

READ THE PASSAGE As you read, think about each paragraph's main idea.

Gigantic Prehistoric Sloths

One of the largest mammals to ever walk the earth was the prehistoric giant ground sloth. Giant ground sloths lived primarily in South and Central America until they became extinct, or died out completely. Giant ground sloths became extinct about 10,000 years ago, during the end of the Ice Age.

The scientific name for the prehistoric giant ground sloth is *Megatherium*, which means "gigantic beast." And indeed, giant ground sloths were massive creatures. Bigger than most elephants, they weighed around five tons. When standing on their powerful hind legs, giant sloths were about 20 feet tall, or about twice the height of a basketball hoop stand.

Megatheriums had huge, 12-inch claws on each of their front paws. They used these claws primarily for reaching and removing choice leaves from trees and bushes. The sloths also had claws on their back paws, but the size of those claws was much less threatening. Despite the power of the sloths' claws, most scientists believe they were most likely used only for gathering food.

Giant ground sloths were very slow-moving animals that ate only plants. When they were standing, the sloths used their muscular tails for balance. Otherwise, they walked very slowly on all four feet. Modern-day sloths are small tree-hanging animals that are roughly the size of small dogs. They are also extremely slow-moving, but they are much smaller and less dangerous than their awesome ancestors. The prehistoric giant ground sloths were far too large to dwell in trees as their modern-day relatives do. Most likely, they could have easily reached the tops of most trees by simply standing up and reaching out with their enormous claws.

SKILL PRACTICE Read each question. Fill in the bubble next to the correct answer.

1. What is the passage mostly about?
Ⓐ large mammals
Ⓑ the Ice Age
Ⓒ giant ground sloths
Ⓓ prehistoric animals
2. Prehistoric ground sloths were different from modern-day sloths because prehistoric ground sloths _____.
Ⓐ were bigger
Ⓑ were slower
Ⓒ ate fewer plants
Ⓓ did not become extinct
3. How did giant ground sloths balance themselves when they were standing up?
Ⓐ with their claws
Ⓑ with their tails
Ⓒ with their front legs
Ⓓ with tree branches
4. Which detail supports the idea that giant ground sloths were huge animals?
Ⓐ They moved very slowly.
Ⓑ Their claws were powerful weapons.
Ⓒ They could stand on their hind legs.
Ⓓ They weighed around five tons.

STRATEGY PRACTICE Did you understand the main ideas the author presented? Why or why not?

READ THE PASSAGE Look for details that help you visualize what the titan arum looks like.

The Smelliest Plant

Here is one flower you would not want to give as a gift—at least not to anyone you like! It is the smelliest member of the plant kingdom, and it is called the titan arum. The word “titan” describes something gigantic, and this plant certainly lives up to its name.

The titan arum grows in the tropical forests of Sumatra, Indonesia. When the plant is in bloom, its stem is about 10 feet tall, and its “flower” spans a diameter of three to four feet. The bloom is actually a funnel-shaped leaf that opens, giving access to hundreds of tiny flowers inside. Visitors flock to botanical gardens in the United States to see these gigantic plants in bloom, but their noses should also be prepared for a unique experience. Besides its enormous size, the titan arum is also known for its hideous smell.

The titan arum’s odor, which is strongest at night, can be smelled from a distance of a half mile away. People describe the terrible odor as the smell of rotting flesh, a stench that creates huge, stomach-turning waves of nausea in those who get a whiff. Because of its similarity to decaying flesh, the titan arum is best known by its common name—the corpse flower.

What is the point of this plant’s horrible smell? The answer is surprisingly simple. The small beetles and flies that pollinate, or fertilize, the plant love its stinky smell. These insects smell the odor, think it is actual decaying flesh, are attracted to it, and end up pollinating the plant. The titan arum needs its awful smell to survive. Without the smell and the insects it attracts, the titan arum might not be able to continue as a species.

SKILL PRACTICE Read each question. Fill in the bubble next to the correct answer.

- Which characteristic gives the titan arum its nickname of “corpse flower”?
 - It comes from tropical forests.
 - It is a gigantic plant.
 - It is pollinated by small beetles.
 - It has a terrible odor.
- When a titan arum is in bloom, how tall is the stem?
 - 10 feet
 - 3 to 4 feet
 - 7 feet
 - 20 feet
- At which time of day is the odor of the titan arum the strongest?
 - at night
 - early in the morning
 - early in the afternoon
 - in the early evening
- Which detail supports the idea that there is a reason the titan arum has such a horrible smell?
 - The plant smells like rotting flesh.
 - The insects that pollinate the plant are attracted by its smell.
 - The plant can be smelled from a distance of a half mile.
 - Human beings do not like the smell.

STRATEGY PRACTICE Which details from the passage helped you best visualize a titan arum?

READ THE PASSAGE Pay attention to the series of steps involved in measuring a pepper's heat.

How Hot Is That Pepper?

You are at a party and are sampling the munchies. You pop a harmless-looking pepper into your mouth, chew it, and swallow it. Yikes! As the pepper burns every part of your mouth, you look frantically for water, ice, or something sweet to make the burning stop.

Some peppers are so hot that they can lead to vomiting, digestive problems, and hospitalization. The simplest way to check the hotness of a pepper is to taste it. There is, however, a safer way to tell in advance how hot a pepper will be: find out where it rates on the Scoville scale.

The Scoville scale, the classic way to determine the hotness of a pepper, was developed by an American chemist, Wilbur Scoville, in 1912. The chemical that causes the sensation of heat in a pepper is called capsaicin, and Scoville discovered a method for measuring the amount of it. Since the amount of capsaicin did not mean much to pepper consumers, Scoville devised a method of rating peppers.

To rate peppers, Scoville followed a series of steps. First, he blended ground peppers in a solution of sugar and water. Then, he had a panel of trained tasters sample the solution. If the tasters found the solution hot, the solution was diluted with additional water and sugar. The tasters continued with this process until they no longer felt the sensation of heat. The Scoville scale measures the number of times the solution needs to be diluted for the tasters to sense no heat at all. The number of dilutions is the number of heat units. Scoville then listed the peppers tested in order by their heat unit range.

The next time you are hungry and are thinking about eating a random pepper, be sure to check the Scoville scale first. Your tongue and your stomach will thank you.

SKILL PRACTICE Read each question. Fill in the bubble next to the correct answer.

1. What should a person do before eating a random pepper?
Ⓐ drink a glass of water
Ⓑ check the pepper's Scoville rating
Ⓒ make a solution of water and sugar
Ⓓ find a group of trained testers
2. What did Wilbur Scoville learn before he decided to develop his scale?
Ⓐ how to dilute peppers
Ⓑ how to train pepper tasters
Ⓒ the number of times a pepper must be diluted
Ⓓ the amount of capsaicin in peppers
3. What did Scoville do first to rate the hotness of peppers?
Ⓐ He diluted a pepper solution.
Ⓑ He created an easy-to-use scale.
Ⓒ He ground up peppers with sugar and water.
Ⓓ He had tasters eat a pepper solution.
4. What is the last step in rating the hotness of a pepper?
Ⓐ checking the amount of capsaicin
Ⓑ blending the pepper with sugar and water
Ⓒ recording when the solution no longer tastes hot
Ⓓ having tasters taste the solution

STRATEGY PRACTICE Which parts of the passage best helped you understand the Scoville scale?

READ THE PASSAGE Pay attention to the steps involved in learning flamenco dancing.

Learning Flamenco Dancing

So you want to learn to dance the highly expressive Spanish dance form, flamenco. This is not a dance you can master in a day or even in a week. Learning flamenco dancing takes time, patience, determination, and a certain amount of personal flair.

The first step is to find a good teacher. Research lesson prices and the qualifications of the teacher. Talk with people who have already taken lessons from the teacher to find out if they were satisfied customers.

Once you have chosen your teacher or class, you will then need to purchase dancing shoes. Female dancers also need a practice skirt.

In your classes, you will learn how to move your whole body the flamenco way. The dance style includes intricate hand and arm movements, the *zapateado* (stepping movements that create distinctive tapping sounds), and specific body movements. It takes a lot of practice to learn flamenco dance steps and to perform them rapidly with the precise rhythm the dance requires.

As the movements become more familiar, you must learn what is by far the most important aspect of flamenco—dancing with heart! The flamenco dancer must have a deep understanding of the music and dance with passion and emotion.

Once you are ready to perform, you will need a costume. In addition to dancing shoes, female dancers usually wear a long ruffled dress. Male dancers often wear tight pants and long-sleeved shirts. If you are in doubt about your costume choice, check with your teacher to find out what he or she recommends. To win over the crowd, you will need more than a costume—you must have the courage to let your passion for the dance shine.

SKILL PRACTICE Read each question. Fill in the bubble next to the correct answer.

- What do you need to do first to learn flamenco dancing?
 - dance with emotion
 - learn specific steps
 - buy a dancing costume
 - find a good teacher
- What do you need to buy before your first lesson?
 - a performance costume
 - dancing shoes
 - a long-sleeved shirt
 - practice music
- According to the passage, what is the last thing you must learn to properly dance flamenco?
 - to dance with rhythm
 - to learn specific movements
 - to dance with heart
 - to learn the *zapateado*
- What do you need after you are ready to perform?
 - the proper costume
 - intricate arm movements
 - passion and emotion
 - a good sense of rhythm

STRATEGY PRACTICE Were you able to visualize people doing flamenco dancing? Why or why not?

READ THE PASSAGE If you do not understand the main idea in a paragraph, reread the paragraph slowly.

The Northwest Passage

At the end of the fifteenth century, Western explorers began looking for the Northwest Passage—a water route through the Arctic that is north of the Canadian mainland and connects the Atlantic and Pacific oceans. Early in the nineteenth century, a passage was discovered, but it proved to be ice-bound and impossible to navigate. Recently, however, the situation has begun to change.

In August 2007, scientists confirmed that Arctic sea ice had shrunk to its lowest levels since records have been kept. As a result, the entire length of the Northwest Passage was ice-free and navigable for the entire month that August. Why did this happen? The answer is believed to be global warming. The planet's rising temperatures caused Arctic ice to thaw at a rate faster than scientists had predicted.

Because sea ice is white and reflective, most of the sun's rays bounce off its surface. When sea ice melts, however, dark ocean waters are exposed. These dark waters absorb the sun's light instead of reflecting it, which causes the water to warm. In warmer water, new ice has trouble forming, which then causes more ice to melt and less ice to form in the years to come.

Scientists are not predicting that the Northwest Passage will be open year-round in the foreseeable future. Global warming has no effect on the tilt of Earth's axis, which is what makes winter in the Arctic extremely harsh. But if global warming continues, sailors of the future may one day be able to claim the Northwest Passage for good.

SKILL PRACTICE Read each question. Fill in the bubble next to the correct answer.

- What is the passage mostly about?
 - why the Northwest Passage opened in 2007
 - the expeditions of Western explorers
 - what causes global warming
 - the long search for the Northwest Passage
- Which event happened after the Arctic sea ice shrank to its lowest level?
 - The Northwest Passage was ice-free and navigable for an entire month.
 - The presence of sea ice began increasing at alarming rates.
 - Global warming began to affect Earth's axis.
 - Explorers tried unsuccessfully to find and navigate the Northwest Passage.
- How did Arctic sea ice change in 2007?
 - It blocked the passage from the Atlantic to the Pacific Ocean.
 - It melted more than it had since measuring began.
 - It started reflecting the sun's rays.
 - It opened the Northwest Passage for good.
- What happens after dark ocean waters are exposed?
 - The water reflects more of the sun's light.
 - New ice forms deep in the ocean.
 - The water absorbs the sun's energy and gets warmer.
 - Winters in the Arctic become harsher.

STRATEGY PRACTICE Describe something in the passage that you better understood after rereading it.
