in their path and can bury homes, businesses, and in rare occurrences, entire cities. On the other hand, lava flows construct landforms like islands. They also pull minerals up to the surface from deep below and deposit nutrients fertilizing surrounding soil. Volcanoes can ooze quietly over time or erupt explosively sending clouds of ash miles into the air. Volcanic ash consists of tiny pieces of rocks, glass and acidic gas that is dangerous to small infants and/or anyone struggling to breathe due to asthma or other severe respiratory illnesses. Giant ash clouds can also disrupt air travel and sometimes alter weather.

Volcanoes go hand-in-hand with other geological forces such as earthquakes, floods, landslides, and tsunamis. The danger zone for most volcanoes is 20 miles of the surrounding area, but is sometimes expanded to a 100 mile radius.

Name: _____ Use evidence from the text
to support each answer.

Volcanoes- Nonfiction

What is another name for a magma?

What kind of damage can a volcano cause?

What is usually a safe distance away from a volcano?

Name: _____

Volcanoes- Nonfiction

Volcanoes

What is important to know about Volcanoes?

Give evidence from the text.

[illegible]

Name: _____

Skeeter the Volcano



Mama Jo always told me to hold my angry temper in check 'cause it had enough pressure behind it to erupt just like a volcano. She often reminded me that, "Skeeter, I've watched you blow many a time when you were not even knee-high to a grasshopper!" I've always known this to be a true statement, but I so wanted to be more like my big sister, Tina-Jean. Tina-Jean rarely cries, she never screams or stomps her foot, and she always waits patiently for her turn in the bathroom.

It wasn't till I was in 5th grade that I learned that not all volcanoes erupt spitting out volcanic ash and rocks into the air. Some volcanoes only hiccup little bits of lava over time building new land with every other hiccup or so. That means that not all volcanoes cause damage on this here planet. Some volcanoes are good ones cause they build up rather than tear down. The hiccupping kind can actually create brand new land when a volcano breaks through at the bottom of the ocean floor, maybe where there's a hotspot of magma underneath, lava gets squeezed like toothpaste coming out of a tube. That lava cools and hardens, so that the lava that flows out next builds up on top of that layer and cools and hardens. This keeps happening

Name: _____

Volcanoes- Fiction

till an island is formed. That's supposed to be how the Hawaiian islands came to be. Imagine that!

So Mama Jo is probably right about my violent temper and all. Now I am probably burning up bridges with folks that I may need later. But with some effort on my part, I really believe that I can learn to hold in a little and rather than tearing down friendships, I can build 'em up and be more like Tina-Jean. You may not know this, but she's real good at making and keeping friends. Mostly, 'cause she is so kind to and patient with everyone she meets. I, on the other hand, have a hard time pretending that I like people when I really don't. I also can't abide anybody who gets in my way when I'm line for lunch, or waiting to buy an ice cream, or raising my hand to answer one of Ms. Yarbrough's many questions during our class lessons. I like being first, and I don't mind being loud either. Sure friends are important to me, but food and being noticed are also pretty high on my list of must haves.

I suppose that I could start allowing some folks to get ahead of me in line and I suppose that I could give up a bit of the limelight, if I have to... And maybe, if I only get a little mad and let off just a iddy-biddy smidgeon of anger, I might be able to keep a few more names in my book of friends. I might be able to add a little along the way. And eventually, I'll have built a little island of people that I don't mind so much and perhaps they done mind me so much. Hah! Pappa Todd likes to remind me, "Skeeter, No man's an island." But, I think that with a little work... I can be part of a newly, formed island chain.

What is the main idea of this fictional selection?

How is an angry temper like a volcano?

Why does Skeeter want to be more like her sister, Tina-Jean?

Name: _____ Volcanoes

What can Skeeter do to make and keep friends? Give evidence from the text, and then add your own ideas.

Lined area for writing the response.

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