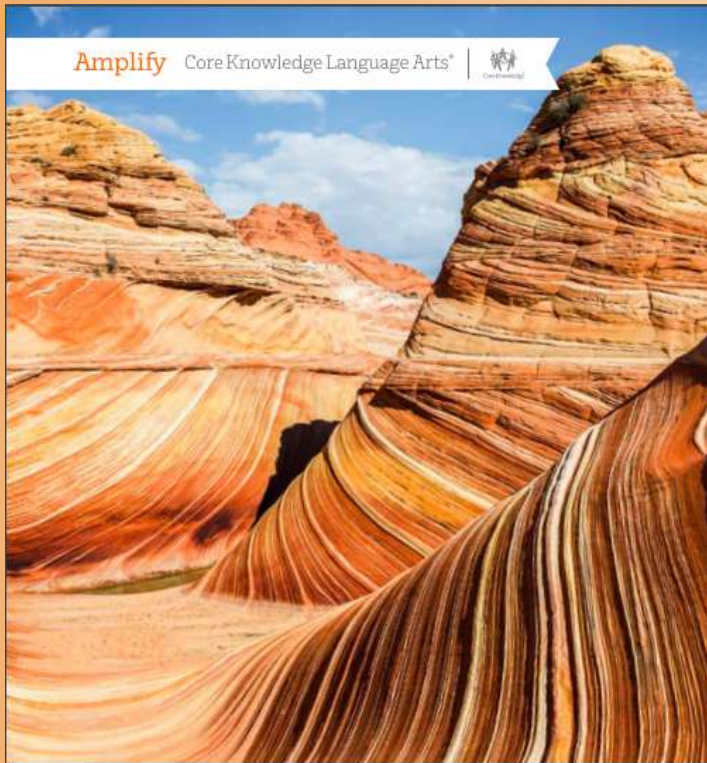


Lesson 6: Volcanoes, Geysers, and Hot Springs





We are going to be reading chapter 4: Earth's Fiery Volcanoes

Before we start reading, let's go over
some vocabulary first! Turn to Activity
page 6.1 (workbook page 49)

Unit 5

Reader

Grade 4

Geology: The Changing Earth



Vocabulary for “Earth’s Fiery Volcanoes”

1. **volcano, n.** a hill or mountain that forms over a crack in Earth’s crust from which lava erupts (**volcanoes**) (32)
2. **crater, n.** a bowl-shaped opening at the top of a volcano or geyser (32)
3. **fine, adj.** very small (33)
4. **subduction zone, n.** the place where one tectonic plate is sliding beneath another tectonic plate (**subduction zones**) (36)
5. **descend, v.** to move downward (**descends**) (36)
6. **hotspot, n.** a very hot region deep within Earth’s mantle where a huge magma chamber forms (**hotspots**) (38)
7. **plume, n.** a column of magma that rises from the mantle into a chamber beneath Earth’s crust (40)
8. **hot spring, n.** a naturally flowing source of hot water (**hot springs**) (40)

Let’s echo read the words
and then we will discuss a
few unfamiliar words!



Chapter 4

Earth's Fiery Volcanoes

Imagine seeing new land form right before your eyes. You can do just that on the island of Hawaii in the Hawaiian Island chain. There, the Kilauea volcano has been erupting continuously since 1983. At times, red-hot lava shoots out of the crater at the volcano's top. More often, lava oozes out of cracks on the volcano's sides. As the lava flows downhill, it cools and hardens into volcanic rock. When lava flows all the way to the ocean, it cools to form rock along the shore. This adds new land to the island, making it a little bigger than it was before.

Erupting volcanoes are dramatic natural events. They can be a creative force, adding new land—even whole islands—to our planet. They also bring minerals from deep inside the earth to the surface. However, volcanoes can be dangerous and destructive. Large volcanic eruptions can flatten entire forests. They can fill the air with poisonous gases and hot, choking ash. They can release rivers of lava that burn and bury everything in their path. Erupting volcanoes can also trigger earthquakes, tsunamis, and landslides. They can even change the weather all around the world.

THE BIG QUESTION
How do scientists
determine where
volcanoes might
develop?

THE BIG QUESTION
How do scientists
determine where
volcanoes might
develop?

Turn to page 32 in your reader and follow along as we begin to read this chapter together.



Why do you think volcanoes,
geysers, and hot springs are
common along plate boundaries
and hot spots?



Now let's turn to
Activity Page 1.3
(workbook page 5)
to look at the
**Evidence
Collector's Chart**

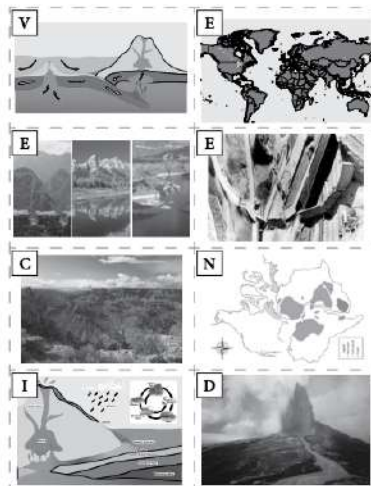


Evidence Collector's Chart

Chapter #	What is the cause?	What evidence is there?	Letter
	At some point, Pangaea broke apart and the pieces slowly moved apart over a long period of time.	<div style="border: 1px dashed black; height: 150px; width: 100%;"></div> <hr/> <hr/> <hr/> <hr/>	
	Tectonic plates move very slowly due to the heat and pressure in Earth's mantle.	<div style="border: 1px dashed black; height: 150px; width: 100%;"></div> <hr/> <hr/> <hr/> <hr/>	
	Material in the mantle moves beneath stuck rocks at a fault, causing pressure to build over time and then suddenly release as the rocks break and slip past each other, shaking the ground.	<div style="border: 1px dashed black; height: 150px; width: 100%;"></div> <hr/> <hr/> <hr/> <hr/>	

We can now complete row 4 of our Evidence Collector's Chart! Let's take a look!

Evidence of Changes on Earth



Word Work: fine

Text Example:

"The fine ash particles in the air blocked some of the sunlight reaching Earth's surface."

Meaning:

very small

Part of speech:

adjective



My Example:

"We shredded the cheese for our tacos into very fine pieces."

Alternate Meaning:

very well or pleasant



Meaning 1 – very small



OR

Meaning 2 – very well or pleasant



COMMAS

A comma is a punctuation mark used to separate words or numbers in dates and addresses, as well as a series of words in a sentence.

A comma is also used to indicate that a pause is needed in a sentence. When used with quotation marks, a comma helps to set off a quotation from the rest of a sentence and indicates that a pause is needed.



QUOTATION MARKS

Quotation marks are punctuation marks used to show exactly what a person says or has said (dialogue). They are also used when copying the exact words from a written text.

The text states, “Erupting volcanoes are dramatic natural events.”



QUOTATION MARKS

Sentences with quotes can also be reorganized into a split or interrupted quotation. Look at how the sentence would look...

“Erupting volcanoes,” the text states, “are dramatic natural events.”



QUOTATION MARKS

Let's look at some more examples...What month is your birthday?

1–4 do sentence 1; 5–8 do sentence 2; 9–12 do sentence 3

What I asked my friends is your favorite color?

Green Seth responded is my favorite color.

My favorite color Bonnie said is purple.



Time to practice!



NAME: _____ 6.2 TAKE-HOME
DATE: _____

Commas and Quotation Marks

Rewrite each sentence, inserting a comma or commas and quotation marks in the appropriate locations. Be sure to use correct capitalization and end punctuation.

Example: The time he explained is 3:47 pm
"The time," he explained, "is 3:47 pm."

1. You don't have to look hard the teacher said to find rocks

2. Students might ask what are rocks? before reading the

3. Rocks are naturally occurring materials made of solid substances the author explains

ral billion years

dimentary and

Core Knowledge Language Arts | Grade 4
Activity Book | Unit 5 51

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Grade 4 | Core Knowledge Language Arts

Turn to Activity
Page 6.2
(workbook page
51) We will do
the first one
together.

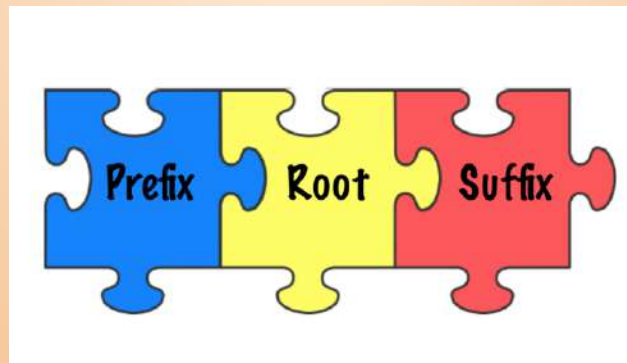
The rest is
homework!



Root: rupt

Meaning: to break or burst

Adding prefixes and suffixes to root words can change its meaning and part of speech.



Root: rupt

Word	Part of Speech	Meaning
erupt	verb	send out rock, lava, and ash in a sudden explosion
eruption	noun	process of sending out rock, lava, ash in sudden explosion
abrupt	adjective	sudden, unexpected; breaking through suddenly
disrupt	verb	cause disorder by breaking through what is happening
rupture	noun	A break or burst
uninterrupted	adjective	continuing without breaking or being stopped





Write a complete sentence for each of the following words. Be sure to use correct capitalization and punctuation.

7. *disrupt*

NAME: _____ 6.3 PAGE HOME
DATE: _____

Root *rupt*

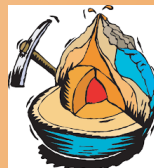
Write the correct word to complete each sentence. You may need to add -ed, -ing, or -s to make the word correctly fit in the sentence.

uninterrupted	erupt	disrupt
rupture	abrupt	eruption

1. A volcanic _____ is usually sudden and violent.
2. When my friend lied to me, it caused a(n) _____ in our friendship.
3. My parents say it's bad for me to spend television, so they limit how much I can watch _____.
4. Old Faithful is a geyser in Yellowstone National Park that _____ several times a day.
5. Sometimes my dog _____ my sleep when she barks in the middle of the night.
6. During an argument, my brother left the room in a(n) _____ way instead of continuing the conversation.

HOMEWORK

Complete
Activity Page
6.3 for
homework.



Spelling

Let's start by echo reading each word!

hierarchy

matriarch

archrival

anarchy

autograph

biographer

calligraphy

paragraph

eruption

uninterrupted

rupture

abrupt

Tear out Activity
page 6.4 and keep
it in your red
folder this week!



Remember to
complete Activity
Pages 6.2 and 6.3 for
homework

