

4th Grade Distance Learning

Week 2

(April 6th-9th)

Name:

Teacher:

Multi Digit Addition Week 2 Day 1 Video Transcript

Hi, welcome to Math Antics. In this video we're gonna learn how to do multi-digit addition.

A multi-digit number is just a number with more than one digit, which is anything greater than 9. Two-digit numbers use two number places, like the number 32. It has a '2' in the ones place and a '3' in the tens place.

Three-digit numbers use three number places, for example 215. There's a '5' in the ones place, a '1' in the tens place, and a '2' in the hundreds place.

But no matter how many digits a number has, if you know your basic addition facts, you can add it to any other multi-digit number easily.

So let's start by adding these two numbers together.

Here's how it works.

The first thing we need to do is stack the numbers up. And by that, I mean re-writing them so they're on top of each other like this.

Ah ah ah - don't be sloppy! Make sure they line up nice and straight.

That's more like it.

But here's the most important part. Be sure to line up the number places so that they're directly over each other...so that the ones place of the number on top is directly over the ones place of the number beneath it. And if you line up the ones places correctly, then all the other number places will be lined up too.

The tens places are also lined up, and the hundreds places. Well, the bottom number doesn't have a digit in the hundreds place, but that's ok. We can imagine a zero there as a place holder, but we don't have to show it. After our numbers are lined up, we draw a line just below the bottom number because our answer is going to go below that.

We also put a plus sign down here on the left side to show that we're adding. By stacking the numbers up, we've formed columns for each number place and we're going to add the digits in each column.

And this is super important... We ALWAYS start with the ones places column and then work our way to the left.

And in the ones places we have 5 plus 2 which equals 7. So we put a '7' in the ones place of our answer which is just below the line. Now we can move left to the next number place column, which is the tens place. The digits there are a '1' plus a '3', and that gives us a '4' in the tens place of our answer.

And last of all, we add the hundreds place column. But there's only one digit there, so we don't really have to add it.

We just bring the '2' down to our answer like this. Of course we could add the '2' to the zero that we imagined there as a place holder, but 0 plus 2 will just give us 2 also.

There: 215 plus 32 equals 247.

Let's try another example.

This one's a little harder: 1,850 plus 354

Okay, the first step is the same.

We need to stack the numbers up so we can add each number place column.

Be sure to line up the ones places and draw your line and plus symbol just like in the last example.

Again, we ALWAYS start by adding the digits in the ones place.

0 plus 4 equals 4, so a '4' goes in the ones place of our answer.

Now we move to the next place to the left (the tens place), and here comes the tricky part.

If you add the digits in the tens places (5 plus 5) you get 10.

But 10 is a two-digit number, so we would need to use two digits in our answer to write it!

But we can't leave a '1' in the hundreds place of our answer because we're going to need that space when we add the hundreds place digits.

That '1' is gonna be in the way.

So what do we do?

The answer is; we carry the digit that we don't have room for up to the top of the next number place column.

Instead of putting it in the answer space, we put it above the other digits in our hundreds place column so that we can add it with the rest of the digits in that column.

So you can see, the '1' is gonna go in the hundreds place of the answer, ...just not by itself.

It's almost like it has to 'get in line' so it can be added to the other digits in that column.

Oh, and carrying the extra digit up to the next column you're gonna add is often called "re-grouping" because it's really like you're moving a group of 10 to the next column over, and leaving whatever is left in the first column. ...in this case, zero.

Okay, now that we've carried that '1', we can add up the digits in the hundreds place column, which means adding up three digits now. 1 plus 8 plus 3 which equals 12.

Hmmm... another two-digit number!

Alright, it looks like we'll have to carry again because we're gonna need this answer spot for the next column to the left.

So we carry the '1' up to the top of the next column and leave our '2' where it is in the hundreds place of the answer...just one more column to add up now.

In the thousandths places we have 1 plus 1 equals 2.

Okay, we've added up all our columns, so the answer to our addition problem is 2,204.

Think you've got it so far? Let's try one more together before you do some of the exercise problems.

Let's add up these three numbers: 145, 809 and 77

We start the same way, stacking the numbers up and making sure all the ones places line up in a column on the right.

And as always, we add up the digits in the right-hand column first.

$$5 + 9 + 7 = 21.$$

Because that answer is a two-digit number, we need to carry the first digit to the next column, which is like moving a group of 20 over and leaving the '1' behind.

Now we add the next column, and there are 4 digits to add:

$$2 + 4 + 0 + 7 = 13$$

Yep, that's another two-digit answer so we carry the '1' and leave the '3' in the tens place.

Last, we add the hundreds place column:

$$1 + 1 + 8 = 10$$

Wow!... another two-digit number. But this time we don't need to carry, because there's no more columns left to add, so we won't be getting in the way of any answers by leaving both the digits in the answer like this.

So our answer is 1,031

Alright, now you know how to add multi-digit numbers, but it's very important to practice so you'll remember and get good at it.

So check out the printable exercises for this section. I recommend that you work a few problems each day for several days until you've got it down.

And it's a great idea to use a calculator to check your answers.

This will help you find mistakes, and you'll get practice doing math with a calculator, which is an important skill too.

Thanks for watching Math Antics and I'll see you next time.

Multi-Digit Addition (day 1)

Your email address (scott_peterson@isd31.net) will be recorded when you submit this form.
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* Required

Math Antics - Multi-Digit Add...



$299 + 760 = *$

1 point

Your answer

$858 + 359 = *$

1 point

Your answer

$695 + 590 = *$

1 point

Your answer



$3,875 + 635 *$

1 point

Your answer

$6,428 + 8,704 = *$

1 point

Your answer

$14,579 + 7,422 + *$

1 point

Your answer

$18,721 + 12,127 = *$

1 point

Your answer

$8,675,309 + 214,013 *$

1 point

Your answer

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Submit

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Multi-digit subtraction Day 1 (Apr. 8)

Hi and welcome to Math Antics.

In this video we're gonna learn how to do multi-digit subtraction.

It's similar to doing multi-digit addition like we learned in our last video, but there's a few important differences.

The main difference is, with subtraction the order of the problem matters.

With addition, you can switch the order of the numbers you're adding and you'll still get the same answer.

$$5 + 2 = 7 \text{ and } 2 + 5 = 7.$$

But with subtraction, if you have the problem 5 minus 2, you'll get 3.

But you CAN'T switch the problem around. You won't get the same answer if you try to do 2 minus 5 instead.

In fact, you'll probably get confused because you'll be trying to subtract a bigger number from a smaller one.

With multi-digit subtraction, it's important to remember that order matters, especially when you're re-writing your problem.

Often you will be given a problem like this (38 - 25)

and you'll have to re-write it with the numbers stacked up like we did with addition.

But you have to make sure that the first number, the one you're taking FROM, goes on top

and the number you are taking AWAY is on the bottom.

Another hint is that the bigger number should always be on top.

Okay, let's go ahead and try this problem.

We've got 38 on top and 25 below it, and the ones places are lined up, just like they should be.

Now we draw our line so our answer can go below it,

and we write a minus sign over here on the left to show that we're subtracting.

Now we can start getting our answer. And just like with addition, we ALWAYS start with the ones place column.

Here we subtract the bottom number from the top:

$$8 - 5 = 3 \text{ So the '3' goes in the ones place of our answer.}$$

Now we move to the next place column to the left, the tens place.

There we have 3 - 2 which is 1.

There, we just subtracted 25 from 38 and found out that the difference is 13.

Alright, let's see another example: 135 - 27

Ah-ha, this is where multi-digit subtraction can get a little tricky.

Let's re-write our problem: 135 on top, 27 below it, with the ones places lined up neatly,

and our answer line and subtraction symbol in place.

There... now we can start subtracting.

Uh-oh! Look at this... In our ones place column, the digit on top is smaller than the digit on the bottom.

How can we subtract a bigger digit from a smaller one? Did we make some kind of mistake?

No, we wrote our problem correctly... the bigger number is on top.

Sometimes this just happens... the top digit might be smaller than the bottom digit, so you can't subtract it...

unless... you borrow!

Here's how borrowing works...

The top digit is 5, but the digit below it wants to take 7 away.

"Sorry, I don't have 7, I only have 5."

"Well, what about your neighbor? He's in a bigger number place... he's loaded! So you can just borrow from him."

"Excuse me, I've got a little problem... do you happen to have something I could borrow?"

"Why of course. Here you go!"

Great, that '1' will help. But if you just add 1 to 5, you'd get 6.

But fortunately, this '1' came from the next number place and it really represents a 10.

And when we add 10 to 5 we get 15 which is big enough.

Now, instead of this column being $5 - 7$, it's $15 - 7$ and $15 - 7 = 8$.

Okay, we've got the first digit of our answer.

Now we can move on to the next column. But remember, we borrowed from that number place.

It used to be a '3', but now it's a '2'. It went down by 1 because we borrowed from it.

Well, remember... we really borrowed 10, because it was in the next number place, but it's sometimes easier to just think of it as borrowing a '1' and getting to stick that '1' in front of the digit that needed to borrow.

So in the tens place, we have 2 minus 2 which gives us zero in our answer.

And then, our last column just has 1 minus nothing (or 1 minus zero) so that's still just 1.

There, we've calculated that the difference between 135 and 27 is 108.

Alright, let's try another example with borrowing (or re-grouping as some teachers call it). Let's subtract 58 from 426.

Again we start by subtracting the digits in the ones place column.

Here we have $6 - 8$, and since 6 is too small to subtract 8 from, we'll need to borrow.

We always borrow from the number place on the left.

We'll borrow a '1' (which is really a '10') and we'll write it in front of our borrowing digit (in this case 6) which gives us 16.

And don't forget to make the digit we borrowed from smaller by 1.

You can just cross it out and write the new smaller number above it, like this.

Okay, now we can subtract the first column: $16 - 8 = 8$

Now for the tens place. Since we borrowed from this column, it's become $1 - 5$, but again, the top number is too small, so we'll have to borrow again.

We borrow a '1' from the next number place over which means that digit will change from a '4' to a '3'.

Then we put the '1' in front of the borrowing digit which will make it 11.

Now we can do the subtraction for that column: $11 - 5 = 6$.

And the last column is easy, we bring that leftover '3' down to the answer line because there's nothing there to subtract from it,

and that means 368 is our answer.

So now you know the basics of multi-digit subtraction.

But before you move on to practicing with exercises, I want to show you one more important trick.

Once in a while, you'll come across a situation where you need to borrow from the next number place over,

but that digit happens to be a zero! How can you borrow from a zero?

Well, you can't. So you'll have to borrow from the next TWO digits instead of just one.

In this case, instead of borrowing from 0, borrow from 40.

You'll get the '1' you need to borrow, and the 40 will become a 39.

Or in this case... If the '3' needs to borrow, don't borrow from the '0', borrow from the '20' and there will be 19 left over.

Or, what if there's two zeros in a row like this problem? Well, if the '2' needs to borrow, then borrow from the whole 500 next door. The 2 will become 12, and the 500 will drop by one to become 499.

Get the idea? You can do that no matter how many zeros are in a row.

Just keep including the next digit to the left until you get a number you can really borrow from.

Okay - that wraps up this lesson. Hopefully you have a better idea of how multi-digit subtraction works,

but to really get it down, you've got to practice.

So be sure to do those exercises.

Thanks for watching and I'll see you next time.

Learn more at www.mathantics.com

Multi-Digit Subtraction (day 1)

* Required

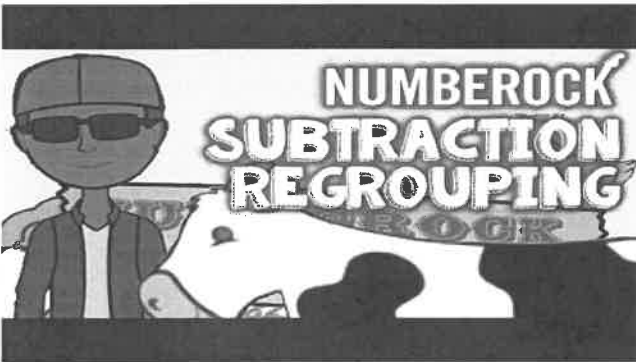
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Multi-Digit Subtraction



<http://youtube.com/watch?v=Y6M89-6106l>

Subtraction Rap



<http://youtube.com/watch?v=nku3jVLbPBw>

2. $1,400 - 238 =$ *

1 point

3. $1,900 - 1,238 = *$

1 point

4. $4,620 - 1,710 = *$

1 point

5. $5,243 - 2,454 = *$

1 point

6. $3,142 - 1,261 = *$

1 point

7. $2,375 - 896 = *$

1 point

8. $5,000 - 2,583 = *$

1 point

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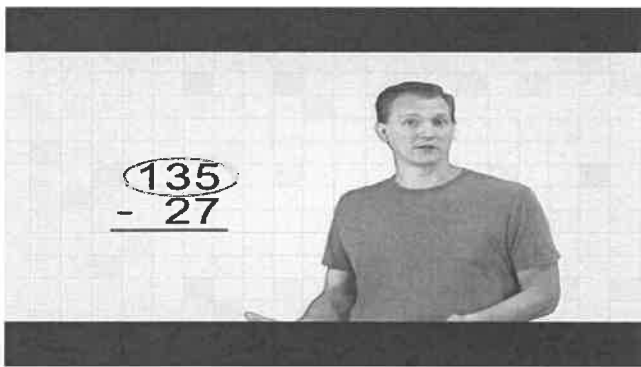
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Multi-Digit Subtraction (day 2)

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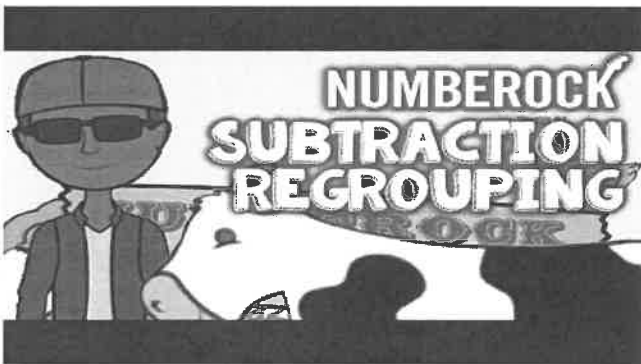
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Multi-Digit Subtraction- Same videos as Multi-Digit Subtraction (Day 1)



<http://youtube.com/watch?v=Y6M89-6106I>

Subtraction Rap



<http://youtube.com/watch?v=nku3jVLbPBw>

2. $960,739 - 894,045 =$ *

1 point

3. $665,717 - 82,824 = *$ 1 point

4. $372,608 - 57,425 = *$ 1 point

5. $597,603 - 404,980 = *$ 1 point

6. $614,702 - 539,508 = *$ 1 point

7. $724,359 - 99,068 = *$ 1 point

8. $394,280 - 56,473 = *$ 1 point

9. $896,581 - 355,274 = *$ 1 point

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Google Forms

Name: _____

Science : Germs

Read the "Germs" article. Write a brief summary about what you learned from the article.



How do Germs Get Inside of Your Body?

By Mystery Doug

(phone ringing)

- Hi, Doug.

- Hi, Natasha.

- I have a question for you.

How do germs get inside of your body?

- Ooh, that's a great question. From the time all of us are really young, adults are telling us about germs, right? Like, if food falls on the floor, don't eat that.

It might have germs on it. We're told it's important to cover up our mouths when we sneeze, and to wash our hands before we eat.

It seems like germs must be everywhere.

But what really are germs anyway?

I mean, you might know that they're extremely tiny living things that can make you sick.

They're so small that you can't see them with your eyes alone.

But what I mean is, it's not like germs make you sick just by being near you.

Otherwise, we'd be getting sick all the time.

When we do get sick, somehow it means germs were able to get inside our bodies in order to make us feel that way.

How do they do that?

What do you think?

If you want to stop and discuss this with someone near you, now would be a good time to pause the video.

Okay, you ready?

Well, before I tell you this, maybe one thing that might surprise you is that people haven't always known that germs are what make us sick.

In fact, before the microscope was invented, no one even knew that germs existed.

They were just too small for anyone to have noticed them.

If you've ever been curious, here is what some of them look like.

There are lots of different kinds of germs, and different germs cause different sicknesses.

Like this one here, this is one of the germs that causes the common cold.

Here's one that can cause you to throw up, one that you might hear people call a stomach bug.

Or, here's one of the germs that causes the flu.

The discovery of germs was really important, because once we figured out that it's germs that cause people to get sick, we could finally start to do something about how to stop them.

Figuring out how to kill germs once they're inside your body, that involves medicine, everything from the traditional knowledge of helpful plants to the discovery of special medicines,

like vaccines and antibiotics. But what if you could figure out how to stop germs from ever getting into your body in the first place?

How do they even get into your body?

From all of the things you hear adults say about washing your hands and not touching things on the ground, maybe it's tempting to think that just touching germs alone can make you sick.

Maybe they can get through your skin.

But by doing careful experiments, scientists have been able to figure out that this is not how most germs get into your body.

It turns out most germs, especially ones that cause colds and flu, are only able to get into your body through openings, places like your mouth, your nose, your eyes.

Wait, so as long as you just make sure not to get any germs into your mouth or your nose or your eyes, you're basically sure to not catch a cold or get the flu?

Whoa.

Does this mean you could even stand right next to someone who has these germs in their body and not ever get sick?

Well, technically, yes. But here's where things get a little trickier than it first seems.

You see, what if that person sneezes or coughs?

Check out what happens when you sneeze or cough as seen in slow motion.

You see all those tiny droplets that go into the air?

If the person sneezing or coughing is sick, each one of those droplets is likely to contain some of the germs that's making them sick.

If you breathe those germs in, either through your nose or your mouth, now you might get whatever sickness they have.

Seeing a slow-motion video like this makes it so real why everyone is always saying to cover your mouth when you cough or sneeze.

At least then the droplets won't go into the air.

They stay in your elbow or tissue instead.

But someone else sneezing or coughing into the air isn't the only way germs can get inside your body.

You would be surprised at how often we rub our eyes, rub our noses, put our fingers near our mouths, even without realizing it.

Sometimes, especially when people know there are germs going around, you'll hear adults give the advice, "Try not to touch your face."

That can be so hard to follow though.

Like, what if you've got an itch, and you just have to touch your face?

And I mean, what are we just supposed to never touch our faces?

You can't do this or this?

Well, the good news is, touching your fingers to any part of your face doesn't mean germs are definitely gonna get inside your body.

It's only a concern if your hands might have germs on them, like, for example, if you've been touching a surface that lots of other people touch.

This is the reason why everyone is always saying to wash your hands really well.

It's because we often bring our hands near our faces,

whether it's to rub our eyes

or even just when we're eating.

If each of us makes sure we wash our hands

before we touch our face or before we eat,

the soap and water rinse any germs off,

so that those germs will go down the drain

and not into your body.

So in summary, a lot of the germs that make us sick

get into our body through openings

like our mouths, nose, and eyes.

But by practicing good hygiene,

we can make it harder for germs to get near these openings

in the first place.

That's all for this week's question.

Thanks, Natasha, for asking it.

Now, for the next episode,

we'd usually go back to our last poll

before we did this special episode,

but since Saint Patrick's Day is coming up,

I decided to pick out three questions from the question jar

that all have something to do with Saint Patrick's Day.

When this video is done playing, you'll get to vote on one.

You can choose from: who was Saint Patrick;

how is a rainbow made;

or, why are four-leafed clovers considered good luck?

So submit your vote when the video is over.

I want to hear from all of you watching.

There are mysteries all around us.

Stay curious, and see you next week.

4th grade

**Language
Arts**

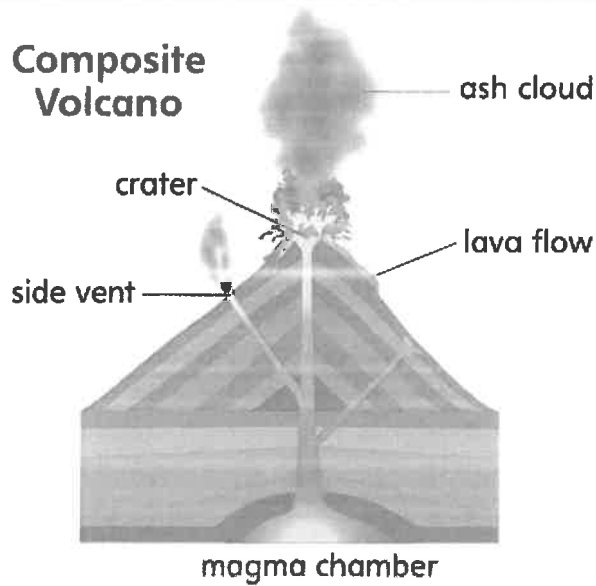
Week 2

(April 6th - April 10th)

Name:

Teacher:

Composite Volcano



Weekly Question

April 9th

In what ways do volcanoes impact Earth?

Quick Write What happens when a volcano erupts? Use evidence from the media to retell the process in a way that maintains its meaning and has a logical order.

An **active** volcano is one that still has the ability to erupt. When volcanoes erupt, they release heat, pressure, and substances from below Earth's crust. Thin, runny magma may be released in a slow lava flow. Thick, gooey molten rock can build up pressure that results in an explosion. This explosive eruption may throw ash, steam, poisonous gases, and enormous boulders into the sky.



A volcano that has not erupted in the last 10,000 years, or a volcano that is no longer connected to magma below the Earth's surface, is called **extinct**.

Learning Goal

I can learn more about informational text by analyzing the main idea and details.

Spotlight on Genre



Informational Text

Reading **informational text** can help you discover new topics and deepen your understanding of topics you have encountered before.

- The text presents facts.
- The tone is usually neutral.
- The main idea is not a claim to be supported.
- Details, definitions, and examples develop the idea.
- Photographs and captions demonstrate ideas.

Establish Purpose Knowing the genre of a text can help you set a realistic purpose for reading. Since an author’s purpose in writing an informational text is to inform, what can you expect to gain from reading it?

What types of informational text have you read?



My PURPOSE

TURN and TALK With a partner, discuss your purposes for reading. Make a plan to check in with your partner during and after reading. Decide how you will help each other determine whether you have achieved your purposes.

Types of Informational Texts

✓ **FACT**

X **Fiction**

Reports

- ★ may contain charts, tables, or diagrams
- ★ present, analyze, and draw conclusions from data

Procedural, or "How-To," Texts

- ★ present steps in a process
- ★ describe assembly instructions
- ★ explain a recipe
- ★ provide rules of a game

Narrative Nonfiction

- ★ may include vivid descriptions
- ★ often focuses on people and events

Articles

- ★ can be informational or narrative nonfiction
- ★ may contain photos



Seymour Simon wants to develop “enthusiasm for exploring the world” in his readers. He attributes his direct, conversational approach to science topics to his twenty-three years as a science teacher.

Volcanoes

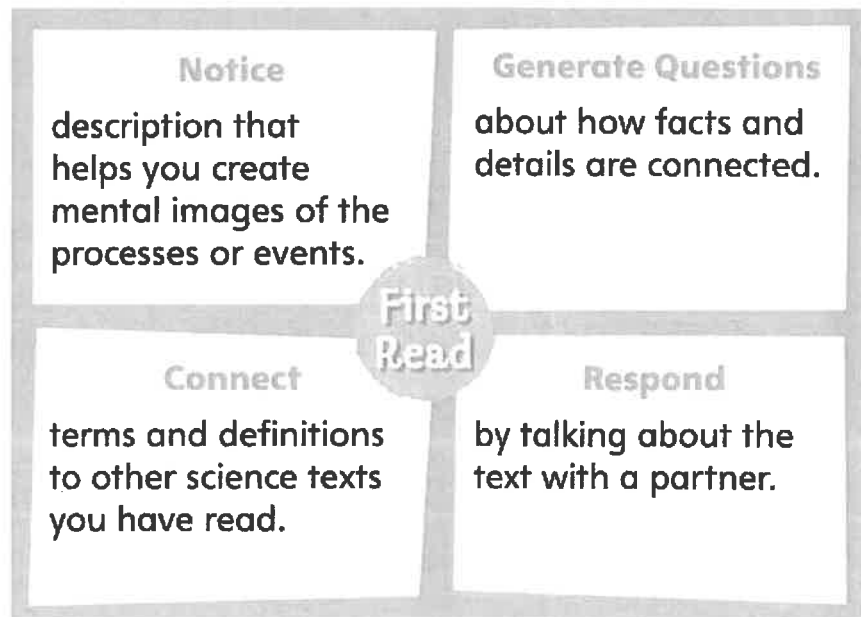
Preview Vocabulary

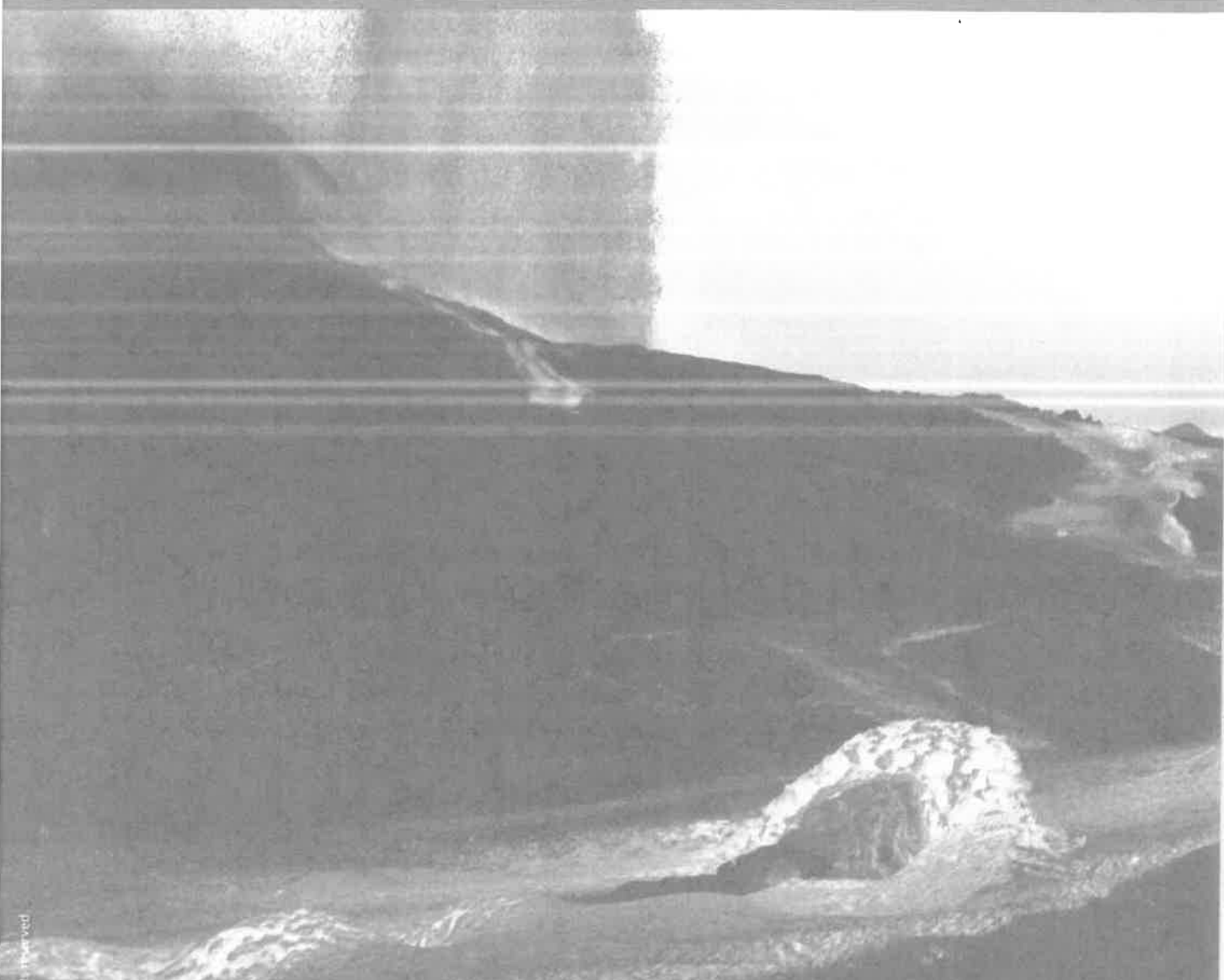
As you read *Volcanoes*, pay attention to these vocabulary words. Notice how they help you form mental images of important topics or ideas from the text.

	magma	face
reclaim	gushes	threatened

Read

Use the title of the text to identify its topic. Before you begin reading, write what you already know about this topic. Follow these strategies when you read **informational texts** for the first time.





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VOLCANOES

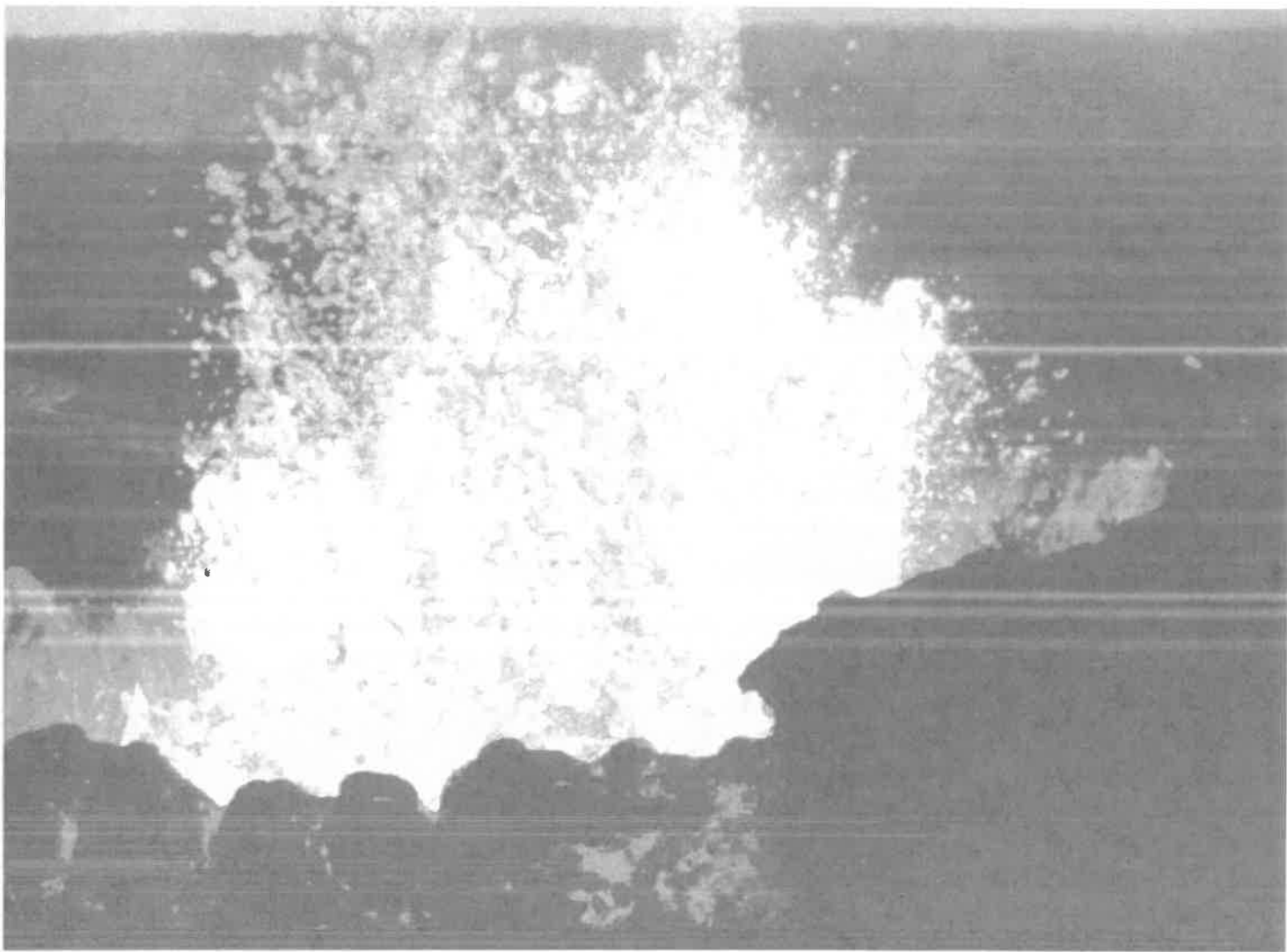
by Seymour Simon



AUDIO



ANNOTATE



CLOSE READ

Analyze Main Idea and Details

Why does Seymour Simon include anecdotes, or brief stories, about people long ago?

Underline a main idea supported by these details.

- 1 Throughout history, people have told stories about volcanoes. The early Romans believed in Vulcan, their god of fire. They thought that Vulcan worked at a hot forge, striking sparks as he made swords and armor for the other gods. It is from the Roman god Vulcan that we get the word *volcano*.
- 2 The early Hawaiians told legends of the wanderings of Pele, their goddess of fire. Pele was chased from her homes by her sister Namaka, goddess of the sea. Pele moved constantly from one Hawaiian island to another. Finally, Pele settled in a mountain called Kilauea, on the big island of Hawaii. Even though the islanders tried to please Pele, she burst forth every few years. Kilauea is still an active volcano.

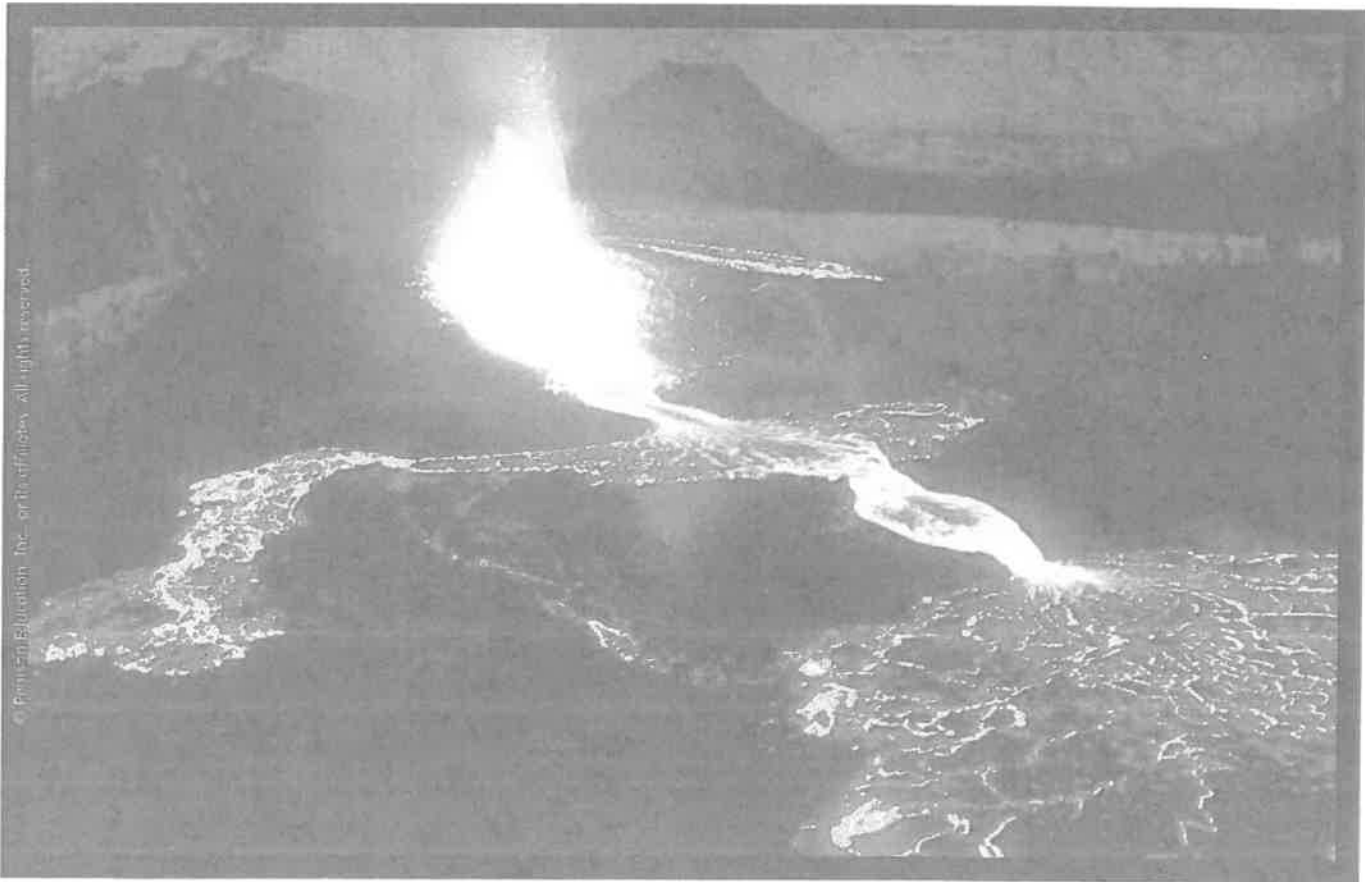
- 3 In early times, no one knew how volcanoes formed or why they spouted red-hot molten rock. In modern times, scientists began to study volcanoes. They still don't know all the answers, but they know much about how a volcano works.
- 4 Our planet is made up of many layers of rock. The top layers of solid rock are called the crust. Deep beneath the crust is the mantle, where it is so hot that some rock melts. The melted, or molten, rock is called magma.
- 5 Volcanoes are formed when magma pushes its way up through the cracks in Earth's crust. This is called a volcanic eruption. When magma pours forth on the surface, it is called lava. In this photograph of an eruption, you can see great fountains of boiling lava forming fiery rivers and lakes. As lava cools, it hardens to form rock that is also called lava.

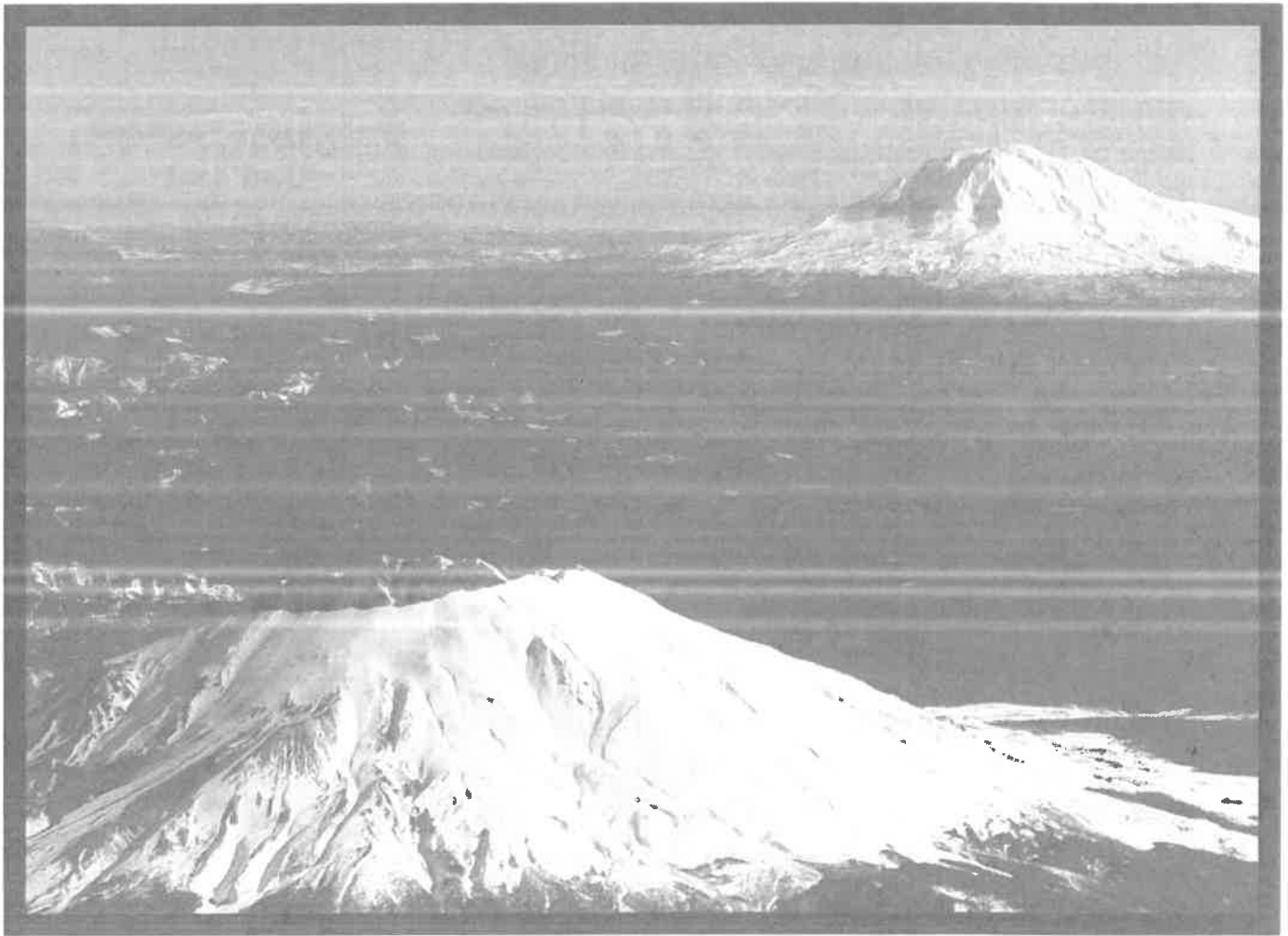
Analyze Main Idea and Details

What main idea is supported with details in the text and the image on this page?

Underline the idea.

magma liquid rock
beneath Earth's surface





CLOSE READ

Monitor Comprehension

When you monitor your comprehension, you keep track of what you do and do not understand.

Highlight an idea or detail that is essential to your understanding of volcanoes.

- 6 A volcano is a hill or mountain formed by erupted material that piles up around the vent. Mount Rainier in the state of Washington is an ice-covered volcano that last erupted in the nineteenth century.
- 7 Not far from Mount Rainier and another volcano, Mount Adams (top, right), is Mount St. Helens (bottom, left). Native Americans and early settlers in the Northwest had seen Mount St. Helens puff out some ash, steam, and lava in the mid-1800s. Yet for more than a century, the mountain seemed quiet and peaceful.

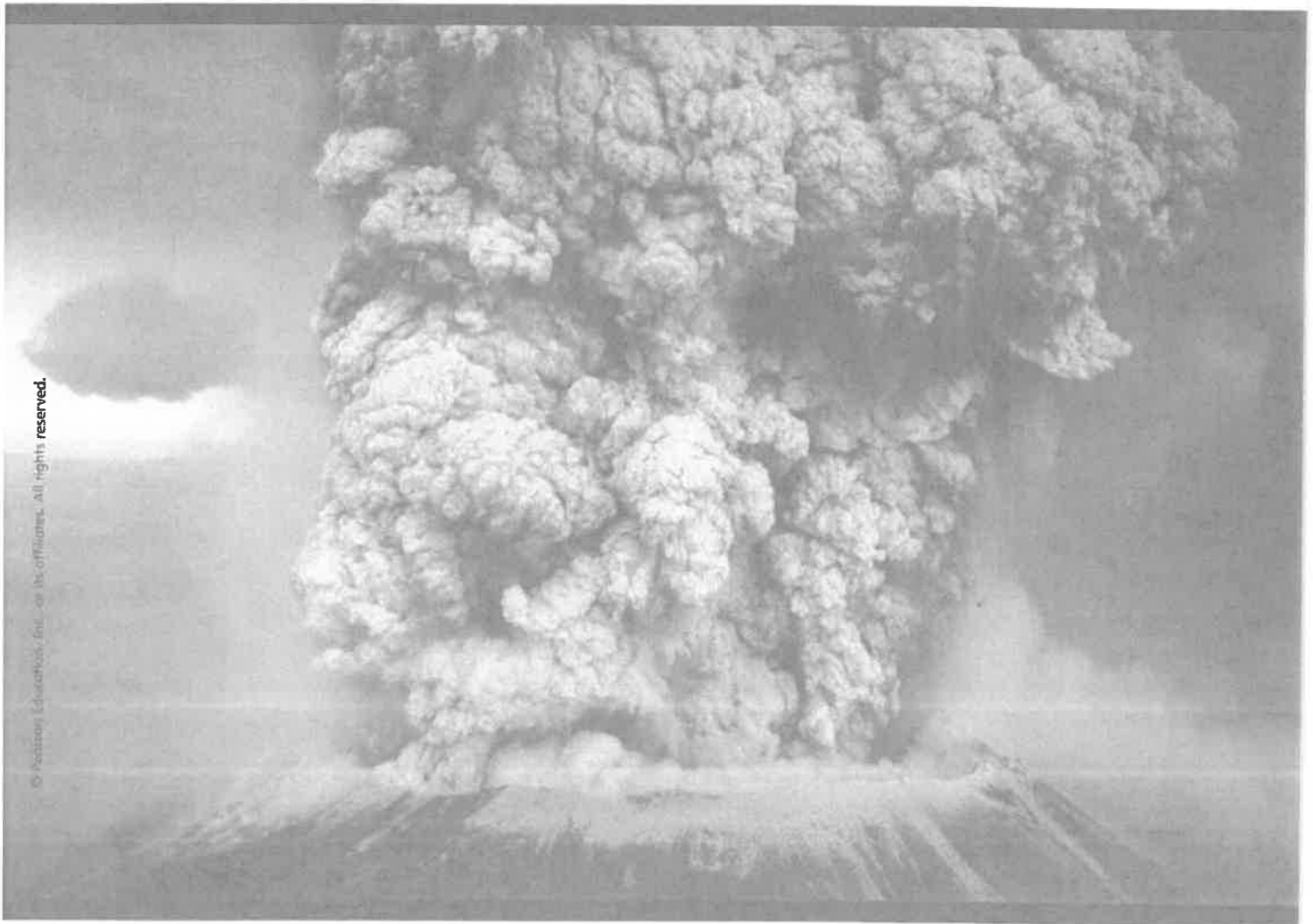
8 In March 1980, Mount St. Helens awakened from its long sleep. First there were a few small earthquakes that shook the mountain. Then, on March 27, Mount St. Helens began to spout ashes and steam. Each day brought further earthquakes, until by mid-May more than ten thousand small quakes had been recorded. The mountain began to swell up and crack.

9 Sunday, May 18, dawned bright and clear. The mountain seemed much the same as it had been for the past month. Suddenly, at 8:32 A.M., Mount St. Helens erupted with incredible force. The energy released in the eruption was equal to ten million tons of dynamite.

Monitor Comprehension

How can you use a text feature to improve your understanding?

Highlight details that help you understand what the image shows about force.



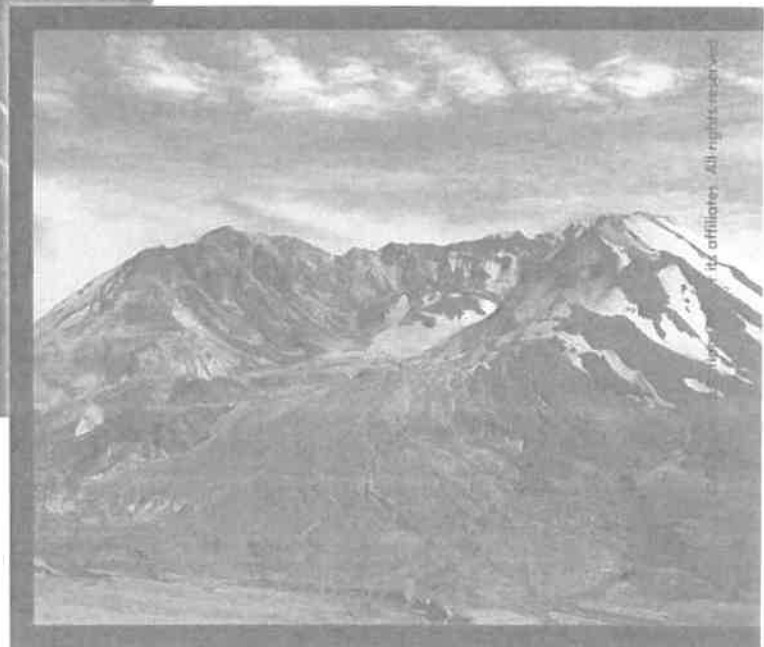
Analyze Main Idea and Details

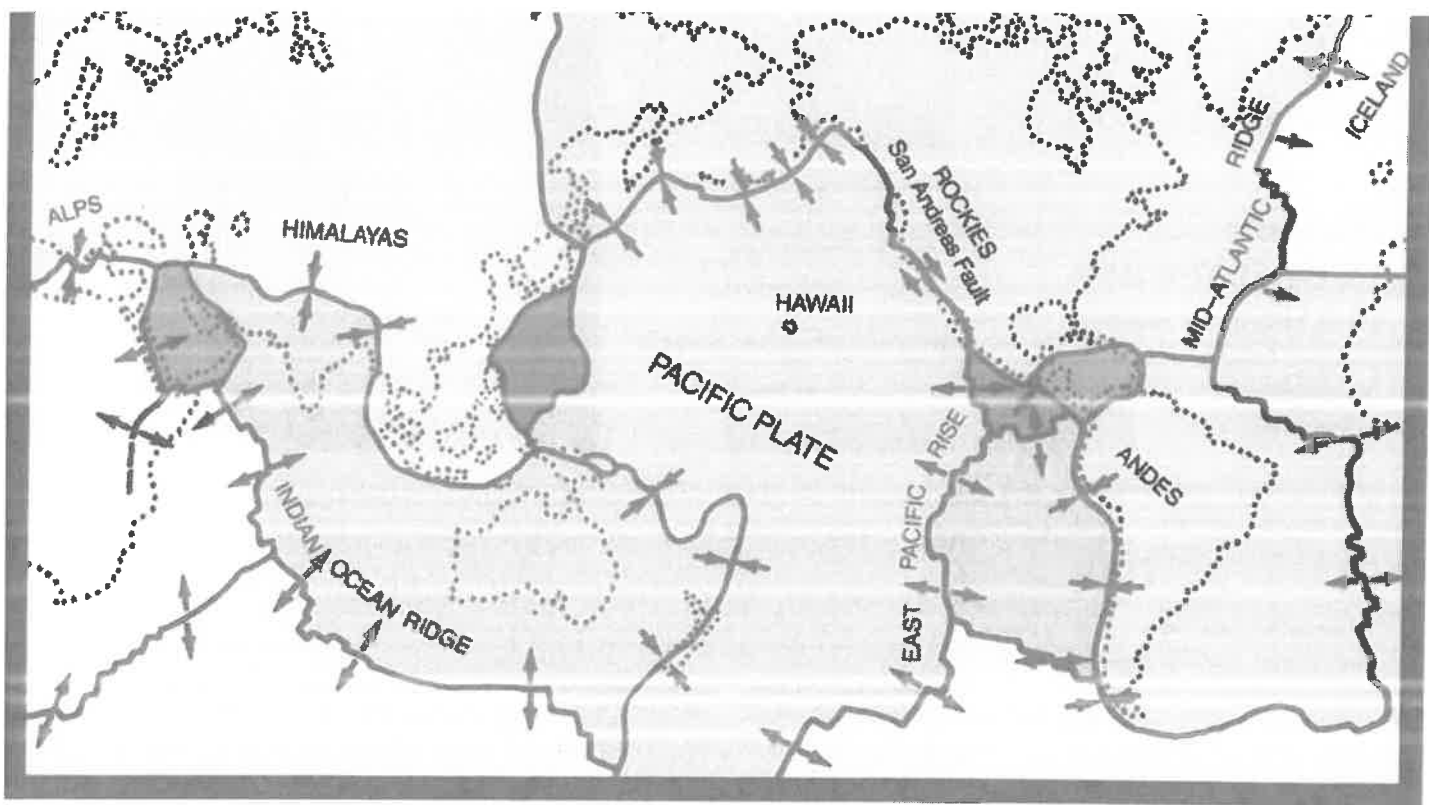
Underline details that support a main idea in paragraph 10.

face surface; front or outer part

10 The eruption of Mount St. Helens was the most destructive in the history of the United States. Sixty people lost their lives. Measurable ash fell over a huge area of more than 75,000 square miles. Hundreds of houses and cabins were destroyed, leaving many people homeless. Miles of highways, roads, and railways were badly damaged. The force of the eruption was so great that entire forests were blown down like rows of matchsticks.

11 Compare the way Mount St. Helens looked before and after the eruption. The top of the volcano and a large segment of its north face slid away. In its place is a huge volcanic crater. In 1982, the mountain and the area around it were dedicated as the Mount St. Helens National Volcanic Monument. Visitor centers allow people to view the actively growing lava dome that now partially fills the crater.





CLOSE READ

Analyze Main Idea and Details

Use details in the text to determine a main idea about the locations of volcanoes.

Underline details that support the idea.

- 12 Volcanoes don't just happen anyplace. Earth's crust is broken into huge sections like a giant cracked eggshell. The pieces of the crust are called plates. The United States, Canada, Mexico, some parts of Russia, and the western half of the North Atlantic Ocean are all on the North American plate. Most of the world's volcanoes erupt in places where two plates meet.
- 13 Down the middle of the North Atlantic Ocean, two plates are slowly moving apart. Hot magma pushes up between them. A chain of underwater volcanoes runs along the line where the two plates meet. Some of the underwater volcanoes have grown so high that they rise from the ocean floor to above sea level as islands.
- 14 Iceland is a volcanic island in the North Atlantic. In 1963, an area of the sea near Iceland began to boil and churn. An undersea volcano was exploding and a new island was being formed. The island was named Surtsey, after the ancient Norse god of fire.

Monitor Comprehension

What strategies could you use to improve your comprehension of a difficult text?

Highlight information you might need to reread, ask questions about, or include in a summary of how volcanoes create land.

reclaim take back



- 15 Ten years after the explosion that formed Surtsey, another volcano erupted off the south coast of Iceland on the island of Heimaey. Within six hours of the eruption, more than 5,000 people were taken off the island to safety. After two months, hundreds of buildings had burned down and dozens more had been buried in the advancing lava. Then the volcano stopped erupting. After a year's time, the people of Heimaey came back to reclaim their island with its new 735-foot volcano.
- 16 Many volcanoes and earthquakes are located along the margins of the large Pacific plate. Volcanoes and earthquakes are so numerous that these margins are called the "Ring of Fire." But a few volcanoes are not on the edge of a plate. The volcanoes in the Hawaiian Islands are in the middle of the Pacific plate.
- 17 These volcanoes have grown, one after another, as the Pacific plate slowly moves to the northwest to form the Hawaiian volcanic chain. Each volcano grew from the deep Pacific seafloor over several million years. Eruption followed eruption, and little by little, thin layers of lava hardened, one atop another. Thousands of eruptions were needed to build mountains high enough to reach from the deep sea bottom and appear as islands.
- 18 The largest Hawaiian volcano is Mauna Loa. It is seventy miles long and rises thirty thousand feet from the ocean floor. It is still growing and is one of Hawaii's most active volcanoes.

- 19 Hawaiian lava usually gushes out in red-hot fountains a few hundred feet high that feed lava rivers or lakes. Hawaiian volcanoes erupt much less violently than did Surtsey or Mount St. Helens. Only rarely does a Hawaiian volcano throw out rock and high clouds of ash.
- 20 Steam clouds billow as a flow of hot lava enters the sea. Hawaii is constantly changing as frequent eruptions of the Mauna Loa and Kilauea volcanoes add hundreds of acres of new land to the Big Island. Old lava flows are quickly weathered by the waves into rocks and black sand.
- 21 Hawaiian lava is fluid and flows quickly. In some lava rivers, speeds as high as thirty-five miles per hour have been measured. In an eruption in 1986, a number of houses were threatened by the quick-moving lava. Firefighters sprayed water on the lava to slow down its advance.

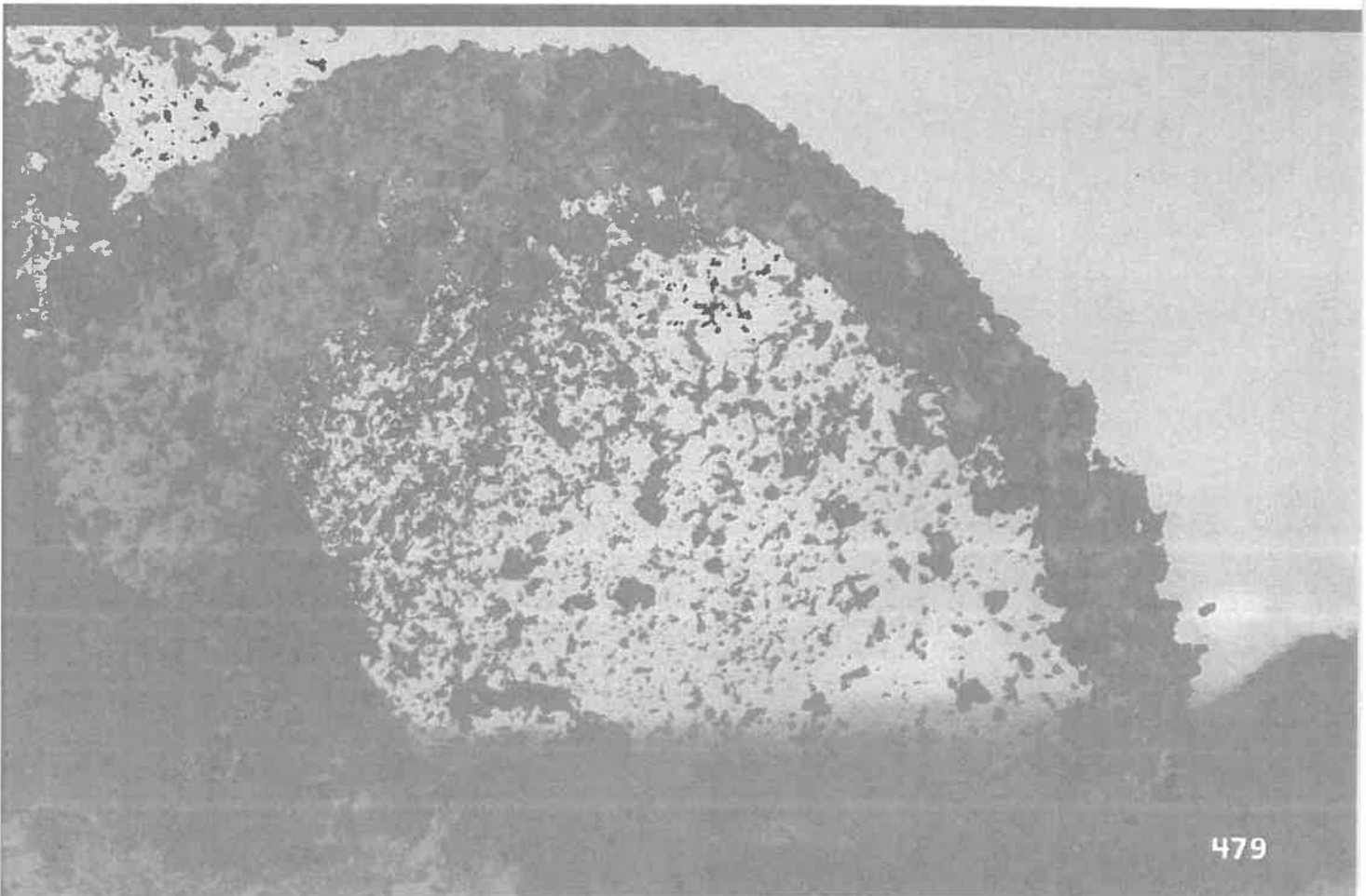
Vocabulary in Context

Skilled readers determine the meanings of unfamiliar words by closely reading the **context**, or words and sentences around the word. Use context clues to determine the meaning of the word *billow*.

Underline clues that support your definition.

gushes spouts; flows quickly

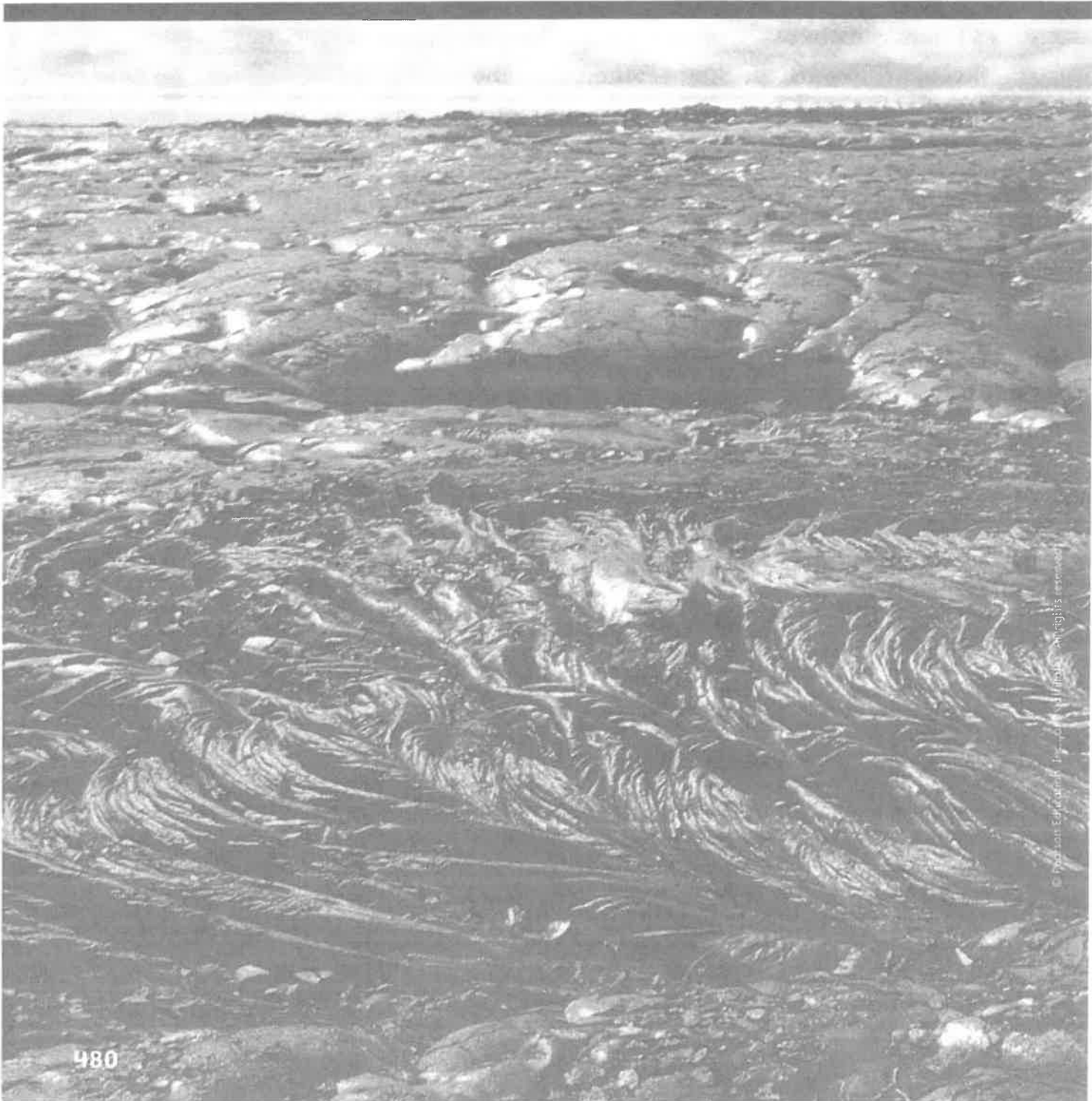
threatened endangered; put in a risky position

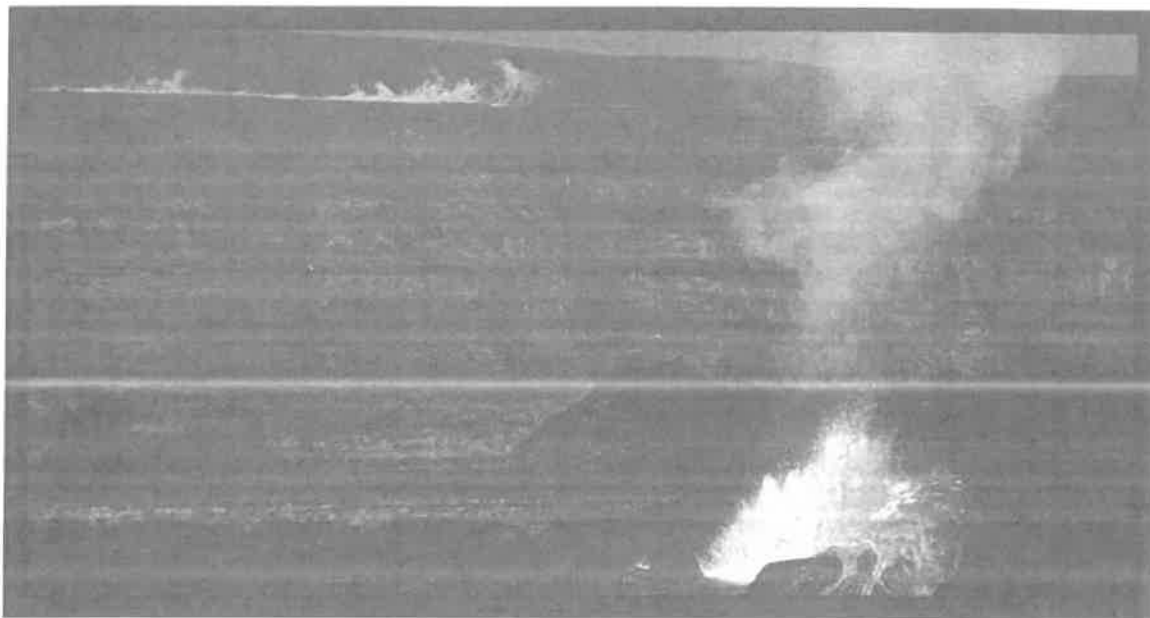


Analyze Main Idea and Details

Underline details that support an idea about the relationship between volcanic eruptions and volcanic rocks.

- 22 When lava cools and hardens, it forms volcanic rocks. The kinds of rocks formed are clues to the kind of eruption. The two main kinds in Hawaii have Hawaiian names. Thick, slow-moving lava called *aa* (AH-ah) hardens into a rough tangle of sharp rocks. Thin, hot, quick-moving lava called *pahoehoe* (pah-HO-ee-ho-ee) forms a smooth, billowy surface.





CLOSE READ

Analyze Main Idea and Details

What main idea does Seymour Simon support with examples?

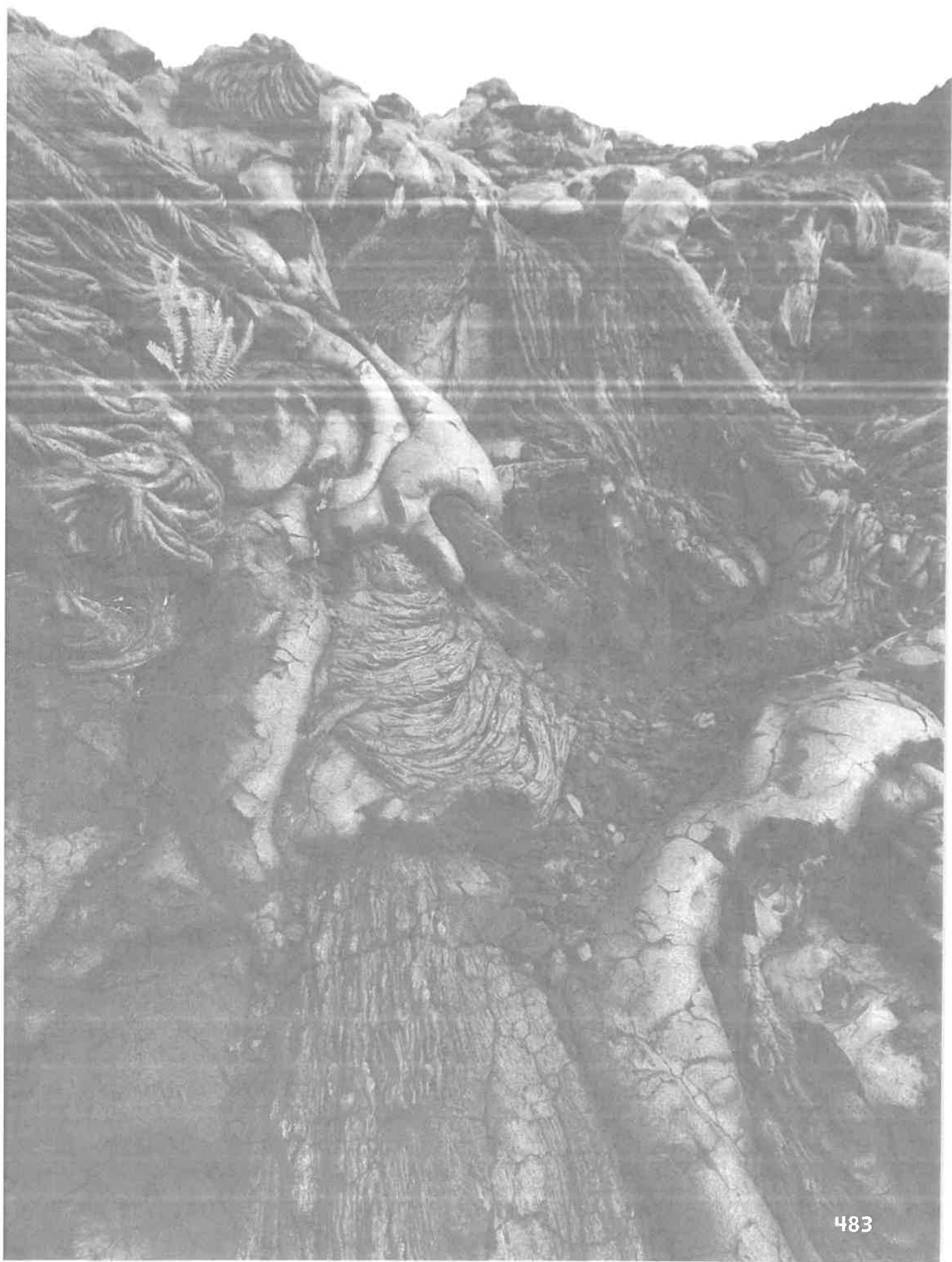
Underline the idea.

- 23 Earth scientists have divided volcanoes into four groups. Shield volcanoes, such as Mauna Loa and Kilauea, have broad, gentle slopes shaped like an ancient warrior's shield.
- 24 Cinder cone volcanoes look like piles of dry sand poured through an opening. They erupt explosively, blowing out burning red-hot ash and cinders. The ash and cinders build up to form the cone shape. The cinder cone on Pacaya volcano in Guatemala, Central America, has had frequent eruptions.
- 25 Most of the volcanoes in the world are composite or stratovolcanoes. Stratovolcanoes are formed by the lava, cinders, and ash from many eruptions. An eruption can be initially explosive, when ash and cinders fall to the ground. Later the eruption becomes less violent and lava slowly flows out, covering the layer of ash and cinders. Further eruptions add more layers of ash and cinders, followed by more layers of lava. Mount Shasta in California and Mount Hood in Oregon are stratovolcanoes. They are still active even though they have not erupted for many years.

**Monitor
Comprehension**

Highlight ideas that you might find surprising, confusing, or need to clarify.

- 26 A fourth kind of volcano is called a dome volcano. Dome volcanoes have thick, slow-moving lava that forms a steep-sided dome shape. After an eruption, the volcano may be plugged with hardened lava. The plug prevents the gases from escaping, like a cork in a bottle of soda water. As the pressure builds up, the volcano eventually explodes, as Mount St. Helens did. Lassen Peak in California is a dome volcano that erupted violently in 1915. You can see the huge chunks of volcanic dome rock near the summit.
- 27 Around the world there are many very old volcanoes that no longer erupt. Some of these volcanoes are dead and will not erupt again. These are called extinct. Others can be inactive for as long as 50,000 years and then reawaken. These are called dormant. Crater Lake Volcano in Oregon is currently considered dormant, but it is likely to erupt again. Almost seven thousand years ago, its predecessor, Mount Mazama, erupted and covered the ground for thousands of miles around in a blanket of pumice and ash. Toward the end of the eruption, the entire top of the volcano collapsed inward. A huge crater, called a caldera, formed and was later filled with water. Crater Lake reaches a depth of two thousand feet, the deepest lake in North America.
- 28 After a volcano erupts, everything is buried under lava or ash. Plants and animals are nowhere to be found. But in a few short months, life renews itself. Plants grow in the cracks between the rocks. Insects and other animals return. Volcanoes do not just destroy. They bring new mountains, new islands, and new soil to the land. Many good things can come from the fiery explosions of volcanoes.



Develop Vocabulary

Analogies compare two things that have something in common. For example, consider the analogy **up : down :: left : right**. The relationship between *up* and *down* is opposites. So is the relationship between *left* and *right*. This analogy could be read, “up is to down the way that left is to right.” Other relationships in analogies include examples and parts of a whole.

My TURN Fill in the word to complete each analogy. On the line, explain the relationship between the words in each pair.

1. magma : lava :: **thoughts** : words
Relationship: inside (magma and thoughts) to outside (lava and words)

2. face : volcano :: _____ : pie
Relationship: _____

3. destroy : reclaim :: _____ : plant
Relationship: _____

4. tiptoe : creep :: _____ : gushes
Relationship: _____

5. warned : threatened :: asked : _____
Relationship: _____

Check for Understanding

MyTURN Look back at the text to answer the questions.

1. How can you tell that *Volcanoes* is an informational text?
2. How does Seymour Simon's use of photographs support your understanding of volcanoes?
3. What conclusion can you draw about the connection between volcanoes and earthquakes? Describe the connection, and use text evidence to support your conclusion.
4. People live on and near volcanoes. What advantages of living there outweigh the possible dangers? Synthesize information from the text and what you already know about why people live in certain places.

Analyze Main Idea and Details

Main ideas tell readers the most important information in a text. **Details, or supporting evidence**, add information about each idea. Analyze the author's main ideas and details to connect related information about a topic.

1. **My TURN** Go to the Close Read notes in *Volcanoes* and underline main ideas and supporting evidence about volcanoes.
2. **Text Evidence** Use the underlined text to analyze a main idea. Write a main idea and its supporting evidence. Then answer the question.

Main Idea			
Supporting Evidence	Supporting Evidence	Supporting Evidence	

How does the supporting evidence relate to the main idea?

Monitor Comprehension

Monitor comprehension, or check your understanding of a text, as you read. When you do not understand something, stop reading to figure out why. To monitor comprehension as you reread *Volcanoes*, start by annotating, or marking, the unclear text so you can return to it. Then make adjustments to gain understanding. For example,

- Reread, slowly and carefully, to find connections among ideas.
- Use resources, including dictionaries, pictures, and your background knowledge, to determine the meaning of a word or an idea.
- Ask questions. Ask a person who knows more about the subject, or conduct research to get answers.

Once you have made adjustments, the unclear text should make sense, and you can continue reading.

1. **My TURN** Go back to the Close Read notes and highlight text that you do not understand.
2. **Text Evidence** Use your highlighted evidence to practice monitoring comprehension and deciding how to make adjustments.

Challenging Text	How to Make Adjustment
Word not defined: vent	Look up the definition
Difficult text:	
Unclear mental image:	
Unanswered question:	

Reflect and Share

Write to Sources What questions do you still have about the topic of volcanoes? Think about what interests you most about the texts you have read this week. Then write a letter to one of the authors. Ask your questions, and explain why you want to learn more about the subject. Use text evidence and domain-specific language to support your explanation.



Use Domain-Specific Language Use domain-specific words to help your readers know exactly what you mean. For example, instead of writing “I liked reading about Hawaii,” write about specific facts, such as “I liked learning how quickly Hawaiian lava can flow.” Use these words in your response.

fiery
plates
layer

ash
dome
clouds

dormant
churn
explode

spout
force
cone

Weekly Question

In what ways do volcanoes impact Earth?

Academic Vocabulary

Learning Goal

A **synonym** has almost the same meaning as another word. An **antonym** has a meaning that is opposite.

I can use language to make connections between reading and writing.

My TURN For each underlined word,

1. **Write** a synonym from the word bank.
2. **Write** an antonym from the word bank.
3. **Revise** the original sentence using the antonym.

Word Bank

save bored destroy name disguise astonished

Original Sentence	Synonym	Antonym	Antonym Sentence
Please <u>label</u> the carton clearly.	name	disguise	Please disguise the carton.
Laura <u>amazed</u> us with her juggling.			
They plan to <u>preserve</u> this swamp because it is a home to alligators.			

Suffixes *-en*, *-ent*, *-ence*

Add the suffixes *-en*, *-ent*, and *-ence* to roots and base words to change meanings and parts of speech.

-en	Means “to cause to be,” “to cause to have,” “to become,” and “to come to have”
	Creates verbs in present tense and in past tense with <i>have</i> , <i>had</i> , or <i>has</i>
	Examples: <i>lengthen</i> , <i>darken</i> , <i>have written</i> , <i>had eaten</i> , <i>has broken</i>
-ent	Means “causing an action” or “being in a state”
	Creates adjectives
	Examples: <i>indulgent</i> , <i>confident</i> , <i>persistent</i>
-ence	Means “condition” or “action”
	Creates nouns
	Examples: <i>indulgence</i> , <i>confidence</i> , <i>persistence</i>

You can turn many nouns that end in *-ence* into adjectives that end in *-ent*.

My TURN Read and highlight the word in each sentence that has the suffix *-en*, *-ent*, or *-ence*. On the lines, give the word’s part of speech and its definition.

1. An absorbent sponge helped me clean up the spilled water. **adjective**
capable of soaking up
2. They confirmed the existence of extinct volcanoes.
3. Scientists have taken measurements of the lava’s progress.
4. In legends, events may awaken a sleeping volcano.

Spell Words with *-en*, *-ent*, *-ence*

Adding the endings *-en*, *-ent*, and *-ence* as suffixes to roots and the ends of base words sometimes requires changing the spelling. For example,

bite → *bitten* – drop the e, double the consonant, and add *-en*

indulge → *indulgent* – drop the e, and add *-ent*

My TURN Read the words. Then sort the words by their endings.

SPELLING WORDS

chosen	frozen	stolen	forgotten	driven
spoken	tighten	forbidden	undertaken	mistaken
present	presence	evident	evidence	confident
confidence	intelligent	intelligence	persistent	persistence

-en

-ent

-ence

Capitalization Rules

Many historical events, languages, races, and nationalities have proper nouns for names. Proper nouns are capitalized.

Rule	Examples
Capitalize the main words in the names of historical events.	the American Revolution the Battle of San Jacinto
Capitalize the names of languages.	Swedish Arabic
Capitalize the names of races.	American Indian Native Hawaiian
Capitalize the names of nationalities.	Guatemalan Korean

MyTURN Edit this draft by correcting capitalization for seven words.

English and spanish are the two most common languages spoken in Texas homes. The next two most common languages in Texas are vietnamese and chinese. This is because many immigrants came to Texas from Vietnam after the vietnam war ended in 1975. More asian immigrants came to Texas in the late 1970s, and most of them were of chinese descent.

Week 2, Assignment 1- Informational Text Quiz

Your email address (trisha_richardson@isd31.net) will be recorded when you submit this form. Not you? [Switch account](#)

* Required

Name: *

Your answer

Please read pages 468-469 in your textbook and select three types of informational text. Hint: Use your anchor chart on page 469.

3 points

- Drama
- Narrative non-fiction
- Articles
- Reports
- Graphic Novels



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Google Forms



Week 2 Assignment 2-Vocabulary Preview

Please guess the meaning of each word. Then, use your book (pages 471-483) or a dictionary to write the correct definition in a complete sentence.

Word	My Guess	Correct Definition
Magma(page 473)		
Face (page 476)		
Reclaim (page 478)		
Gushes (page 479)		
Threatened (page 479)		

Week 2 Assignment 3 - Suffixes -en, -ent, -ence

Use page 490 to help complete the table.

<i>-en</i>	Means "to cause to be," "to cause to have," "to become", and "to come to have"
	Examples: lengthen, darken, have written, had eaten, has broken
<i>-ent</i>	Means "causing an action" or "being in a state"
<i>-ence</i>	
	Creates nouns

Complete the table below filling in the correct part of speech and the meaning of the word. Highlight the suffix.

Suffix	Meaning	Part of Speech
soften	verb	to make soft or softer
absent		
presence		
broken		
convenience		

Week 2, Assignment 4 Main Idea and Supporting Details

Main Ideas tell readers the most important information in a text. **Details**, or **supporting evidence**, add information about the main idea.

Directions: Turn to page 476 and find paragraph 10. Using paragraph 10, find the main idea of the paragraph and three supporting details. (Hint: The main idea is often times the first sentence of the paragraph!)

Main Idea:

Supporting Detail #1:

Supporting Detail #2:

Supporting Detail #3:

Instructions Student work

Week 2, Assignment 5 "Volcanoes" Weekly Story



 **Trisha Richardson** Mar 19 (Edited Mar 19)

Read the story "Volcanoes" on pages 471-483 of your MyView textbook.

Class comments



Add class comment...



Week 2, Assignment 6
Vocabulary with Antonyms and Synonyms

An **antonym** is a word that means an opposite.

Examples: Black/White Up/Down

A **synonym** is a word that means the same.

Examples: Below/Under Hot/Warm

Directions: Fill in the chart writing an antonym and synonym for each of your vocabulary words.

Vocabulary Word	Synonym	Antonym
magma		
face		
reclaim		
gushes		
threatened		

Week 2 Assignment 7 - Capitalization Rules

Rule	Examples
Capitalize the main words in the names of historical events.	the American Revolution the Battle of San Jacinto
Capitalize the names of languages.	Swedish Arabic
Capitalize the names of races.	American Indian Native American
Capitalize the names of nationalities.	Guatemalan Korean

Rewrite the draft correcting capitalization for 12 words.

English and spanish are the two most common languages spoken in texas homes. The next two most common languages in texas are vietnamese and chinese. This is because many immigrants came to texas from vietnam after the vietnam war ended in 1975. More asian immigrants came to texas in the late 1970s, and most of them were of chinese descent.

Rewrite your draft in the space below.

Week 2. Assignment 8 Monitor Comprehension

When you come across something you do not understand, stop and make a note of it in your brain. Then think about the best way to clear up your confusion. Hint: you can reread, look for context clues, use text features, or find descriptions that help you understand.

Use "Volcanoes" on pages 471-483 of your textbook to complete this assignment.

If I did not understand the meaning of the word *vent* on page 474, a strategy I can use is:

Some details in paragraphs 8 and 9 on page 475 that can help me understand what the image shows about force are:

Vocabulary

Directions: Choose the word or word group that has about the same meaning as the underlined word.

- 1 The magma pushed up through the crust.
 - A hot ash
 - B liquid rock
 - C dust particles
 - D large boulders

- 2 I could read the time on the face of the clock.
 - F bottom
 - G inside
 - H front part
 - J back side

- 3 Wolves were able to reclaim territory in the mountains.
 - A avoid
 - B leave
 - C pass through
 - D take back

- 4 The water gushes out of the fountain.
 - F drips quietly
 - G flows quickly
 - H stops moving
 - J trickles slowly

Directions: Read the question. Then choose the best answer.

- 5 Which word is a synonym for threatened in the sentence below?
Many homes were threatened by the lava flow.
 - A angered
 - B weathered
 - C endangered
 - D excited

Word Study

Directions: Choose the definition that best describes the underlined word in each sentence.

- 6 The presence of our two best players made us confident we would win.
- F being here
 - G loud cheering
 - H confusing ideas
 - J sudden departure
- 7 We noticed that the oak tree was absent from the side of the school.
- A not here
 - B arriving soon
 - C currently here
 - D growing quickly
- 8 I went to the store because of its convenience.
- F being easy to get to
 - G having sales all the time
 - H having few items available
 - J being located a great distance away
- 9 My father tried to mend the broken plate.
- A forgotten
 - B damaged
 - C old and not often used
 - D shiny and fragile to the touch

Directions: Read the question. Then choose the best answer.

- 10 The suffix -en helps a reader know that the word soften means —
- F not soft
 - G hard to make soft
 - H to cause to become soft
 - J hoping to make something become soft

Reading Comprehension

Directions: Read the selection. Then answer each question.

Mount Aso

- 1 Volcanoes occur in many places around the world. When volcanoes erupt, hot, melted rock pours out onto Earth's surface. Erupting volcanoes also send hot gases into the sky. The melted rock and gases come from below Earth's surface. They are under great pressure and are forced out through cracks in Earth's crust.
- 2 Some volcanoes are active. Active volcanoes can erupt at any time. Most volcanoes are not active. It's like they're asleep. Mount Aso, the largest volcano in Japan, is active.
- 3 Mount Aso is one of the biggest active volcanoes on the planet. The volcano stands 5,223 feet tall. Its opening is one of the largest in the world. The opening measures seventeen miles across at the widest part. It is so large that people live in it! There are roads and railroad tracks near the volcano's opening.
- 4 Mount Aso is on the island of Kyushu in Japan. Visitors from around the world travel to Mount Aso to observe its beauty and take pictures. The people who live in Mount Aso's opening and other places on the island use the grassy land nearby to raise cattle. But the people there are aware that the volcano could erupt.
- 5 Mount Aso had not erupted for many years, but that changed in October 2016. Mount Aso erupted, and smoke and ash rose nearly seven miles into the air. Scientists say that since Mount Aso is an active volcano, it could erupt again.

- 11 Which statement best describes the main idea of this selection?
- A Mount Aso is not an active volcano.
 - B Mount Aso is one of many types of volcanoes.
 - C Mount Aso is a large, popular, beautiful volcano.
 - D Mount Aso was forgotten about until it recently erupted.
- 12 Which detail from the selection supports the main idea that Mount Aso is an active volcano?
- F *Volcanoes occur in many places around the world.*
 - G *The opening is so large that people live in it!*
 - H *Visitors from around the world travel to Mount Aso to observe its beauty and take pictures.*
 - J *Mount Aso had not erupted for many years, but that changed in October 2016.*
- 13 Which of the following sentences best expresses the main idea of paragraph 5?
- A Scientists study volcanoes.
 - B Volcanoes are very dangerous.
 - C People should visit volcanoes up close and watch them erupt.
 - D Mount Aso has erupted in the past and could erupt once more.
- 14 What do the details in paragraph 3 help the reader understand about Mount Aso? Write your response on a separate sheet of paper.

Writing – Poetry

Volcanic mountains have been the subject of poems. Think about how you would describe a volcanic eruption. On a separate sheet of paper, write a short poem about a volcanic eruption. Use rhythm in your poem. Remember the characteristics of poetry as you write.

WEEK 2: WRITING

April 6 - April 10

DAY 1:

Write a minimum of 5 complete sentences:

What is your favorite food? Do your parents let you cook? If not, what are some things you would like to learn how to make?

DAY 2:

Write a minimum of 5 complete sentences:

Think about your favorite game. Is it a video game, board game, or something else? What is it and what do you like about it?

DAY 3:

Write a minimum of 5 complete sentences:

If you could choose to have any class pet what would it be and why? Give 3 reasons.

DAY 4:

Write a minimum of 5 complete sentences:

Think about the class pet you mentioned yesterday. Write a letter to Principal Aalgaard persuading her to let us have this pet.

DAY 5:

Write a minimum of 5 complete sentences:

Write 5 sentences on any topic you choose.