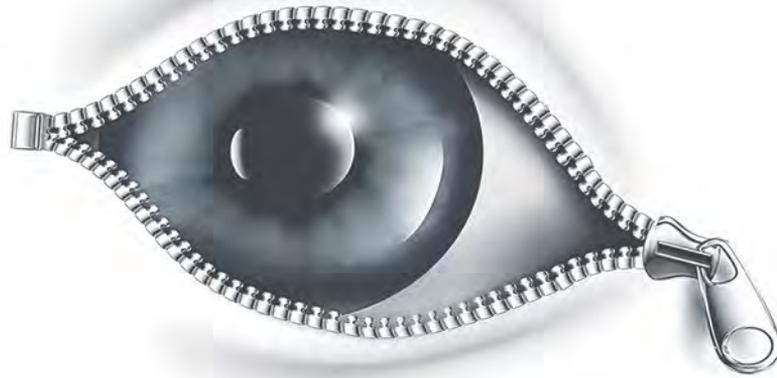


myPerspectives™

ELD Companion



Grade 10



myPerspectives
ELD Companion Workbook

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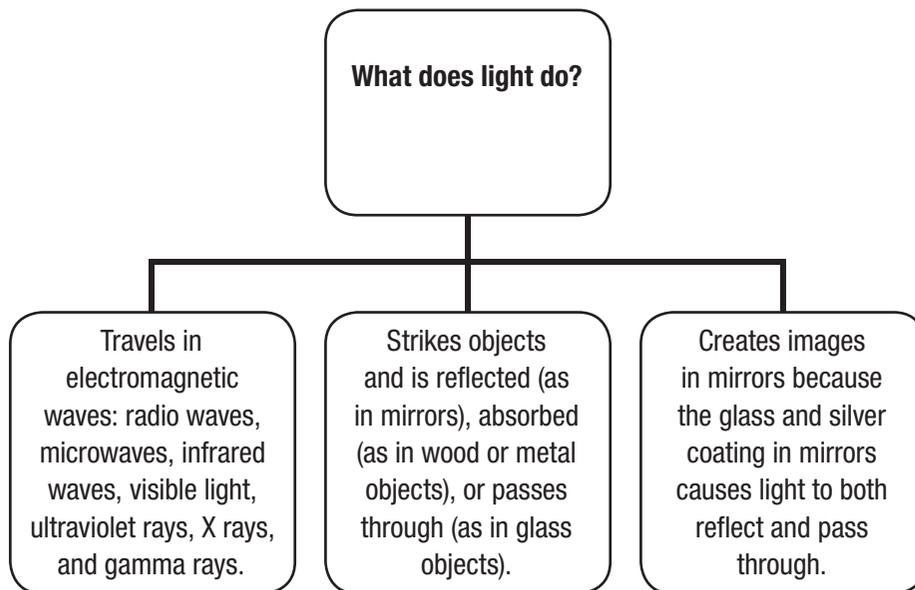
What is light?

“Light”

SUMMARY

This science article tells us what light is and how it behaves. It explains that light is a kind of energy. It travels to us from the sun in waves. These waves have different lengths, or wavelengths. When our eyes take in different wavelengths of light, we see different colors. When light hits an object, it can do one of three things. It can bounce off the object, be taken into it, or pass through it. This is the reason why we can see through some objects, such as glass, but not others. The article also explains how different types of mirrors work.

Visual Summary



Use What You Know

List three everyday sources of visible light, or light that you can see.

1. _____
2. _____
3. _____

Reading Strategy: Preview and Skim

When you skim a text, you read it quickly to find the main ideas. You can then read it more slowly and carefully, noticing the supporting details. Skim the second paragraph on this page. What is this paragraph about?

Comprehension Check

Underline the term for the longest electromagnetic waves. Skim the second paragraph on this page. What are the shortest waves listed?



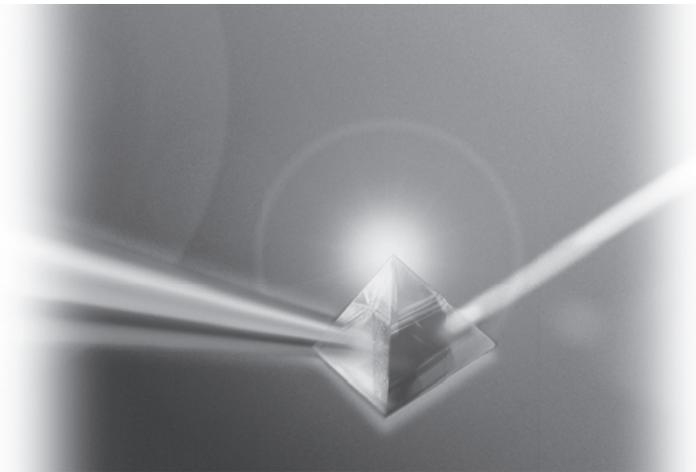
Light

How Does Light Travel?

Light travels from the sun to Earth in waves. These waves, called **electromagnetic waves**, are a form of energy that can travel through space. We talk about electromagnetic waves in terms of the length of the wave, or wavelength.

The electromagnetic spectrum is the name for the whole range of electromagnetic waves. It is organized by wavelength, from the longest electromagnetic waves to the shortest. The longest waves in the spectrum are radio waves. Then come microwaves, infrared rays, visible light, ultraviolet rays, X rays, and gamma rays.

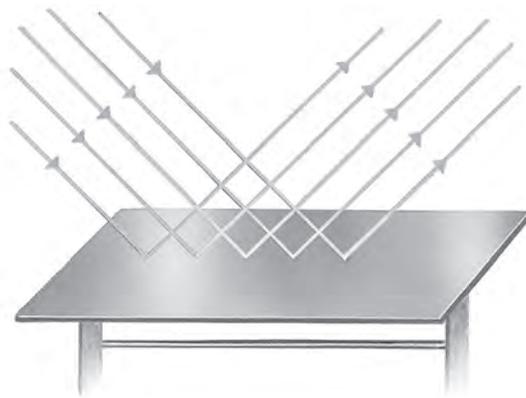
electromagnetic waves, waves that form when an electric field couples with a magnetic field; the waves that make up light



Visible light is the only part of the electromagnetic spectrum that people can see. Visible light is just a small part of the electromagnetic spectrum. It is located between infrared rays and ultraviolet rays. Visible light is a mixture of all the colors we can see in a rainbow: red, orange, yellow, green, blue, and violet. When our eyes take in different wavelengths of light, we see different colors. We see the longest wavelengths of visible light as red. We see the shortest wavelengths as violet.

What Happens When Light Strikes Objects?

When light strikes an object, the light can be reflected, or bounced off the object. The light might also be absorbed, or taken in by the object. Or the light can be transmitted, or passed through the object.



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Reading Strategy: Preview and Skim

Skim the first paragraph on this page. What is this paragraph mainly about?

Comprehension Check

Underline what the first paragraph says about what causes us to see different colors. Which color has a shorter wavelength, yellow or red?



Text Structure

A science article sometimes has headings that tell you what a section of the article will be about. Circle the heading on this page. What does the heading tell you about the section?



Comprehension Check

Underline what happens to light when it strikes an opaque object. Give three examples of opaque objects that you see around you right now.



1. _____
2. _____
3. _____

Text Structure

A science article often defines key terms within the text. Underline the words that describe what a translucent object is. In your own words, define what *translucent* means.



Comprehension Check

Underline what a reflection is. Give three other examples of objects that allow you to see a reflection.



1. _____
2. _____
3. _____

Objects that you cannot see through, such as wood and metal, are called opaque. When light strikes an opaque object, the light is either reflected or absorbed. You cannot see through an opaque object because light cannot pass through it. A glass object is transparent. When light strikes it, the light is allowed to pass through. As a result, you can see through the glass object.

Other objects are translucent. When light strikes them, only some light passes through. When you look through a translucent object, you can see something behind it, but you cannot see the details clearly.

What Is Reflection?

All objects reflect some light. This means that light bounces off the objects. However, different objects reflect light in different ways.

Some objects allow you to see a reflection—or image—of something. For example, when you look at a mirror or a pool of water, you can see a reflection of yourself.

Other objects do not do this. For example, when you look at a wool sweater or a painted wall, you see only the object itself. What you see when you look at an object depends on how its surface reflects light.

To show how light travels and reflects, we can use straight lines to represent light rays. When **parallel** rays of light hit a smooth, or even, surface, all the rays are reflected at the same angle. This is called regular reflection. For example, when you look at a mirror, you see your own reflection. The light rays from your body hit the smooth surface of the mirror and are reflected regularly.

When parallel rays of light hit a bumpy, or uneven, surface, each ray is reflected at a different angle. This is called diffuse reflection. Most objects reflect light diffusely because their surfaces are not completely smooth. For example, a wall may look smooth. But if you look carefully, you will see that its surface has many small bumps. These bumps cause the light to scatter, or to be reflected at different angles.

parallel, two lines that stay the same distance apart and never touch

Reading Strategy: Preview and Skim

Skim the second paragraph on this page. Write a question about light that is answered in this paragraph.



Text Structure

A science textbook often contains highlighted words. Their definitions are at the bottom of the page. Circle the highlighted word on this page. Look at its definition. Then rewrite the sentence without using the highlighted word.



Comprehension Check

Underline the sentences that explain why a wall that looks smooth reflects light diffusely. What's an example of something around you that looks smooth but reflects light diffusely?



Reading Strategy: Preview and Skim

Circle the heading of this section. What do you expect to learn in this section?



Comprehension Check

Underline the words that tell what happens when light hits a mirror. What creates the image you see—the glass or the silver coating?



Text Structure

A science article often defines key terms within the text.



Underline the words that define what an image is. Then in your own words explain what an image is.

How Do Mirrors Work?

A mirror is a sheet of glass that has a smooth, silver-colored coating on one side. Glass is transparent, so light passes through it. However, the silver coating behind the glass is opaque. When light rays pass through the glass, they hit the smooth surface of the silver coating and all the rays are reflected regularly. The result is that you see an image in the mirror. An image is a copy of an object and is formed by reflected rays of light.

Mirrors can have a flat or curved shape. The shape of a mirror determines how the image will look. An image in a mirror can be the same size as the object, or it can be larger or smaller—depending on the mirror's shape.

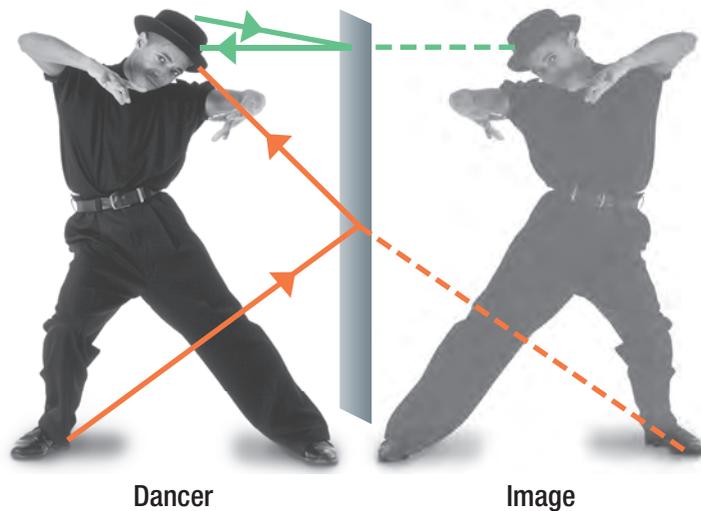


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A plane mirror has a flat surface. When you look into a plane mirror, you see an image that is the same size as you are. Your image appears to be the same distance behind the mirror as you are in front of it. The image you see in a plane mirror is called a virtual image. Virtual images are right side up, or upright. *Virtual* means something you can see but does not really exist. You can't reach behind a mirror and touch your image.

The figure shows how a plane mirror forms a virtual image of a dancer. Light rays reflected from the dancer strike the mirror. (The arrows show light rays from the top and bottom of the dancer.) The mirror reflects the rays toward the dancer's eyes. The brain **assumes** that the reflected rays have reached the eyes in a straight line.

assumes, thinks that something is true; imagines



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Comprehension Check

Underline the characteristics of the image you see in a plane mirror. Why do you think some people choose to cover one wall in a very small room with a plane mirror?



Text Structure

A science article often uses diagrams with captions and labels to help explain ideas. Circle the diagram on this page. How does this diagram help you understand the text?



Comprehension Check

Underline what the image you see in a plane mirror is called. What are some other surfaces that reflect this type of image?



Text Structure

The first paragraph helps describe the diagram on the previous page.



Underline the sentence that explains what the dashed lines represent. In your own words, explain what the dashed lines show.

Reading Strategy: Preview and Skim

Skim the second paragraph on this page. What is this paragraph mainly about?

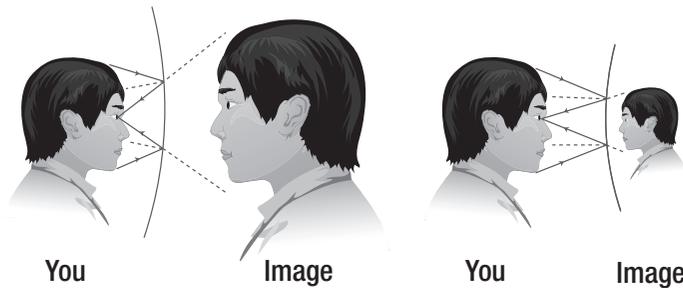
Comprehension Check

Underline the sentence that describes how an image in a curved mirror is different from an image in a plane mirror. Why would a person use a curved mirror that makes its image larger than the object?



The rays are reflected, but the brain interprets the rays as if they had come from behind the mirror. The dashed lines show the points from which the rays appear to come. Since the dashed lines appear to come from behind the mirror, this is where the dancer's image appears to be located.

Curved mirrors behave as though they were many, many little flat mirrors placed side by side, each at a slight angle to the one next to it. Unlike plane mirrors, curved mirrors create reflected images that are not the same size as the object being reflected. The images also appear farther away from or closer to the mirror than the object really is.



A concave mirror has a surface that curves inward. When you look into a concave mirror, the image you see of yourself appears larger than you really are. It also appears farther away from the mirror than you are actually standing.

A convex mirror has a surface that curves outward. When you look into a convex mirror, the image you see is smaller than you are. And it appears closer to the mirror than you really are.

Concave and convex mirrors are both useful in their own ways. Because concave mirrors enlarge the image, people use them when they are putting on makeup or shaving. Concave mirrors are also used as reflectors in flashlights and headlights. Convex mirrors let you see a large distance and a wide field of view, so they are used as rearview mirrors in cars and buses. They are also used as security mirrors in stores.

Choose one and complete:

1. Create a drawing or painting of a rainbow. Label the shortest and the longest wavelengths in your painting.
2. Make a list of reflective surfaces in your home. Find objects in which you can see your reflection.
3. Draw a diagram to show the difference between a reflection in a concave mirror and a reflection in a convex mirror.

Comprehension Check

Underline what kind of surfaces a concave mirror and a convex mirror have. Which surface makes an image that appears larger?



Text Structure

A science article often uses examples to help explain key concepts. Underline all the examples of ways to use concave mirrors. List two uses for convex mirrors.



1. _____
2. _____

Comprehension Check

Underline how an image appears in a convex mirror. Describe the image in a convex mirror of a tall tree that is 50 feet away.



READING WRAP-UP

Retell It!

Imagine you are in a fun house at a carnival. In the fun house, there are a lot of concave and convex mirrors. How do you look in front of a concave mirror? Describe how you look in front of a convex mirror.

Reader's Response

Mirrors can be helpful tools. What are some ways that you use mirrors as helpful tools in your life?

Think About the Skill

How did previewing and skimming help you to better understand the article?

EDIT FOR MEANING

Read

You have read "Light." Now read a passage from it again.

What Happens When Light Strikes Objects?

When light strikes an object, the light can be reflected, or bounced off the object. The light might also be absorbed, or taken in by the object. Or the light can be transmitted, or passed through the object.

Objects that you cannot see through, such as wood and metal, are called opaque. When light strikes an opaque object, the light is either reflected or absorbed. You cannot see through an opaque object because light cannot pass through it. A glass object is transparent. When light strikes it, the light is allowed to pass through. As a result, you can see through the glass object.

The passages below and on the next page contain the same information as the passage you just read. However, each contains one error. First, find the error. Then fix it by editing the sentence so that the information is correct. The first one has been done for you.

Example:

What Happens When Light Strikes Objects?

Light that strikes an object can be reflected (bounced off the object), absorbed (taken in), or transmitted (passed through).

You cannot see through opaque objects. Examples of opaque objects are wood and metal objects. When light hits an opaque object, it is *either reflected or absorbed* ~~always absorbed~~. Light cannot pass through an opaque object, so you cannot see through it. However, light passes straight through a transparent object. This is why you can see through a glass object. Glass is transparent.

Fix the Error

Each paragraph below contains the same information as the paragraphs you just read. However, each paragraph contains one error. First, find the error. Then fix it by editing the sentence so that the information is correct.

1. Find and fix the error.

What Happens When Light Strikes Objects?

When light hits an object, one of three things happens. It is either absorbed (taken in), reflected (bounced off), or transmitted (passed through).

Opaque objects are not transparent. You cannot see through them. Wood and metal are opaque. When light hits an opaque object, it is either reflected or absorbed. Light can pass through an opaque object. Light passes through a transparent object. This is why you can see through a glass object. Glass is transparent.

2. Find and fix the error.

What Happens When Light Strikes Objects?

Objects affect light in different ways. They can “absorb” it, or take it in. They can also reflect it, or bounce it back. And they can transmit the light, allowing it to pass through.

Wood and metal are examples of opaque objects . You cannot see through them. That is because when light strikes an opaque object, the light is either reflected or absorbed. On the other hand, a glass object is transparent. You can see through a glass object. That is because when light strikes a transparent object, the light is completely absorbed.

FOCUS ON DETAILS

Word Search Puzzle

To complete this word search puzzle, you'll need to remember or search for details in the reading. Look at the clues and circle the answers in the puzzle below. Check off each clue after you've found the answer. Write the word next to its clue. The first answer is done for you.

1. You can see through this type of object transparent
2. You cannot see through this type of object _____
3. Something you can see but that does not exist _____
4. To pass through _____
5. The length of a wave _____
6. To take in _____
7. This kind of mirror has a flat surface _____
8. This kind of mirror curves outward _____
9. This kind of mirror curves inward _____
10. To bounce off of _____

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

READ FOR FLUENCY

1. Silently read the text below. Make sure you understand the point that each sentence is making.
2. Underline the word or words in each sentence that are most important. When you read, you should say these underlined words with expression.
3. Look again at the punctuation in the paragraphs. Remember that when a sentence ends in a period, you should read the words as a statement and take a breath before beginning a new sentence. When you see a comma, you should pause briefly. When you see an exclamation mark, you should sound excited. When you see a question mark, you should read as though you are asking a question.
4. Now read the paragraphs below out loud. Pay attention to the important words and punctuation as you read.
5. Write down any words that slowed you down. Practice saying these words out loud.
6. Read the text below out loud two more times. You may want to ask a friend or family member to listen to you and tell you their reactions to your reading.

How Does Light Travel?

Visible light is the only part of the electromagnetic spectrum that people can see. Visible light is just a small part of the electromagnetic spectrum. It is located between infrared rays and ultraviolet rays. Visible light is a mixture of all the colors we see in a rainbow: red, orange, yellow, green, blue, and violet. When our eyes take in different wavelengths of light, we see different colors. We see the longest wavelengths of visible light as red. We see the shortest wavelengths as violet.

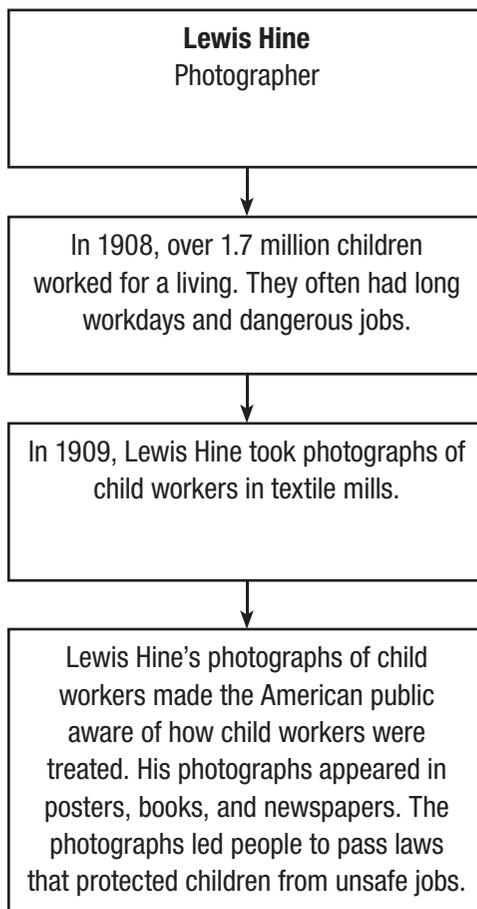
What is light?

From *The Eye of Conscience*

SUMMARY

This social studies article tells about an American photographer named Lewis W. Hine. He risked his life to tell people about the poor and about dangerous working conditions. In the early 1900s, over 1.7 million children were working. The children worked in fields, factories, coal mines, and cotton mills. Their jobs were difficult and dangerous. They worked long hours for very little pay. Hine traveled all over America. He took over 5,000 pictures of child workers. His photographs shocked the nation. The government passed laws to protect children and help the poor.

Visual Summary



Use What You Know

Have you ever seen a photograph that surprised or amazed you? Describe the photograph and how it made you feel.

Text Structure

A social studies article often gives information about important dates in history. Circle the first year mentioned in this article. Why is this year important?



Reading Strategy: Use Visuals

Visuals help support the text and provide more information about the topic. Circle the visual on this page. How does it support the text?



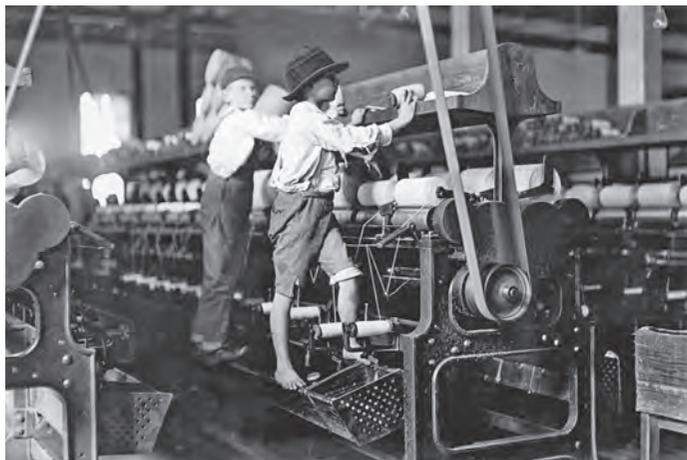
From *The Eye of Conscience*

by Milton Meltzer and Bernard Cole

It was the year 1909 when Lewis W. Hine smuggled his camera into the southern textile mills. Paul Strand, one of America's great photographers, who studied with Hine in 1908, has underscored the courage it took in those early years to photograph child labor in the South. It was like entering the enemy's armed camp, he said. Hine risked the threats of foremen and factory owners who feared what his camera might expose. They were right to be afraid: the pictures and stories he brought away with him shocked the nation and prepared it to support remedial legislation.

Apparently Hine did not always have to take his pictures secretly, for some of his prints show foremen standing by, sometimes smiling into the camera. Such men may not yet have learned what trouble photographs could make for their employers. Or perhaps they were so flattered to be asked to pose that they forgot to think about the possible consequences. Today, of course, few are so naive.

remedial legislation, laws meant to correct something unjust



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Although many were made under bad conditions, almost all of Hine's photographs were remarkably powerful. The deep sympathy he felt for the child workers always came through. The pictures and information he gathered became weapons in the hands of the National Child Labor Committee. The photos were seen everywhere—in posters, in books and pamphlets, in newspapers and magazines. They were dramatic proof of the tragedy of child labor to which America had been blind.

The man who made America see the truth started out not as a photographer but as a laborer. Hine was born in Oshkosh, Wisconsin, in 1874. He worked at many unskilled jobs until he decided to get more education. He took courses at night school, and then went to the Oshkosh Normal School, where teachers were trained. The principal, Frank Manny, liked Hine and urged him on.

pamphlets, small, thin books containing information



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Comprehension Check

Underline the emotion that Hine felt for the child workers. Why do you think Hine's photographs were remarkably powerful?



Text Structure

A social studies textbook often contains highlighted words. Their definitions appear at the bottom of the page. Circle the highlighted word on this page. Look at its definition. What's an example of this item in your home or at school?



Comprehension Check

Circle the first kind of job Lewis Hine held. Why do you think that he decided to go back to school?



Comprehension Check

Underline the sentence that explains what many people in Chicago felt the concern of the government should be. What do you think made people feel this way?



Text Structure

Circle the highlighted words on this page. Look at its definition. Then rewrite the sentence without using the words.



Comprehension Check

Underline the sentences that explain why Frank Manny moved to New York. How was Frank Manny responsible for Hine's future career as a photographer?



Encouraged, Hine went to the University of Chicago. The city of Chicago was then the center of a reform movement. The trade unions, the university professors, the welfare workers like Jane Addams, were all talking about and working for a new and better America. They were sickened by the waste and inhumanity created by the swift industrial growth in the years since the Civil War. They wanted an America that put equality and freedom before profits. The welfare of the people should be the concern of the government, they said, not the welfare of corporations.

Hine was excited by the new ideas around him. When his friend and teacher Frank Manny was appointed principal of the Ethical Culture School in New York, Hine, too, left Chicago. He took a job teaching science in Manny's school.

It was there that his life took another turn. Manny began to experiment with photography as a way of making school activities more meaningful. He chose Hine to become school photographer. Knowing nothing about the craft, Hine taught himself simply by using the camera.

reform movement, people working together to improve something

It was 1903. Cameras and film had been developed to the point where men with hand cameras were setting the standard. Amateurs were often doing better work than the professionals. They showed more imagination, took more chances, dared to break the rules. Already, one amateur, Jacob Riis, had startled the country with his great photos of slum life in New York.

By 1905 Hine had learned enough camera technique to try a major work. He turned to Ellis Island, the place in New York harbor where every day thousands of immigrants landed from Europe. They came to the promised land looking for decent jobs and the freedom they had not known in the old country.

Ellis Island was packed with lonely people, eager to taste American life, but frightened by the unknown. Hine's camera caught the trust and hope in the immigrants' faces and made a vivid record of the newcomers that is now a national treasure.



An Italian family arriving at Ellis Island, 1905

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Text Structure

A social studies article often gives information about important dates.



Circle the first year mentioned on this page. What had begun to change at that time?

Comprehension Check

Underline the sentence that tells who Hine took photographs of at Ellis Island. Why did these people leave their homes in Europe?



Reading Strategy: Use Visuals

Captions often provide additional information about visuals.



Underline the caption on this page. What information does it provide about the photograph?

Comprehension Check

Underline what the first paragraph says about Hine's equipment and method. Why do you think Hine chose to work this way?



Text Structure

Circle the highlighted word on this page. Look at its definition. Then rewrite the sentence without using the word.



Comprehension Check

Circle the cities where Hine traveled during his work as a photographer for *The Survey*. Why do you think that Hine traveled to big cities to take his photographs?



The way Hine worked on that first major task became his standard. When he started, he used a 5×7 view camera, magnesium powder for open flash, and glass plates. Later he added a 4×5 Graflex. His equipment was simple; so was his method. With it he moved directly to the truth.

By now he knew photography would be his lifework. In 1908 he published an article about attempts to improve the life of the poor in New York. His pictures showed the filth and disease of the slums. The editor of a magazine devoted to social reform saw the piece and asked Hine to join the staff of *The Survey* as a photographer. Hine gave up his teaching job and from that day on used his camera to reform social conditions.

His first assignment was to picture the life of immigrant workers in the Pittsburgh steel district. Then he photographed the workers building the New York State Barge Canal. From that he went to investigating the rapidly growing slums of Chicago and Washington, D.C.

slums, poor, overcrowded areas in the city

It was while studying the life of the poor that Hine learned how poverty ruined childhood. In the streets and alleys of the slums he saw children robbed of their futures, their bodies **stunted** and their minds twisted. He learned of children as young as five made to do harsh, cheap labor in the factories.

Already reformers had begun to fight this crime against childhood. The National Child Labor Committee (NCLC) was campaigning for laws to protect children. When the committee head saw Hine's work in *The Survey*, he asked Hine to become staff investigator and photographer.

Hine took the job in 1908 and gave all his heart and strength to it. By that time over 1.7 million children under fifteen years of age were working in fields, factories, mines, and **sweatshops**. But such figures were just units in a census report. No one could call up in imagination's eye the meaning of that fact—1.7 million child wage earners. Lewis Hine knew how to make the figure flesh and blood. "Photographs of revelation," one editor called them.

stunted, not properly developed
sweatshops, places where people are forced to work, usually under horrible conditions



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Comprehension Check

In the first paragraph, underline what Hine saw on city streets. How were the children's futures affected?



Text Structure

A social studies article often gives facts and figures to make a point. Underline the facts and figures about working children in the third paragraph. What point do these facts and figures make?



Reading Strategy: Use Visuals

Circle the visual on this page. What does it show about life in the slums?



Comprehension Check

Underline the states where Hine traveled with his camera. Circle the different workplaces he visited. What does this tell you about child labor in the early 1900s?



Comprehension Check

Locate the quote by Hine. Underline the ways in which the homework done by children helped the manufacturer. What point was Hine making about children's "unselfish devotion to their homework"?



Comprehension Check

Underline what the passage says about what happens to wages because of homework. Why do you think that homework done by children would affect a father's wages?



Hine was always on the move with his camera; now in a Georgia cotton mill, now in a Pennsylvania coal mine, now in a New York sweatshop. He went into the homes of working children, the slum tenements, and the rural shacks. He asked the children their names, measured their heights against his coat buttons, jotted down their ages. He went from anger to despair as he saw no end to the tasks the industrial age was setting for child labor. "Tasks?" he asked once in bitter irony. "Not so—they are 'opportunities' for the child and the family to enlist in the service of industry and humanity. In unselfish devotion to their homework vocation, they relieve the overburdened manufacturer, help him pay his rent, supply his equipment, take care of his rush and slack seasons, and help him to keep down his wage scale. Of course they must accept with cheery optimism the steady decline in wages that inevitably follows in the wake of homework. Isn't it better for everyone to be working instead of expecting father to do it all?"

tenements, large buildings divided up into many small apartments
homework, paid work done in the home for an outside employer

His photographs marched thousands of children out of the mines and factories and paraded them before the nation's eyes. The comfortable and easy could see what working twelve hours a day or a night at miserable wages did to children. They could see the tired young eyes, the blank faces, the gray skin, the crippled hands, the broken bodies. "The great social peril is darkness and ignorance," Hine said. "Light is required. Light! Light in floods!"

Hine's photographs became the core of pamphlets, bulletins, newspaper and magazine articles, and books, all exposing and attacking child labor. He did not insist on quality of reproduction if he could gain immediacy of effect. At least a score of the NCLC pamphlets were shaped from information he gathered in his reports to the committee. Some he wrote in full or in part, in addition to supplying the photos. Costing a nickel or a dime, the pamphlets were distributed nationally. Hine often spoke at NCLC conferences and showed his photographs through stereopticon enlargements. His biographer, Judith M. Gutman, says he took five thousand photographs for the committee; some five hundred of them have been published.

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Choose one and complete:

1. Research the life of Jacob Riis, another photographer who played a part in reform movements. Write a one-page report comparing and contrasting the work of Riis and Hine.
2. Find a photograph in a newspaper or magazine that surprises you. Write a paragraph that explains what you learned from the photograph.
3. Choose one photograph by Lewis Hine. Write a one-page story about the child in the photograph. Describe what you imagine the child's daily life was like.

Comprehension Check

Underline the words that describe how children looked in the photographs. What conclusion do you think people drew about the treatment of child laborers from these photographs?



Text Structure

A social studies article often uses quotations from historical figures. Circle the quotation that appears on this page. What did Hine mean by these words?



Comprehension Check

Underline what the text says about Hine attending conferences. Why do you think it was important that Hine spoke about his photographs?



READING WRAP-UP

Retell It!

Suppose your friend has never heard of Lewis Hine. Summarize Hine's life's work for your friend.

Reader's Response

Hine's photographs were powerful ways to expose social injustice. Images are still very effective in exposing injustice. What new tools and technology are available today that allow many more people to do the type of work Hine did in the early 1900s?

Think About the Skill

How did looking at the photographs help you to better understand the article?

EDIT FOR MEANING

Read

You have read an excerpt from *The Eye of Conscience*. Now read a passage from it again.

The Eye of Conscience

The man who made America see the truth started out not as a photographer but as a laborer. Hine was born in Oshkosh, Wisconsin, in 1874. He worked at many unskilled jobs until he decided to get more education. He took courses at night school, and then went to the Oshkosh Normal School, where teachers were trained. The principal, Frank Manny, liked Hine and urged him on.

Encouraged, Hine went to the University of Chicago. The city of Chicago was then the center of a reform movement. The trade unions, the university professors, the welfare workers like Jane Addams, were all talking about and working for a new and better America.



Fix the Error

Each passage below contains the same information as the passage you just read. However, each passage contains one error. First, find the error. Then fix it by editing the sentence so that the information is correct.

1. Find and fix the error.

The Eye of Conscience

Hine, a photographer of child labor, was himself an unskilled laborer for many years. He was born in Oshkosh, Wisconsin, in 1874. Hine never realized the value of education. It was at Oshkosh Normal School that he trained to be a teacher. The principal there was a man by the name of Frank Manny. He liked Hine and encouraged him.

Hine followed Manny's advice and headed to the University of Chicago. The city was then the center of a reform movement, with workers, professors, and unions alike striving for change in America.

2. Find and fix the error.

The Eye of Conscience

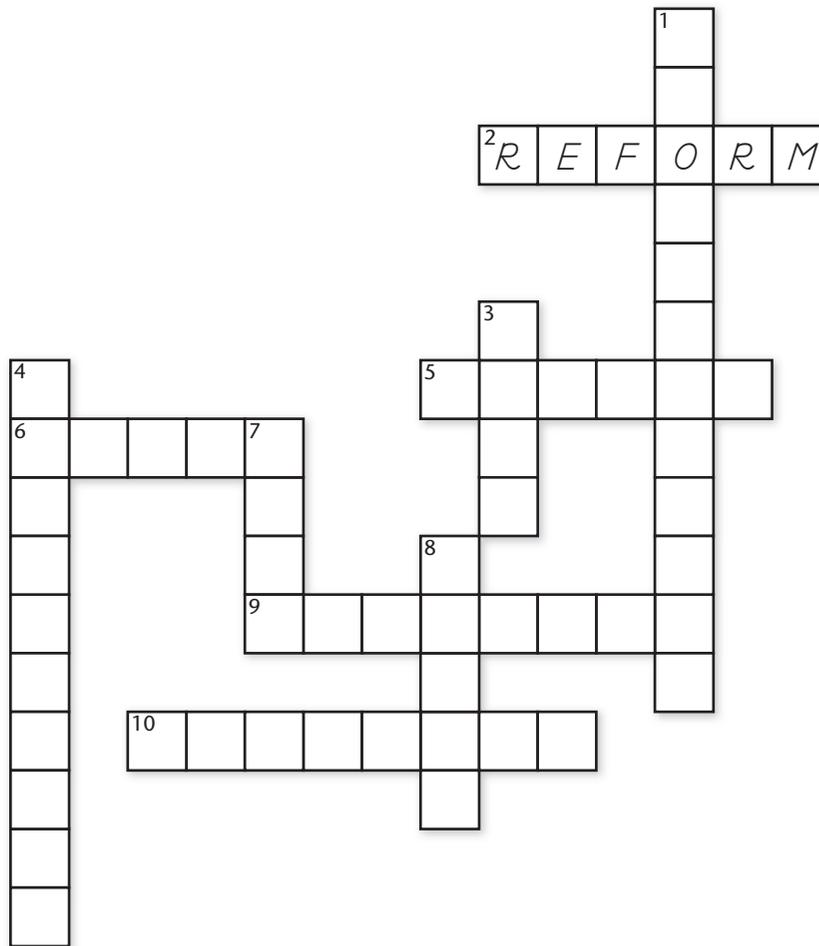
A photographer of child labor, Hine was born in Oshkosh, Wisconsin, in 1874. He worked at many unskilled jobs before he decided to get more education. He took courses at night school, and then went to the Oshkosh Normal School, where teachers were trained. The principal, Frank Manny, discouraged him.

Hine traveled to Chicago to study at the University of Chicago. At that time, welfare workers, trade unions, and professors alike were pushing for a better America. Chicago was the center of that movement.

FOCUS ON DETAILS

Crossword Puzzle

To complete this crossword puzzle, you'll need to remember or search for details in the reading. Use the words in the word box to help you. Not all of the words in the word box are in the puzzle. Fill in the crossword with answers to the clues below. The first answer is done for you.



CITY
 REFORM
 IMMIGRANTS
 SLUM
 LABOR
 CAMERA
 HOMEWORK
 LABORERS
 ABUSE
 MILLS
 MAGAZINE
 HOMES
 LAWS
 PHOTOGRAPHER

Across

2. People in this kind of movement work for change
5. The piece of equipment Hine used to take his photographs
6. Cotton factories
9. *The Survey* is an example of one
10. Paid work that is done in the home

Down

1. Lewis Hine worked as this
3. The NCLC campaigned to change these
4. Newcomers who moved to America
7. A poor, overcrowded area
8. Hine worked to stop child _____

READ FOR FLUENCY

1. Silently read the text below. Make sure you understand the point that each sentence is making.
2. Underline the word or words in each sentence that are most important. When you read, you should say these underlined words with expression.
3. Look again at the punctuation in the paragraphs. Remember that when a sentence ends in a period, you should read the words as a statement and take a breath before beginning a new sentence. When you see a comma, you should pause briefly. When you see an exclamation mark, you should sound excited. When you see a question mark, you should read as though you are asking a question.
4. Now read the paragraphs below out loud. Pay attention to the important words and punctuation as you read.
5. Write down any words that slowed you down. Practice saying these words out loud.
6. Read the text below out loud two more times. You may want to ask a friend or family member to listen to you and tell you their reactions to your reading.

The Eye of Conscience

The city of Chicago was then the center of a reform movement. The trade unions, the university professors, the welfare workers like Jane Addams, were all talking about and working for a new and better America. They were sickened by the waste and inhumanity created by the swift industrial growth in the years since the Civil War. They wanted an America that put equality and freedom before profits. The welfare of the people should be the concern of the government, they said, not the welfare of corporations.

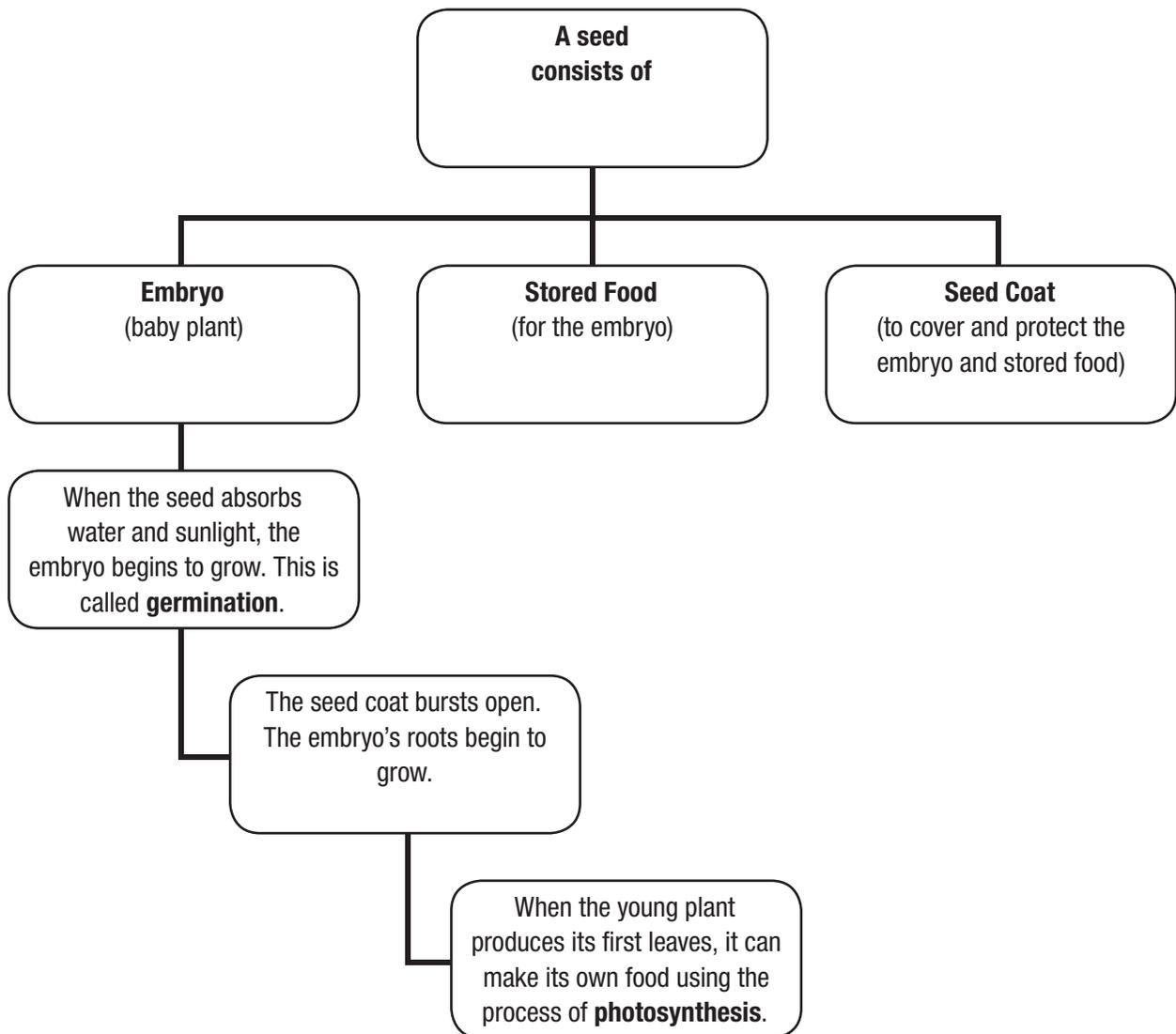
How are growth and change related?

“How Seeds and Plants Grow”

SUMMARY

This science article explains what seeds are made of and how they grow into plants. It describes what happens inside a seed when it first begins to grow.

Visual Summary



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Use What You Know

Some of the foods that humans eat contain seeds. Sometimes we actually eat seeds. List three types of foods we eat that have seeds or seeds that can be eaten.

1. _____
2. _____
3. _____

Text Structure

Sometimes a writer will compare a scientific word to something familiar in order to help the reader better understand the scientific word. Circle the scientific word that is defined in the second sentence, and underline what the word is compared to. In what ways is a seed like a package?



Reading Strategy: Recognize Sequence

Sequence means the order of events. An embryo needs the protection of a seed coat. When does the seed coat become unnecessary?



How Seeds and Plants Grow

Parts of a Seed

Most plants produce new plants from seeds. A seed is like a tiny package. It contains the beginning of a very young plant inside a protective covering.

A seed has three important parts—an embryo, stored food, and a seed coat. The embryo contains the basic parts from which a young plant will develop—roots, stems, and leaves. Stored food keeps the young plant alive until it can make its own food through **photosynthesis**. Seeds contain one or two seed leaves, called cotyledons. In some plants, food is stored in the cotyledons.

The outer protective covering of a seed is called the seed coat. The seed coat is like a plastic wrap, it protects the embryo and stored food from drying out. This protection is necessary because a seed may be inactive—may not begin to grow—for weeks, months, or even years.

Then, when conditions are right, the embryo inside a seed suddenly becomes active and begins to grow. The time when the embryo first begins to grow is called germination.

_____ **photosynthesis**, process by which a plant makes food in its leaves

Germination

During germination, the seed absorbs water from the environment. Then the embryo uses its stored food to begin to grow. The seed coat breaks open, and the embryo's roots grow downward. Then its stem and leaves grow upward. As the stem grows longer, it breaks out of the ground. Once it is above the ground, the stem straightens up toward the sunlight, and the first leaves appear on the stem. When the young plant produces its first leaves, it can begin to make its own food by photosynthesis.



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Choose one and complete:

1. Create a poster that illustrates the parts of a seed.
2. Find out about different kinds of trees on the Internet or at the library. Write a short essay about one kind of tree.
3. Create a chart that shows how a seed grows into a plant. Show the sequence of events.

Comprehension Check

Underline the meaning of the word *germination*. What does the embryo need in order to grow?



Reading Strategy: Recognize Sequence

The last paragraph describes the sequence in which an embryo grows. Underline the sentence that tells what happens when the stem is above the ground. Then describe what happens right after that.



Comprehension Check

Every tiny seed needs help from nature in order to survive. List two natural things a seed needs so that it can grow into a plant.

1. _____

2. _____

READING WRAP-UP

Retell It!

Imagine that you are a seed that has been planted in soil. Tell what happens to you as you grow into a plant. Be sure to include each stage of the germination process in your story.

Reader's Response

What is the most interesting thing you learned in this article? Why was it interesting to you?

Think About the Skill

In what ways did identifying the sequences in this article help you to understand how a plant grows?

EDIT FOR MEANING

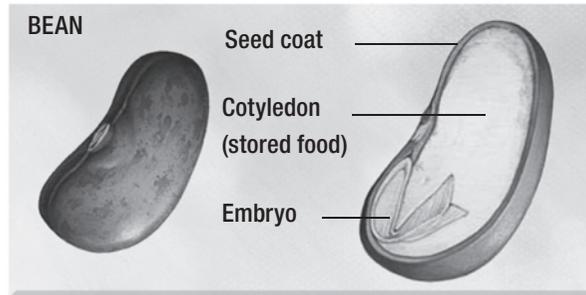
Read

You have read "How Seeds and Plants Grow." Now read a passage from it again.

Parts of a Seed

The outer protective covering of a seed is called the seed coat. The seed coat is like a plastic wrap; it protects the embryo and stored food from drying out. This protection is necessary because a seed may be inactive—may not begin to grow—for weeks, months, or even years.

Then, when conditions are right, the embryo inside a seed suddenly becomes active and begins to grow. The time when the embryo first begins to grow is called germination.



Fix the Error

Each passage below contains the same information as the passage you just read. However, each passage contains one error. First, find the error. Then fix it by editing the sentence so that the information is correct.

1. Find and fix the error.

Parts of a Seed

A seed is encased in something that's called the seed coat. It resembles a jacket, which keeps the embryo and food stored inside from getting wet. This jacket-like covering is needed because a seed may not begin to sprout for a long time.

After a while, under the right conditions, the embryo will begin to grow. This time is called germination.

2. Find and fix the error.

Parts of a Seed

The seed coat is the outer covering of the seed. The seed coat around a seed is like plastic wrap around a bowl of fruit salad. Both the seed coat and the plastic wrap keep anything from getting inside, including air. Thanks to the seed coat, the seed's embryo is protected and its stored food stays moist. But this isn't important because a seed always starts to grow immediately.

The period when the seed begins to grow, under the right conditions, is called germination.

FOCUS ON DETAILS

Mystery Word Puzzle

To complete this mystery word puzzle, you'll need to remember or search for details in the reading. Use the clues to help you unscramble each of the words. Write the words in the boxes. The numbered letters will form the mystery word. The first answer is done for you.

1. Like a tiny package

DESE

S	E	E	D
---	---	---	---

2. Keeps a plant alive until it can make its own

SOTDRE DOFO

--	--	--	--	--	--	--	--	--	--

3. The outer protective covering of a seed

ESED TCAO

--	--	--	--	--	--	--	--

4

4. The seed parts where plants store food

SNODELTOCY

--	--	--	--	--	--	--	--	--	--

5

5. The part of plant that suddenly becomes active

MEORBY

--	--	--	--	--	--

8

6. The time when an embryo begins to grow

TIONGREINAM

--	--	--	--	--	--	--	--	--	--	--

6

2

7. What the seed absorbs

RWTAE

--	--	--	--	--

3

8. The plant part points to this

UNSTILHG

--	--	--	--	--	--	--	--

1

9. What appears on the stems

SLVEAE

--	--	--	--	--	--

7

In what condition is a seed before it begins to grow?

			C				
--	--	--	---	--	--	--	--

1 2 3 4 5 6 7 8

READ FOR FLUENCY

1. Silently read the text below. Make sure you understand the point that each sentence is making.
2. Underline the word or words in each sentence that are most important. When you read, you should say these underlined words with expression.
3. Look again at the punctuation in the paragraphs. Remember that when a sentence ends in a period, you should read the words as a statement and take a breath before beginning a new sentence. When you see a comma, you should pause briefly. When you see an exclamation mark, you should sound excited. When you see a question mark, you should read as though you are asking a question.
4. Now read the paragraphs below out loud. Pay attention to the important words and punctuation as you read.
5. Write down any words that slowed you down. Practice saying these words out loud.
6. Read the text below out loud two more times. You may want to ask a friend or family member to listen to you and tell you their reactions to your reading.

Germination

During germination, the seed absorbs water from the environment. Then the embryo uses its stored food to begin to grow. The seed coat breaks open, and the embryo's roots grow downward. Then its stem and leaves grow upward. As the stem grows longer, it breaks out of the ground. Once it is above the ground, the stem straightens up toward the sunlight, and the first leaves appear on the stem. When the young plant produces its first leaves, it can begin to make its own food by photosynthesis.

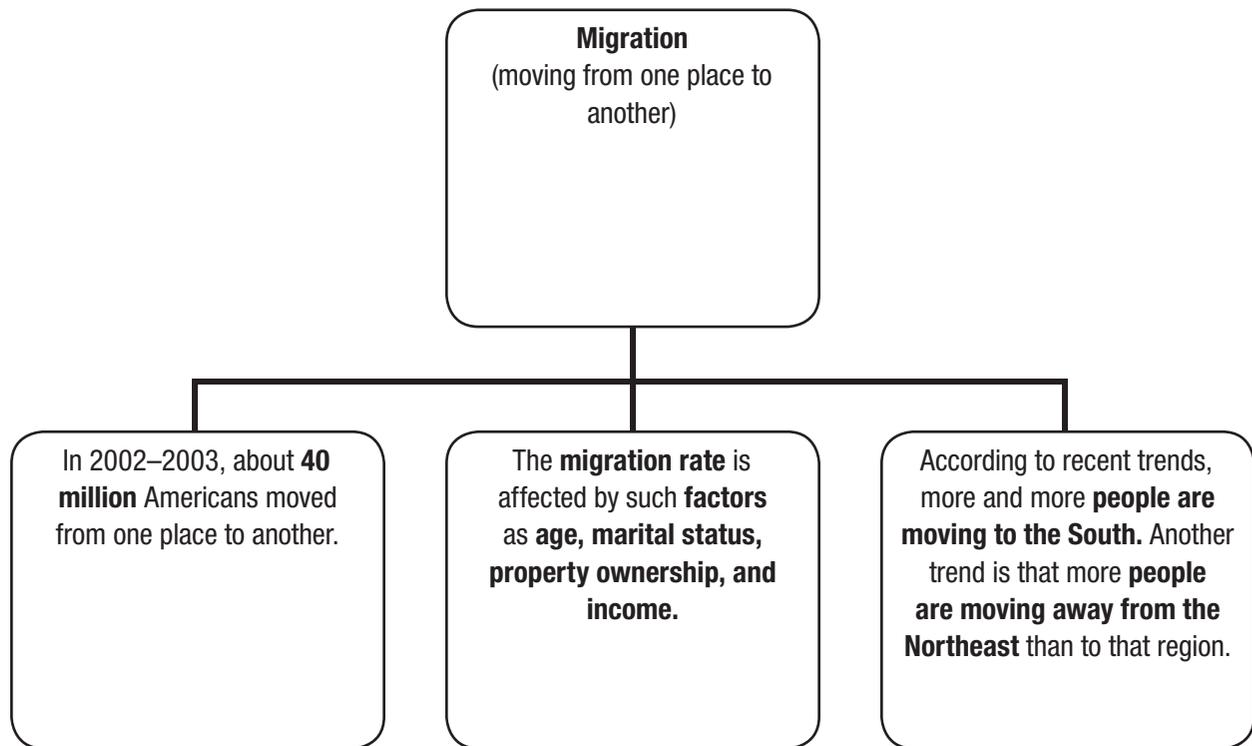
How are growth and change related?

“Migration Patterns”

SUMMARY

This social studies article gives information about the movement of people in the United States. People in this country move to a new home often. Most people don't move very far away. Some kinds of people move more often than others. Younger people, people who are not married, people who rent their homes, and poor people move the most. People often move from areas in the Northeast to areas in the South. The article predicts that the South will get more crowded. Then people may start to move to the West and the Midwest.

Visual Summary



Use What You Know

List three reasons why you think people move to a new city, state, or country.

1. _____
2. _____
3. _____

Text Structure

Social studies articles may have highlighted words. Their definitions are at the bottom of the page. Circle one highlighted word on this page. Look at its definition. Reread the sentence in which it appears. Rewrite the sentence without using the highlighted word.



Reading Strategy: Use Graphs

Choose one interesting fact in the second paragraph. Give two reasons why the fact might be easier to understand in a graph.

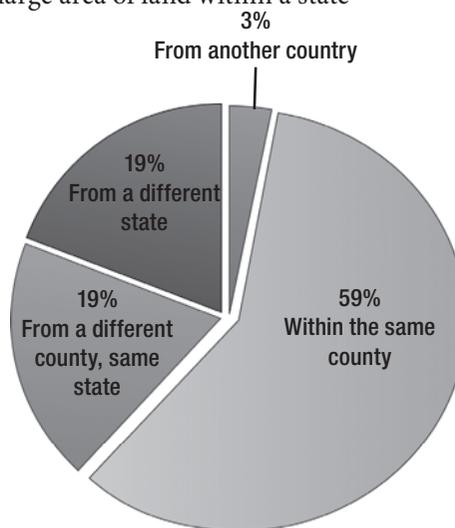
1. _____
2. _____

Migration Patterns

People in the United States move often. According to the United States Census Bureau, 40.1 million Americans—more than 14 percent of the total population—changed **residence** between March 2002 and March 2003.

In that year, the people who moved didn't always move a long distance. The pie chart below shows that about 59 percent of people who moved stayed within the same **county**. About 19 percent moved from a different county within the same state. About 19 percent moved from a different state. Only 3 percent moved from another country. Overall, the moving rate has declined slightly over the past decade, but people have tended to move longer distances. In 1998, for example, only 15 percent of people who moved went to another state, as opposed to the 19 percent in 2002–2003. In 1998, almost 65 percent of those who moved stayed within the same county; this number dropped to 59 percent by 2002–2003.

residence, where they live
county, large area of land within a state



Percent Distribution of Movers by Type of Move: March 2002 to 2003 (Source: U.S. Census Bureau)

Moving rates vary according to such factors as age, marital status, property ownership, and income. In 2002–2003, about 30 percent of twenty- to twenty-nine-year-olds moved, but less than 5 percent of people ages sixty-five to eighty-four moved. Younger people may have moved more often because they got married or because of new jobs. Single people and divorced people moved more often than married people. Widowed people moved least often, possibly because widowed people tend to be older. Over 30 percent of all renters moved in 2002–2003, compared with about 7 percent of homeowners. Finally, lower-income groups were more likely to move than higher-income groups.

marital status, state of being married or unmarried



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Comprehension Check

Underline the four factors that affect how often a person moves.



Explain why you think owning property might affect someone's ability to move.

Text Structure

Social studies articles present factual information. Statistics are a type of fact



that provides numbers or amounts. Underline the statistic about the percentage of twenty- to twenty-nine-year-olds who moved, and the statistic for the number of sixty-five to eighty-four-year-olds who moved. What explanation does the article give for the difference in the two percentages?

Comprehension Check

Underline who moves more often than married people. Why do you think this is the case?



**Reading Strategy:
Use Graphs**

Underline the sentence that tells about moves from the Northeast to the South and from the South to the Northeast. Suppose you were making a line graph of the number of people who migrated from the Northeast to the South between 2002 and 2003. In which direction would the line go?



Text Structure

Social studies texts often make reference to history. Look at the sentence you underlined above. Based on recent history, do you think that people are more likely to move to the Northeast or from the Northeast in the near future? Why?

Comprehension Check

Underline the sentence that tells about population changes in city and country areas. Do you think this will continue to be true in the future? Why?



Moves to different regions in the United States have changed the country's population distribution. As was true throughout the 1990s, more people moved from the Northeast to the South than from the South to the Northeast in 2002–2003. In general, more people moved *from* the Northeast than *to* the Northeast. The number of people moving into and out of urban and rural areas remained about the same.



What will the future population distribution of the United States look like? If today's trends continue, more people may be moving to the South. In addition, the new residents there may be younger than those moving to the South today. The Northeast may become less populated, and more Southerners may migrate to the less densely populated areas of the West and Midwest.



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Reading Strategy: Use Graphs

Information can sometimes be told in a graph as well as a paragraph. Underline the information in this paragraph about the age of future residents of the South. If you were to tell that information in a graph, what title might you give the graph?



Text Structure

Social studies articles include lots of facts, and some of them can be surprising. Underline a fact in this paragraph that surprised you. Tell why it surprised you.



Comprehension Check

What do you think happens when younger people move into an area? List three public services that may be affected.

1. _____
2. _____
3. _____

Text Structure

The text on this page is a letter between two friends. Circle the date of the letter, and underline the name of the person the letter is addressed to. Why is the writer composing a letter to her friend? What is her main purpose for writing?



Comprehension Check

Circle the word in the first paragraph that tells where the writer is writing from. What region of the country did the writer move to? And what region of the country did she move from?



Comprehension Check

Underline the sentence that tells what the writer realizes about Florida's weather. What are some things the writer misses about Pennsylvania?



August 2, 2009

Dear Tiffany,

I'm sorry it's taken me so long to write, but I've been really busy since the move. Things in Florida are so different from what I'm used to—I have a feeling I'm more of a Pennsylvania person. I'm still adjusting.

How quickly the time has passed! We've been here a whole year. Yet we still have boxes to unpack. Remember when I told you I was worried about moving to Florida? Well, we arrived in the summer, and the weather here reminded me of summer in Japan, which was comforting. However, as time passed, I realized that Florida's weather changes very little. During winter break, I felt strange listening to the radio playing holiday songs and then looking out the window to see people walking in short sleeves and flip-flops. You know how much I love wearing winter clothes. I adore the warm, comfy feeling I get whenever I bundle up to brave the Pennsylvania winter. Even though I knew Florida's winters were much warmer than Pennsylvania's, I still hoped to recapture that feeling I craved so much. I won't need my warm clothes here.

I know you are jealous of how sunny Florida is, but it rarely changes. It is always sunny. I was overwhelmed by the constant sunshine at first. I hoped I would get used to it. I was doing fairly well until I visited Pennsylvania in March. As soon as I arrived, I recognized another important element I was missing: the dead sky. The opaque, slate-gray space edged with thin, wispy clouds is nowhere to be seen in Florida. The sky here is always a beautiful, crisp blue without a cloud in sight. Whenever I look up into the sky, I sigh, wishing for a sight more realistic and less cheery.

*I miss you, and I hope to hear from you soon.
Your friend always,
Reina*

Choose one and complete:

1. Write and illustrate a postcard that tells a friend about your city or town.
2. Use the U.S. Census Bureau site on the Internet or information in the library to help you research American migration patterns from 1980 to 1999. Create a chart to show one pattern that occurred during that period of time.
3. Choose a state. Then use Census Bureau information from the Internet to research the moving patterns in that state from 2002 to 2003. Write a one-page report about your findings.

**Reading Strategy:
Use Graphs**

Information in a text can sometimes be explained in a graph as well as in a paragraph.



Circle the phrase in the third sentence that might be used as the subject of a graph. What might the graph help a reader understand?

Comprehension Check

Underline Reina's description of "the dead sky." Draw picture of it in the box below.



Comprehension Check

Underline the sentence that tells what the writer wishes for. What do you think Reina means when she writes "more realistic and less cheery"?



READING WRAP-UP

Retell It!

What did you learn from the selection about where people in the United States are moving? Why do you think people are migrating to those areas?

Reader's Response

Suppose you are an official who is trying to get people to move to your city or town. What would you tell people about where you live? What do you think is important for them to know?

Think About the Skill

In what ways can graphs and other visual aids like charts help a reader better understand what an article is saying?

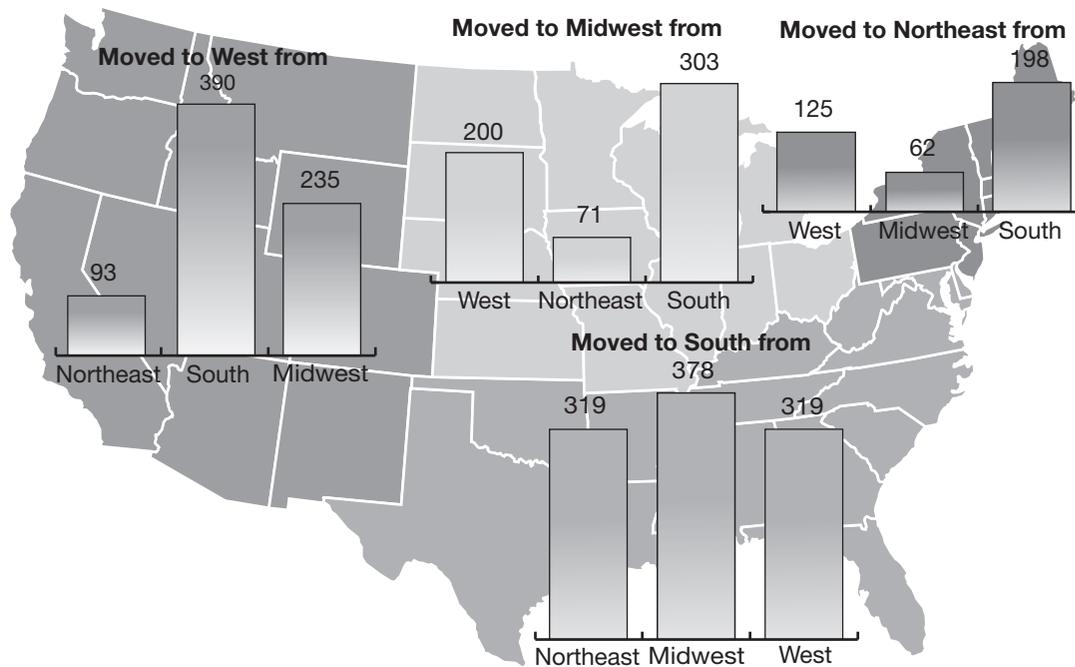
EDIT FOR MEANING

Read

You have read "Migration Patterns." Now read one paragraph from it again.

Migration Patterns

Moves to different regions in the United States have changed the country's population distribution. As was true throughout the 1990s, more people moved from the Northeast to the South than from the South to the Northeast in 2002–2003. In general, more people moved *from* the Northeast than *to* the Northeast. The number of people moving into and out of urban and rural areas remained about the same.



Fix the Error

Each paragraph below contains the same information as the paragraph you just read. However, each paragraph contains one error. First, find the error. Then fix it by editing the sentence so that the information is correct.

1. Find and fix the error.

Migration Patterns

Because of where people in the United States have chosen to move, the population of some areas has declined while the populations of other areas has increased. In the last decade of the 20th century, more people left the Northeast to move to the South than the other way around. This was also true in 2002–2003. Generally, the Northeast lost population to all parts of the country. The number of people who left cities to move to country areas went up, too.

2. Find and fix the error.

Migration Patterns

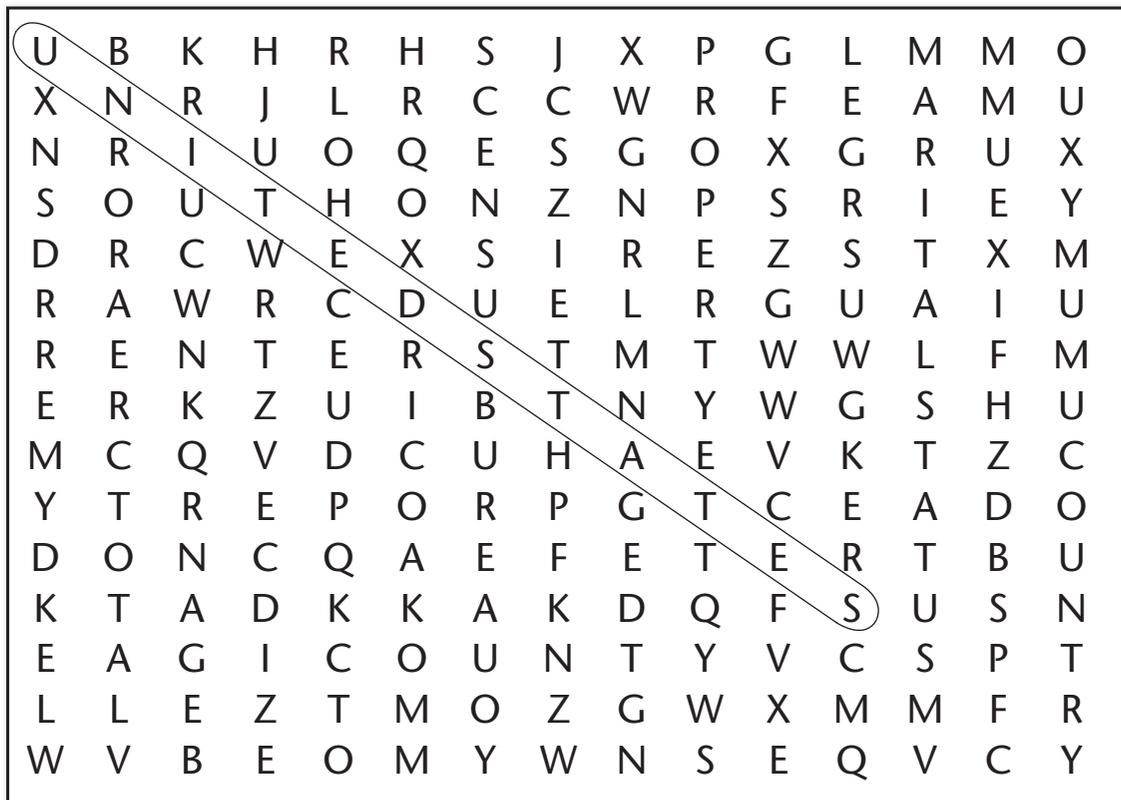
Some regions of the United States have more people than they used to because of the way population patterns have shifted. At the end of the 1900s, Northeastern states lost population to Southern states because many Southerners moved North. This also happened in 2002–2003. However, the number of Americans who moved to and from cities and the countryside stayed about the same.

FOCUS ON DETAILS

Word Search Puzzle

To complete this word search puzzle, you'll need to remember or search for details in the reading. Look at the clues and circle the answers in the puzzle below. Check off each clue after you've found the answer. Write the word next to its clue.

1. People in this nation move often United States
2. Official group that gives out population figures _____
3. The number when all the numbers in a group are added together _____
4. State of being married or unmarried _____
5. People who do not own their homes _____
6. The region where many people in the Northeast moved to _____
7. Between 2002 and 2003, only 3 percent moved from another _____
8. Large area of land within a state _____
9. One factor that affects moving rates _____
10. Ownership of this is a factor in moving rates _____



READ FOR FLUENCY

1. Silently read the text below. Make sure you understand the point that each sentence is making.
2. Underline the word or words in each sentence that are most important. When you read, you should say these underlined words with expression.
3. Look again at the punctuation in the paragraphs. Remember that when a sentence ends in a period, you should read the words as a statement and take a breath before beginning a new sentence. When you see a comma, you should pause briefly. When you see an exclamation mark, you should sound excited. When you see a question mark, you should read as though you are asking a question.
4. Now read the paragraphs below out loud. Pay attention to the important words and punctuation as you read.
5. Write down any words that slowed you down. Practice saying these words out loud.
6. Read the text below out loud two more times. You may want to ask a friend or family member to listen to you and tell you their reactions to your reading.

Migration Patterns

What will the future population distribution of the United States look like? If today's trends continue, more people may be moving to the South. In addition, the new residents there may be younger than those moving to the South today. The Northeast may become less populated, and more Southerners may migrate to the less densely populated areas of the West and Midwest.

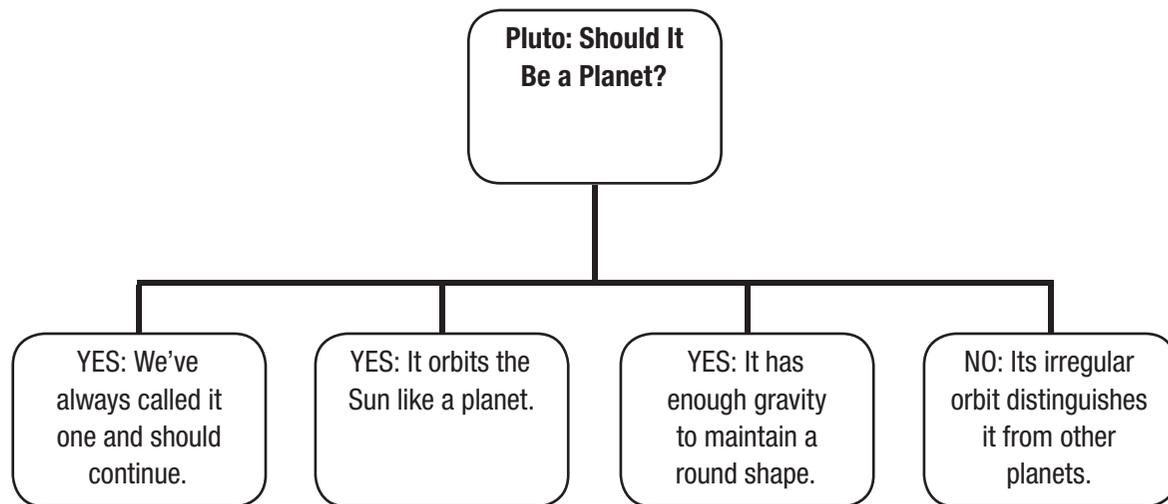
How can we tell what's right?

"I ♥ Pluto"

SUMMARY

In this editorial, the author talks about his feelings about Pluto. He explains why he thinks Pluto should continue to be the ninth planet in our solar system. He knows that his feelings are not scientific. In August 2006, scientists of the International Astronomical Union voted. They decided that Pluto was not a planet anymore. The scientists said that a planet must have a round shape. It must also orbit the sun and have a certain type of orbit. Pluto has a round shape and it orbits the sun, but it has an unusual orbit. Because of this, scientists call Pluto a dwarf planet, not a planet.

Visual Summary



Use What You Know

List three things you know about our solar system.

1. _____
2. _____
3. _____

Text Structure

An article often has highlighted terms. Their definitions are at the bottom of the page. Underline the highlighted term on this page. Then circle its definition. Reread the sentence in which the term appears. Then rewrite the sentence without using the term.



Reading Strategy: Distinguish Fact from Opinion

Editorials often include both facts and opinions. Facts are statements that can be proven. Opinions are personal beliefs that cannot be proven. Circle the text in the third paragraph that gives a fact. Underline the text that gives an opinion. What is the author so upset about?



I ♥ Pluto

by Tim Krieder

August 23, 2006
Charlestown, MD

My love for our picked-on ninth planet is deeply, perhaps embarrassingly, personal.

I took my first public stand on Pluto's fate when I addressed the Forum on Outer Planetary Exploration in 2001. I informed the scientists that, first of all, no way was I or anyone else about to unlearn anything we'd been forced to learn in school. More important, I felt sure that, as former children, we all respected the principle: no takebacks.

Planets, like Supreme Court justices, are appointed for life, and you can't **oust** them no matter how unqualified they may prove to be. If they could kick out Pluto, I warned, they could do it to anything, or anyone.

I admit: it's a highly emotional issue and maybe I got carried away in the heat of debate.

oust, force out of a position of power

Even I was a little **abashed** last week when the International Astronomical Union proposed an absurdly broad definition of planethood that included moons and asteroids. Any half-formed hunk of frozen crud that could pull itself together into a ball long enough to get photographed by the **Hubble** would be considered a planet.

For longtime Pluto fans, there was something almost punitive about this proposal: happy now?

I guess I always knew in my heart that Pluto didn't belong. Pluto is what my old astronomy textbook rather judgmentally called a "deviant," and I've always felt a little defensive on its behalf. Neither a terrestrial planet nor a gas giant, Pluto is mostly ice. It's smaller than our own Moon. It has an orbit so eccentric that it spends 20 years of each revolution inside Neptune's orbit. Its orbital plane is tilted at a crazy 17-degree angle relative to the rest of the solar system. Its satellite Charon is so large in proportion to it that it's been called a double planet.

abashed, embarrassed or ashamed

Hubble, powerful orbiting telescope that takes photos of celestial bodies in outer space

deviant, one who is different, in a bad way

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Comprehension Check

Underline the text that tells about a new definition of planethood. Why do you think the author feels this definition is absurd?



Reading Strategy: Distinguish Fact from Opinion

Underline the facts about Pluto that make it "deviant." Why do you think the author still holds the opinion that Pluto is a planet?



Text Structure

Editorial writers sometimes use humor, slang words, or sarcasm in their writing. Underline examples of this kind of writing in the text. What do you think is the purpose of using this kind of writing?



Text Structure

Editorials often use literary devices, such as similes. A simile compares one thing to another using the words *like* or *as*. Underline an example of a simile in the first paragraph. How does the simile make the writing more interesting?



Reading Strategy: Distinguish Fact from Opinion

Underline a sentence in the text in which the author shares an opinion about the solar system. List one fact in the text that supports that opinion.



Comprehension Check

Underline the text that tells what the astronomical union is about to do. What solution would the author accept?



Lately I've thought of Saturn's moon Titan as the Homecoming Queen of the solar system, courted and fawned over. Pluto is more like the girl in black who never talked to anybody and wrote poems about dead birds. I just can't stand by and watch as the solar system's oddball gets pushed farther down into the substrata of social ostracism.

All I really wanted was a little velvet-rope treatment for Pluto. I didn't expect them to throw open the doors to all this Kuiper Belt riffraff.

It's like that point at a party when you look around and ask: Who are these people? Sedna? Xena? Ceres? Ceres is an *asteroid*. Why not just make Greenland a planet? And I have nothing but respect for Charon, but come on: it's obviously Pluto's moon.

The solar system is a mess.

The astronomical union is to vote on Pluto tomorrow. For the record, I would accept a separate (but equal!) class of planetoids, including Sedna and Xena. After all, the childhood mnemonic is easily fixed: My Very Energetic Mother Just Served Us Nine Pizzas, Sans Xenophobia.

ostracism, state of being excluded

Kuiper Belt, orbiting objects in the outer regions of our solar system

mnemonic, device that helps you remember things—in this case, the order of the planets

If we do create a category for “ice dwarves,” I hope they’ll at least all be named after dwarves: Gimli, Sneezy, Rumpelstiltskin.

But what I really wish is that we’d just grandfather Pluto in and then close all the loopholes. Let’s do it, not for scientific reasons, but for sentimental ones.

As a friend of mine at NASA said, “It would prove our humanity to let Pluto stay in.” It would be like that moment of grace when the doorman is about to escort you out of a private party where you don’t belong, but then someone who knows you taps him on the shoulder and says, “Wait a minute, I know this guy. He’s O.K.”

grandfather Pluto in, allow Pluto to remain a planet in spite of the facts



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Comprehension Check

Underline the sentence that lists dwarves. Why do you think the author refers to Pluto as an “ice dwarf”?



Reading Strategy: Distinguish Fact from Opinion

In the author’s opinion, what would be the very best way to resolve Pluto’s status? Why does he feel this way?

Text Structure

Articles sometimes include quotations. Underline the text that has a quotation from a friend at NASA. What do you think is the purpose of using quotations?



Comprehension Check

Underline the text that tells the number of defining characteristics of a planet. In your own words, what is the first characteristic of a planet.



Text Structure

Some articles provide numbered points followed by comments about the points. Underline the text of the first point given on this page. What is the purpose of the comments that follow?



Reading Strategy: Distinguish Fact from Opinion

Underline the text that gives facts about Pluto's gravity. Based on those facts, why might Pluto be considered a planet?



Why Pluto Is Not a Planet

The International Astronomical Union has come up with three defining characteristics of a planet. A celestial body must have all three characteristics to be considered a planet.

1. It must orbit the sun.

Earth takes 365 days to orbit the sun. Pluto takes 248 years! This is because Pluto is billions of miles away from the sun. But according to the first characteristic, Pluto is a planet. Even though it is so far away from the sun, there is no other object comparable to the sun close enough to Pluto to pull it out of orbit.

2. Its gravity must be strong enough for it to maintain a round shape.

Every object has its own gravity. Huge objects, like planets, have so much gravity that they actually pull on themselves until they become round in shape. And since Pluto has enough gravity to stay round, it is still a planet according to this second characteristic.

3. It must be able to clear the neighborhood around its orbit.

To do this, a planet must be large enough that the force of its gravity affects surrounding objects. The objects collide with the planet, making it grow. As the planet gets bigger, the number of objects around it gets smaller. A planet’s gravity can also change other objects’ orbits, making future collisions unlikely. Hundreds of objects orbit in the Kuiper Belt with Pluto. Pluto is not large enough to remove them. One of these, Eris (formerly known as Xena), is larger than Pluto. So Pluto is not a planet according to this third characteristic. On August 24, 2006, Pluto was reclassified as a “dwarf planet.”

Choose one and complete:

1. Draw a diagram showing the orbits of Pluto, the planets, and other objects in our solar system.
2. On one side of a chart, make a list of facts that support an argument for not considering Pluto as a planet. On the other side, list facts for why Pluto should be considered a planet.
3. Write a letter to the editor of your local newspaper that gives your response to the article “I ♥ Pluto.”

Text Structure

Articles often contain dates and figures. What happened on August 24, 2006?

Comprehension Check

Underline the text that explains why Pluto can’t affect objects in orbit with it. What does this mean for Pluto’s status as a planet?



Reading Strategy: Distinguish Fact from Opinion

Circle the text that gives a conclusion about other objects in Pluto’s orbit. Is this conclusion based on fact or opinion? Explain your reasoning.



READING WRAP-UP

Retell It!

Imagine that you are giving a speech before a group of scientists who are considering changing the status of Pluto as a planet. Summarize the major reasons for changing Pluto's status.

Reader's Response

How might the definition of a planet be changed in order to qualify Pluto as a planet?

Think About the Skill

How did being able to distinguish between fact and opinion help you understand the editorial?

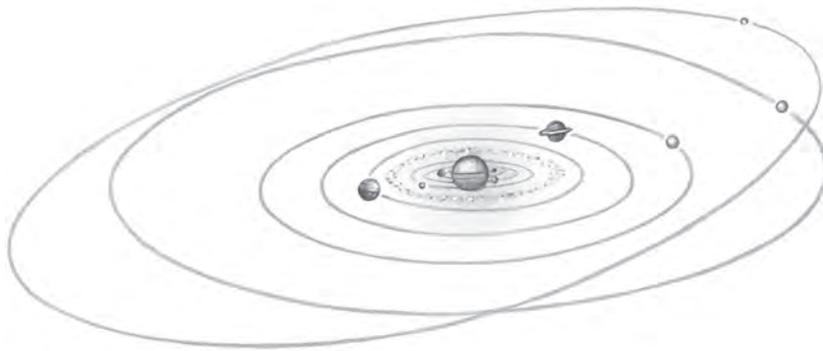
EDIT FOR MEANING

Read

You have read "I ♥ Pluto." Now read one paragraph from it again.

I ♥ Pluto

I guess I always knew in my heart that Pluto didn't belong. Pluto is what my old astronomy textbook rather judgmentally called a "deviant," and I've always felt a little defensive on its behalf. Neither a terrestrial planet nor a gas giant, Pluto is mostly ice. It's smaller than our own Moon. It has an orbit so eccentric that it spends 20 years of each revolution inside Neptune's orbit. Its orbital plane is tilted at a crazy 17-degree angle relative to the rest of the solar system. Its satellite Charon is so large in proportion to it that it's been called a double planet.



Fix the Error

Each paragraph below contains the same information as the paragraph you just read. However, each paragraph contains one error. First, find the error. Then fix it by editing the sentence so that the information is correct.

1. Find and fix the error.

I ♥ Pluto

I guess I always knew that Pluto was exactly like the other planets. In my old astronomy text, Pluto is listed as a “deviant” planet, whatever that means. I’ve never really liked that term, so I’ve always defended Pluto when I’ve gotten a chance. Neither a terrestrial planet nor a gas giant, Pluto is mostly made up of ice. Compared to our Moon, Pluto comes out second in size. Pluto’s orbit is weird. Pluto takes 20 years of each revolution around the sun floating inside Neptune’s orbit. Pluto’s orbit is tilted at a 17-degree angle compared to the orbits of the other planets. Pluto’s own moon, Charon, is so huge that Pluto has been called a planet made up of two planets.

2. Find and fix the error.

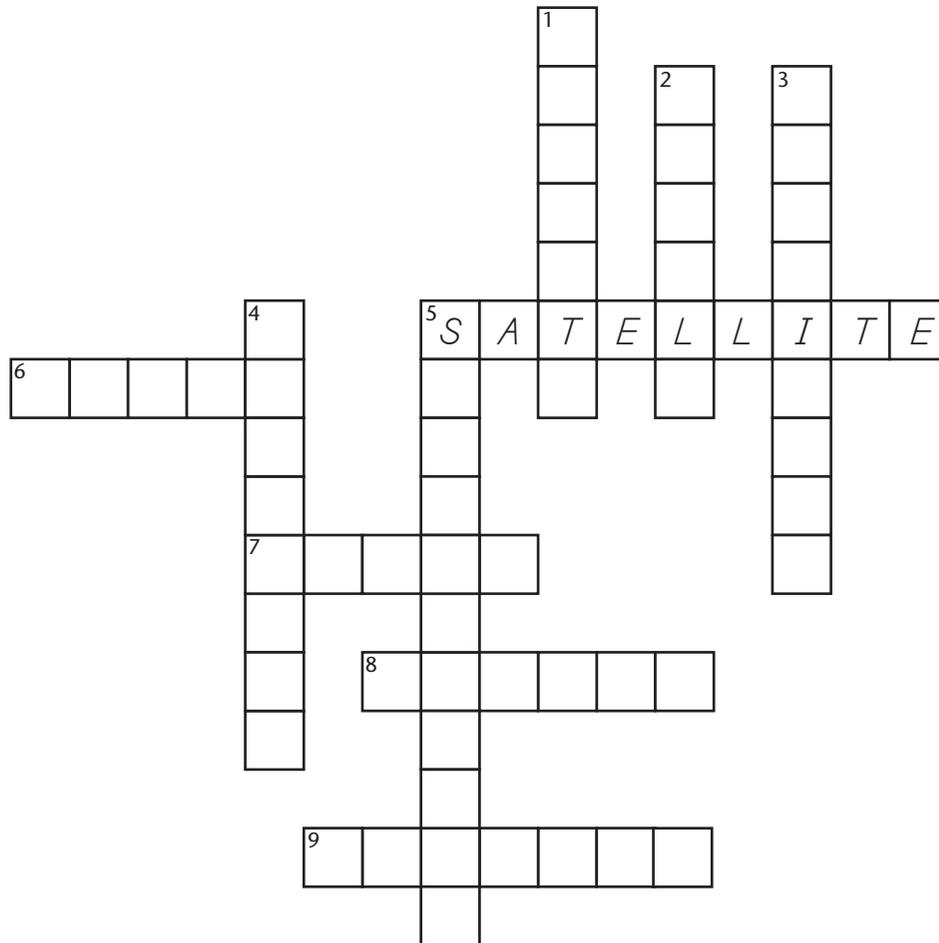
I ♥ Pluto

You’ve asked me about Pluto and I guess I’ve always known that Pluto is just not similar to the planets in the solar system. Pluto is what my old astronomy textbook rather judgmentally called a “typical planet.” You can’t call Pluto a planet with solid ground, nor is it made up of gas like the big bully of the solar system, Jupiter. Pluto is made up mostly of ice, sort of like a big snowball. But it’s not exactly big because Pluto is not quite as large as our Moon. It has a strange orbit. For 20 years of its revolution around the sun, it hides inside Neptune’s orbit. Its orbital plane is tilted at a 17-degree angle as compared to the remainder of the planets. Its satellite Charon is so large in proportion to it that Pluto has been called a double planet.

FOCUS ON DETAILS

Crossword Puzzle

To complete this crossword puzzle, you'll need to remember or search for details in the reading. Use the words in the word box to help you. Not all of the words in the word box are in the puzzle. Fill in the crossword with answers to the clues below.



SENTIMENTAL
 FUNDAMENTAL
 SATELLITE
 MAGNETISM
 RECORDER
 MNEMONIC
 GRAVITY
 DEBATE
 HUBBLE
 PLANETS
 COMETS
 ORBIT
 TITAN
 APPOINTED

Across

5. An orbiting object, like a moon or manmade communications device
6. The Homecoming Queen of the solar system
7. An object's path around a larger object, like the sun
8. Reasoned argument between two people or groups
9. Our solar system has nine of these—or eight, depending on your definition

Down

1. A force that keeps objects in orbit around one another
2. A powerful orbiting telescope named after a famous scientist
3. To be given a position by a higher authority
4. A memory device
5. Appealing to the emotions rather than logic

READ FOR FLUENCY

1. Silently read the text below. Make sure you understand the point that each sentence is making.
2. Underline the word or words in each sentence that are most important. When you read, you should say these underlined words with expression.
3. Look again at the punctuation in the paragraphs. Remember that when a sentence ends in a period, you should read the words as a statement and take a breath before beginning a new sentence. When you see a comma, you should pause briefly. When you see an exclamation mark, you should sound excited. When you see a question mark, you should read as though you are asking a question.
4. Now read the paragraphs below out loud. Pay attention to the important words and punctuation as you read.
5. Write down any words that slowed you down. Practice saying these words out loud.
6. Read the text below out loud two more times. You may want to ask a friend or family member to listen to you and tell you their reactions to your reading.

I ♥ Pluto

I took my first public stand on Pluto's fate when I addressed the Forum for Outer Planetary Exploration in 2001. I informed the scientists that, first of all, no way was I or anyone else about to unlearn anything we'd been forced to learn in school. More important, I felt sure that, as former children, we all respected the principle: no takebacks.

Planets, like Supreme Court justices, are appointed for life, and you can't oust them no matter how unqualified they may prove to be. If they could kick out Pluto, I warned, they could do it to anything, or anyone.

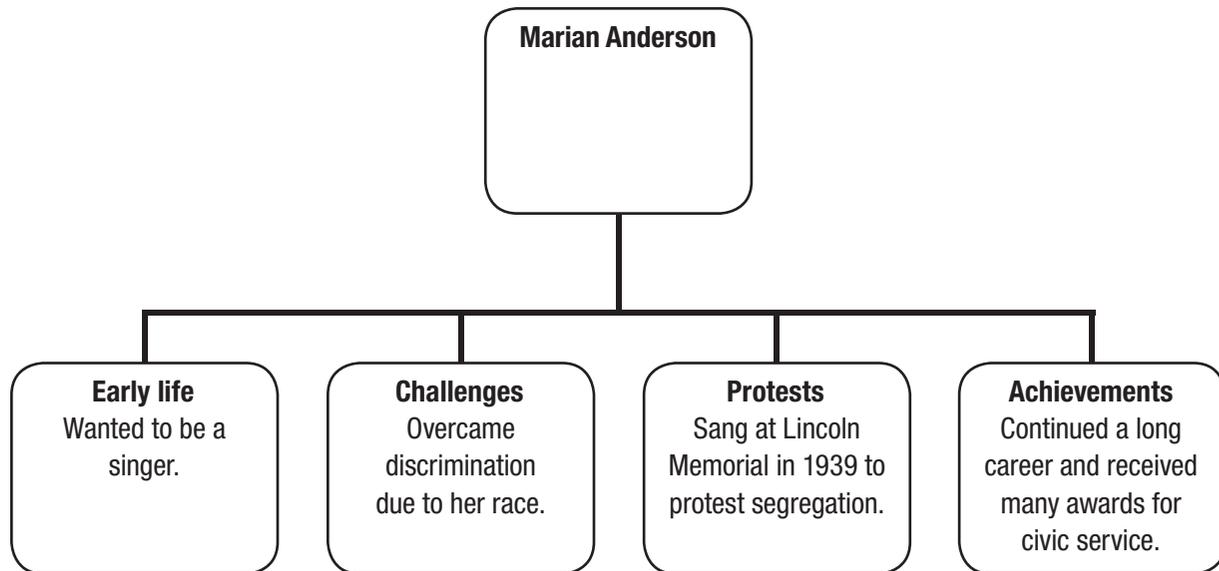
How can we tell what's right?

"Marian Anderson: A Voice for Change"

SUMMARY

This social studies text tells about the singer Marian Anderson. Anderson dreamed of becoming a professional singer, but as an African American, she faced many difficulties. From the 1920s to the 1960s, African Americans did not have the same rights as whites. The best music schools would not accept black students. Many concert halls did not allow black performers. Traveling was especially difficult in the South. Many restaurants, hotels, and trains in the South were for whites only. Anderson did not allow these difficulties to stop her. She became one of the most popular singers of her time.

Visual Summary



Use What You Know

List three goals you would like to achieve in your lifetime.

1. _____
2. _____
3. _____

Text Structure

The title of a social studies article gives you an idea of the topic you are going to read about. Underline the title of the article. What do you think the article will be about?



Reading Strategy: Summarize

Summarizing can help you understand the main points of an article. Underline the main idea of the second paragraph. After you read the paragraph, summarize the paragraph in one sentence.



Marian Anderson: A Voice for Change

Gifted with a magnificent singing voice, Marian Anderson didn't set out to change America. She set out only to sing. From childhood on, her ambition was to become a professional singer. She hoped to study at top music schools and train with the best teachers. She wished to perform in well-established concert halls, ones with excellent **acoustics** to allow listeners to hear the music in all its glory.

But because Anderson was African American, these goals were not easy to achieve. During her lifetime, many schools, churches, and theaters in the United States were **segregated**. It was not unusual for music schools and concert halls to welcome only white students, audiences, and performers. Anderson didn't let these obstacles stop her. In struggling to realize her dream, she overcame racial barriers in her own life and advanced the cause of racial equality in the United States.

acoustics, the qualities of a room, such as its shape and size, which affect the way sound is heard in it
segregated, meant to be used or attended by members of one race or religion

The Baby Contralto

Marian Anderson was born in 1897 and grew up in Philadelphia. She went to church every Sunday, and it was there that she first sang in public. At age six, Anderson joined her church's junior choir. Her natural singing voice was low and rich—a **contralto**—but she had an amazing three-**octave** range. Anderson thrilled listeners with the way she sang the spirituals that were part of the service.

Nicknamed “the baby contralto,” Anderson was chosen to join a choir of singers from many different African-American congregations. By the time she was ten, she was invited to give solo concerts at benefits and other events. When she was twelve, her father died as a result of an accident. Anderson, her mother, and two sisters moved in with her grandparents, and Mrs. Anderson went to work as a cleaning woman to support her daughters. Throughout Marian Anderson's life, her mother's strength and determination helped sustain her.

Turning Points

When Anderson graduated from eighth grade, she had reached a turning point. If she wanted to sing professionally, she needed training. Her church raised money for her to attend music school, but Anderson was rejected solely on the basis of her race. It was a blow she never forgot.

contralto, lowest female singing voice
octave, the range of notes between the first note of a musical scale and the last

Text Structure

A social studies article often includes highlighted terms.



Their definitions are at the bottom of the page. Underline the first term on this page. Circle its definition. Now reread the sentence where the term appears. Then rewrite the sentence without using the term.

Comprehension Check

Circle the phrase that tells the nickname given to Anderson.



Why do you think she was given this nickname?

Reading Strategy: Summarize

A summary restates the main idea in your own words. Circle the last paragraph on this page. Sum up the main idea of the paragraph in a sentence or two of your own.



Reading Strategy: Summarize

Rereading can help you summarize information. Reread the first paragraph. Circle important words and phrases. Summarize how segregation affected Marian Anderson's early career.



Text Structure

Social studies articles often discuss events that took place in the past. Circle the dates on this page. In what year did Anderson first sing with the New York Philharmonic?



Comprehension Check

Underline the sentence in the last paragraph that tells how Anderson felt about her own work. Why did she decide to go to Europe?



Anderson studied with teachers, both black and white, who taught black students. They helped her expand her repertoire of spirituals and popular songs to include arias from operas and other classical songs. Now in demand as a concert artist, she organized her own tours, choosing venues that welcomed black musicians. On tour in the South, she sang mostly in African-American churches and colleges. Travel through the South was difficult. "Colored only" train cars were dirty, and many hotels served only white people.

In 1925, Anderson won the chance to sing as a soloist with the great New York Philharmonic Orchestra in a large stadium in New York City. An audience of more than 7,000 people attended. Her concert was a triumph, and success followed success over the next few years.

Despite mostly enthusiastic reviews, Anderson wasn't yet satisfied with the quality of her own work. Since operas were usually written in Italian or German, she decided to go to Europe to perfect her skills in these languages. She appeared in dozens of concerts there from 1930 to 1935, enchanting European audiences.

A more accomplished and self-confident Anderson returned to the American stage. In 1936, she performed at the White House for President Franklin D. Roosevelt and First Lady Eleanor Roosevelt. Marian Anderson had become an international singing sensation.

A Historic Concert

In 1938, Howard University invited Anderson to appear in the nation's capital, Washington, D.C., where she had often performed. Officials at Howard tried to rent the largest and best theater in the area, Constitution Hall, for her concert. The concert hall owners rejected the request.

An organization called the Daughters of the American Revolution, known as the DAR, owned Constitution Hall. Although black patrons could sit in a small section at the back of the hall, the DAR had instituted a "white artists only" policy in 1932.

When the DAR denied Marian Anderson the right to appear there, her fans of all races and nationalities were outraged. One of them was Eleanor Roosevelt, who was a member of the DAR. To show her disapproval, she resigned her membership.

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Text Structure

Social studies articles often include subheadings that introduce a new section. Circle the subheading on this page. What do you think the rest of the passage will be about?



Reading Strategy: Summarize

Sometimes authors use phrases that summarize important ideas. Circle the phrase "white artists only" policy. Explain in your own words what that phrase means.



Comprehension Check

Underline the name of the First Lady in 1936. How did the First Lady's resignation from the DAR support Marian Anderson?



Text Structure

Social studies articles often present causes and effects. Underline the text that tells what the school board agreed to let Anderson do. What was the effect of this decision?



Comprehension Check

Circle the date of Marian Anderson's open-air concert. Why was the location of the concert important?



Reading Strategy: Summarize

Summarizing information about historical events can help you understand why they are important. Circle the last paragraph on this page. Explain why Marian Anderson's 1939 concert was important in U.S. history.



Concert organizers also turned to the local school board for help, requesting use of the largest school auditorium in the area. Since it was located in an all-white school, the board agreed that Anderson could appear there, but insisted that no other African-American artists be allowed to do so. The concert organizers rejected the offer.

With the help of the National Association for the Advancement of Colored People, or the NAACP, a location for Anderson's concert was finally found. The NAACP invited her to sing from the steps of the Lincoln Memorial, the monument created to honor the Great Emancipator, Abraham Lincoln.

On April 9, 1939, Marian Anderson appeared in a ground-breaking open-air concert before an audience of 75,000 people. Her concert at the Lincoln Memorial became a lasting symbol of the senseless injustice of racial prejudice and of the need to guarantee equal rights for all.

From that point on in her career, Anderson insisted on “vertical” seating in segregated cities. Vertical seating meant that an imaginary line was drawn down the center of a theater—from front to back—with black patrons on one side and white on the other, for separate but equal seating. By the 1950s, however, Anderson would no longer perform where audiences were segregated in any way.

A Busy Life

Anderson’s career continued in the years after her historic concert, although her personal and professional life changed. In 1943 she married the architect Orpheus Fisher, whom she had known since high school. In 1958 Anderson served as a delegate to the United Nations. She sang again on the steps of the Lincoln Memorial in 1963, when Martin Luther King Jr. delivered his “I Have a Dream” speech. She received the Presidential Medal of Freedom in 1963. Although she retired only a few years later, she continued to travel and to speak at public events.

Marian Anderson died in 1993 at the age of ninety-six. Today, listeners can still hear recordings of some of her performances and witness the voice whose power moved audiences to tears and helped to inspire change in America.

Choose one and complete:

1. Draw a poster that advertises Marian Anderson’s 1939 concert.
2. Write a speech that Eleanor Roosevelt might have given to explain why she quit the DAR.
3. Write and perform a song or poem about the life of Marian Anderson.

Text Structure

A paragraph usually has a main idea and details that support the main idea. Underline the topic sentence of the second paragraph. What are three details that support the main idea?



1. _____
2. _____
3. _____

Comprehension Check

Circle the sentence that tells about Anderson singing at the Lincoln Memorial in 1963. Why is this an important event in the history of the United States?



Reading Strategy: Summarize

Biographies often try to summarize a person’s whole life in a short reading. Reread the text under the subheading “A Busy Life.” Circle important words and phrases. Then write a summary of what Anderson’s life was like after her 1939 concert.



READING WRAP-UP

Retell It!

Imagine you are writing an encyclopedia entry about famous Americans. Write a short summary of an entry on Marian Anderson. Use details from the article you just read.

Reader's Response

What did you find most interesting about Marian Anderson's challenge to segregation? Why did you find it interesting?

Think About the Skill

How did summarizing help you to better understand the article?

EDIT FOR MEANING

Read

You have read “Marian Anderson: A Voice for Change.” Now read one paragraph from it again.

Turning Points

Anderson studied with teachers, both black and white, who taught black students. They helped her expand her repertoire of spirituals and popular songs to include arias from operas and other classical songs. Now in demand as a concert artist, she organized her own tours, choosing venues that welcomed black musicians. On tour in the South, she sang mostly in African-American churches and colleges. Travel through the South was difficult. “Colored only” train cars were dirty, and many hotels served only white people.



Fix the Error

Each paragraph below contains the same information as the paragraph you just read. However, each paragraph contains one error. First, find the error. Then fix it by editing the sentence so that the information is correct.

1. Find and fix the error.

Turning Points

Anderson was taught by black teachers: she never had a white teacher. They helped her add to her collection of spirituals and popular songs to include songs from operas and other classical music. Now that she was popular as a concert singer, she set up her own tours, selecting places that wanted black musicians to appear. On tour in the South, she sang mostly in African-American churches and colleges. However, travel through the South was not very pleasant. Many train cars were labeled “Colored only,” and these were always the dirtiest cars. She also found that many hotels refused to serve African Americans.

2. Find and fix the error.

Turning Points

Anderson went to classes taught by both black and white teachers whose students were black. These teachers did not help her to expand the range of spirituals and popular songs to include operas and classical works. Now in demand as a singer, she organized her own tours, choosing venues that welcomed black musicians. When she toured in the southern states, she sang mostly in churches and in colleges where African Americans attended. It was not easy to travel in the South. Train cars labeled “Colored only” were not clean, and many hotels did not serve African Americans.

FOCUS ON DETAILS

Word Search Puzzle

To complete this word search puzzle, you'll need to remember or search for details in the reading. Look at the clues and circle the answers in the puzzle below. Check off each clue after you've found the answer. Write the word next to its clue.

1. The qualities of a room, such as its shape and size, which affect the way sound is heard in it acoustics
2. Lowest female singing voice _____
3. Last name of first lady who protested on behalf of Anderson _____
4. President whose memorial was the site of Anderson's 1939 concert _____
5. Range of notes between the first and last notes of a musical scale _____
6. System that divides people based on race, religion, or gender _____
7. Operas were usually written in Italian or this language _____
8. Where Marian Anderson first sang in public _____
9. Separate but equal seating in opera houses was called _____ seating
10. Anderson served as a _____ to the United Nations

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

READ FOR FLUENCY

1. Silently read the text below. Make sure you understand the point that each sentence is making.
2. Underline the word or words in each sentence that are most important. When you read, you should say these underlined words with expression.
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6. Read the text below out loud two more times. You may want to ask a friend or family member to listen to you and tell you their reactions to your reading.

The Baby Contralto

Marian Anderson was born in 1897 and grew up in Philadelphia. She went to church every Sunday, and it was there that she first sang in public. At age six, Anderson joined her church's junior choir. Her natural singing voice was low and rich—a contralto—but she had an amazing three-octave range. Anderson thrilled listeners with the way she sang the beautiful spirituals that were part of the service.

Nicknamed “the baby contralto,” Anderson was chosen to join a choir of singers from many different African-American congregations. By the time she was ten, she was invited to give solo concerts at benefits and other events.

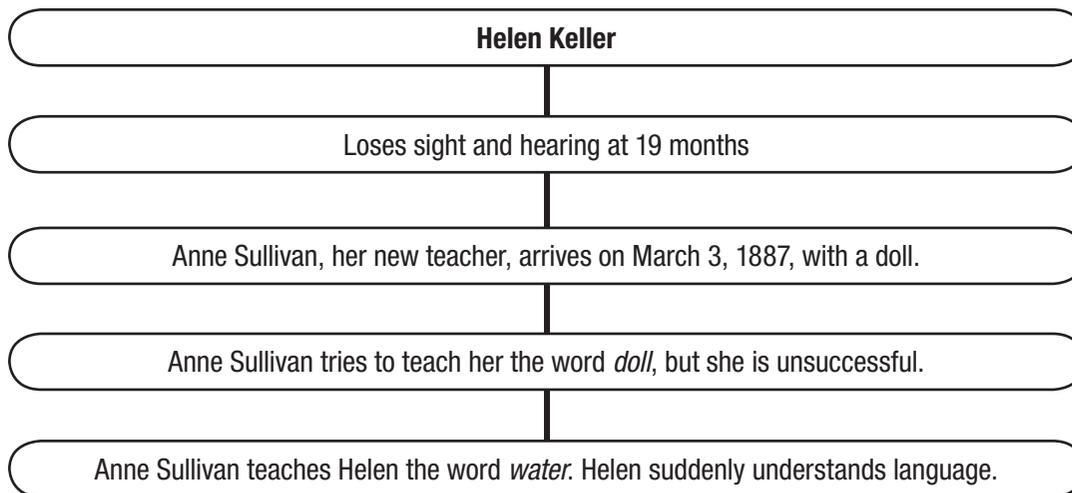
Can we think with the heart?

From *The Story of My Life*

SUMMARY

When Helen Keller was a child she lost the ability to see and hear. In this passage from her autobiography, Keller describes what this was like. For many years she could not communicate her thoughts and feelings to other people. When she was seven years old, a teacher came to live with her. The teacher taught her how to talk with her hands. She used her fingers to spell out words. For Helen, learning her first word changed her life. It was the start of a new world of learning. It gave her hope for the future.

Visual Summary



Use What You Know

Name a person who had to struggle to overcome something. What was the challenge he or she had to overcome?

Text Structure

Underline the title of this article. Titles can tell readers a lot about the topic of a social studies article. If you were going to write an article that told the story of your life, what three things would be the most important?



1. _____
2. _____
3. _____

Reading Strategy: Identify Main Idea and Details

Quotations can illustrate an author's point and support a main idea. Underline the quotation in this passage. Tell in your own words what the quotation means.



From *The Story of My Life*

by Helen Keller

Chapter 1

One brief spring, musical with the song of robin and mockingbird, one summer rich in fruit and roses, one autumn of gold and crimson sped by and left their gifts at the feet of an eager, delighted child. Then, in the dreary month of February, came the illness which closed my eyes and ears and plunged me into the unconsciousness of a newborn baby. They called it acute congestion of the stomach and brain. The doctor thought I could not live. Early one morning, however, the fever left me as suddenly and mysteriously as it had come. There was great rejoicing in the family that morning, but no one, not even the doctor, knew that I should never see or hear again.

* * *

Gradually I got used to the silence and darkness that surrounded me and forgot that it had ever been different, until she came—my teacher—who was to set my spirit free. But during the first nineteen months of my life I had caught glimpses of broad, green fields, a luminous sky, trees, and flowers which the darkness that followed could not wholly blot out. If we have once seen, “the day is ours, and what the day has shown.”

* * *

unconsciousness, lack of awareness

rejoicing, celebrating

blot out, wipe out completely

Chapter 3

My aunt made me a big doll out of towels. It was the most comical, shapeless thing, this **improvised** doll, with no nose, mouth, ears or eyes—nothing that even the imagination of a child could convert into a face. Curiously enough, the absence of eyes struck me more than all the other defects put together. I pointed this out to everybody with **provoking** persistency, but no one seemed equal to the task of providing the doll with eyes. A bright idea, however, shot into my mind, and the problem was solved. I tumbled off the seat and searched under it until I found my aunt's cape, which was trimmed with large beads. I pulled two beads off and indicated to her that I wanted her to sew them on my doll. She raised my hand to her eyes in a questioning way, and I nodded energetically. The beads were sewed in the right place and I could not contain myself for joy. . . .

* * *

improvised, made without preparation, using materials at hand
provoking, making others angry or annoyed

Reading Strategy: Identify Main Idea and Details

An anecdote is a small story that can make a larger point. Underline what bothered Helen most about the doll. Then explain the main idea of this anecdote and the point it makes.



Comprehension Check

Underline the solution Helen Keller found for fixing her doll. Why is it significant that she solved her own problem?



Text Structure

Social studies articles sometimes show excerpts, or parts of an article, instead of including the whole selection. Circle the punctuation mark that shows that there are gaps in the selections in this piece. Why might readers only be given excerpts of an article?



Text Structure

Biographies often provide dates in the lives of important people. Underline the date on this page. Why is this date significant?



Comprehension Check

Underline how old Helen Keller was on the most important day of her life? What do you think she meant when she said she was filled with wonder when she considered the contrasts “between the two lives which it connects”?



Reading Strategy: Identify Main Idea and Details

Underline two details that show how Helen Keller knew that something different was going to happen in her house on that date. How might these details be different if she could have been able to see and hear?



Chapter 4

The most important day I remember in all my life is the one on which my teacher, Anne Mansfield Sullivan, came to me. I am filled with wonder when I consider the **immeasurable** contrasts between the two lives which it connects. It was the third of March, 1887, three months before I was seven years old.

On the afternoon of that eventful day, I stood on the porch, dumb, expectant. I guessed vaguely from my mother’s signs and from the hurrying to and fro in the house that something unusual was about to happen, so I went to the door and waited on the steps. The afternoon sun penetrated the mass of honeysuckle that covered the porch and fell on my upturned face. My fingers lingered almost unconsciously on the familiar leaves and blossoms which had just come forth to greet the sweet southern spring. I did not know what the future held of marvel or surprise for me. Anger and bitterness had preyed upon me continually for weeks and a deep **languor** had succeeded this **passionate** struggle.

immeasurable, enormous
languor, feeling of tiredness
passionate, involving intense feelings

Have you ever been at sea in a dense fog, when it seemed as if a tangible white darkness shut you in, and the great ship, tense and anxious, groped her way toward the shore with plummet and sounding-line, and you waited with beating heart for something to happen? I was like that ship before my education began, only I was without compass or sounding-line and had no way of knowing how near the harbor was. "Light! Give me light!" was the wordless cry of my soul, and the light of love shone on me in that very hour.

I felt approaching footsteps. I stretched out my hand as I supposed to my mother. Someone took it, and I was caught up and held close in the arms of her who had come to reveal all things to me, and, more than all things else, to love me.

groped, felt around for something to hold onto



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Comprehension Check

Underline Helen Keller's answer to her "wordless cry."



How do you think she felt when she made that cry?

Text Structure

Social studies articles sometimes use literary devices to make a point.



Personification gives human traits or abilities to things that are not human. Underline an example of personification in this passage. What is personified and what human trait or ability is given to this object?

Comprehension Check

Underline what Helen Keller's visitor did when she first met Helen.



What do you think this action may tell about their future relationship?

Comprehension Check

Underline what Helen Keller did after she was taught to spell “d-o-l-l.” What do you think Helen’s reaction to learning how to spell says about her?



Reading Strategy: Identify Main Idea and Details

Underline the name of the person who dressed Helen’s new doll. Explain the significance of this.



Comprehension Check

Underline what Helen still did not understand by the end of that first day. Do you think this changed later on? Why or why not?



The morning after my teacher came she led me into her room and gave me a doll. The little blind children at the Perkins Institution had sent it and Laura Bridgman had dressed it; but I did not know this until afterward. When I had played with it a little while, Miss Sullivan slowly spelled into my hand the word “d-o-l-l.” I was at once interested in this finger play and tried to imitate it. When I finally succeeded in making the letters correctly, I was flushed with childish pleasure and pride. Running downstairs to my mother, I held up my hand and made the letters for doll. I did not know that I was spelling a word or even that words existed; I was simply making my fingers go in monkey-like imitation. In the days that followed, I learned to spell in this uncomprehending way a great many words, among them *pin*, *hat*, *cup*, and a few verbs like *sit*, *stand*, and *walk*. But my teacher had been with me several weeks before I understood that everything has a name.

Perkins Institution, school for sight-impaired students founded in 1832

Laura Bridgman, hearing- and sight-impaired woman who had learned to read and write at the Perkins Institution in the 1830s

One day, while I was playing with my new doll, Miss Sullivan put my big rag doll into my lap also, spelled “d-o-l-l” and tried to make me understand that “d-o-l-l” applied to both. Earlier in the day we had had a tussle over the words “m-u-g” and “w-a-t-e-r.” Miss Sullivan had tried to impress it upon me that “m-u-g” is *mug* and that “w-a-t-e-r” is *water*, but I persisted in confounding the two. In despair she had dropped the subject for the time, only to renew it at the first opportunity. I became impatient at her repeated attempts and, seizing the new doll, I dashed it upon the floor. I was keenly delighted when I felt the fragments of the broken doll at my feet. Neither sorrow nor regret followed my passionate outburst. I had not loved the doll. In the still, dark world in which I lived there was no strong **sentiment** of tenderness. I felt my teacher sweep the fragments to one side of the hearth, and I had a sense of satisfaction that the cause of my discomfort was removed. She brought me my hat, and I knew I was going out into the warm sunshine. This thought, if a wordless sensation may be called a thought, made me hop and skip with pleasure.

_____ **sentiment**, feeling or emotion

Comprehension Check

Circle the two words that Helen Keller got confused. How would you explain to her the difference between those two things?



Reading Strategy: Identify Main Idea and Details

Underline the emotion Miss Sullivan felt earlier that day after trying to teach Helen the difference between two words. List three details that reveal what kind of a teacher Anne Sullivan was.



1. _____
2. _____
3. _____

Comprehension Check

Underline how Helen Keller felt when she touched the fragments of her broken doll. Why do you think she felt this way?



Comprehension Check

Underline the first word that Helen Keller understood. Why was this breakthrough important to her?



Reading Strategy: Main Idea and Details

Underline the scent that attracted Helen Keller and Anne Sullivan to go to the well-house. Why might fragrance be so important to Helen Keller? What does this detail reveal about her life?

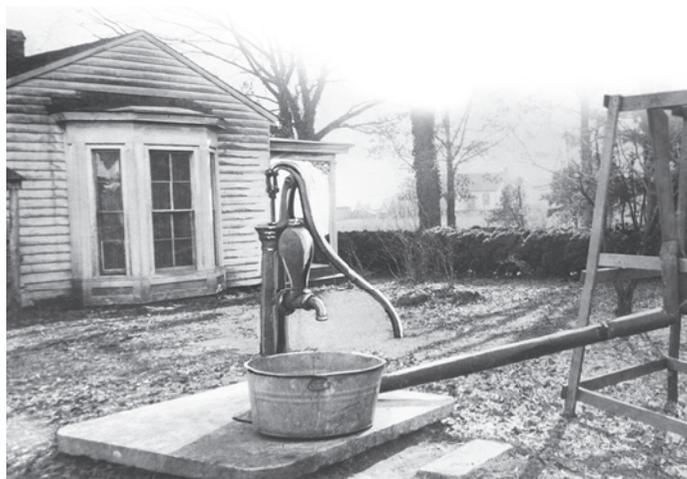


Comprehension Check

What effect did learning to spell *water* have on Helen Keller? What kind of barriers would still hold her back?

We walked down the path to the well-house, attracted by the fragrance of the honeysuckle with which it was covered. Someone was **drawing water** and my teacher placed my hand under the spout. As the cool stream gushed over one hand she spelled into the other the word *water*, first slowly, then rapidly. I stood still, my whole attention fixed upon the motions of her fingers. Suddenly I felt a misty consciousness as of something forgotten—a thrill of returning thought; and somehow the mystery of language was revealed to me. I knew then that “w-a-t-e-r” meant the wonderful cool something that was flowing over my hand. That living word awakened my soul, gave it light, hope, joy, set it free! There were barriers still, it is true, but barriers that could in time be swept away.

_____ drawing water, pumping water from a well



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I left the well-house eager to learn. Everything had a name, and each name gave birth to a new thought. As we returned to the house every object which I touched seemed to quiver with life. That was because I saw everything with the strange, new sight that had come to me. On entering the door I remembered the doll I had broken. I felt my way to the hearth and picked up the pieces. I tried vainly to put them together. Then my eyes filled with tears; for I realized what I had done, and for the first time I felt repentance and sorrow.

I learned a great many new words that day. I do not remember what they all were; but I do know that *mother*, *father*, *sister*, and *teacher* were among them—words that were to make the world blossom for me, “like Aaron’s rod, with flowers.” It would have been difficult to find a happier child than I was as I lay in my crib at the close of that eventful day and lived over the joys it had brought me, and for the first time longed for a new day to come.

vainly, without success

repentance, regret; remorse

Aaron’s rod, the staff carried by Moses’s brother Aaron, believed to have miraculous power

Choose one and complete:

1. Draw a book cover for *The Story of My Life*. Illustrate it with one or more important scenes from the selection you read. Include an introduction to explain what the book is about.
2. Research more about Helen Keller. What are her most important accomplishments? Write a report about your findings.
3. Think about someone you admire because of how he or she faced a challenge in his or her life. Then write a brief play or essay entitled, “You Can’t Stop Me!” about how that person overcame that challenge.

Comprehension Check

Underline how Helen Keller felt as she learned the names of new objects. Why was knowing how to name things so important to her?



Text Structure

Social studies articles often contain details about the lives of individuals who made important contributions or broke barriers. Underline how Helen Keller felt at the end of the day she mentions in this chapter. What guess can you make about why Helen Keller would later become famous?



Comprehension Check

Underline what Helen Keller tried to put back together after she understood her first word. Why did she suddenly feel the need to do that?



READING WRAP-UP

Retell It!

Imagine that you are making a movie about the accomplishments of Helen Keller. Give a summary of the events of her life that will be shown in your movie.

Reader's Response

What can this story teach you about challenges in your own life?

Think About the Skill

How did identifying main ideas and details help you to better understand the article?

EDIT FOR MEANING

Read

You have read an excerpt from *The Story of My Life*. Now read one paragraph from it again.

Chapter 4

The morning after my teacher came she led me into her room and gave me a doll. The little blind children at the Perkins Institution had sent it and Laura Bridgman had dressed it; but I did not know this until afterward. When I had played with it a little while, Miss Sullivan slowly spelled into my hand the word “d-o-l-l.” I was at once interested in this finger play and tried to imitate it. When I finally succeeded in making the letters correctly, I was flushed with childish pleasure and pride. Running downstairs to my mother, I held up my hand and made the letters for doll.



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Fix the Error

Each paragraph below contains the same information as the paragraph you just read. However, each paragraph contains one error. First, find the error. Then fix it by editing the sentence so that the information is correct.

1. Find and fix the error.

Chapter 4

The next morning, my teacher gave me a doll. It was sent by blind children from the Perkins Institution. Laura Bridgman dressed it. I didn't know this until later. I played with it. Then Miss Sullivan spelled "L-A-U-R-A," into my hands. Fascinated by this finger play, I copied it. When I succeeded, I was filled with pleasure and pride. I ran downstairs where my mother was waiting. Holding up my hand, I formed the letters.

2. Find and fix the error.

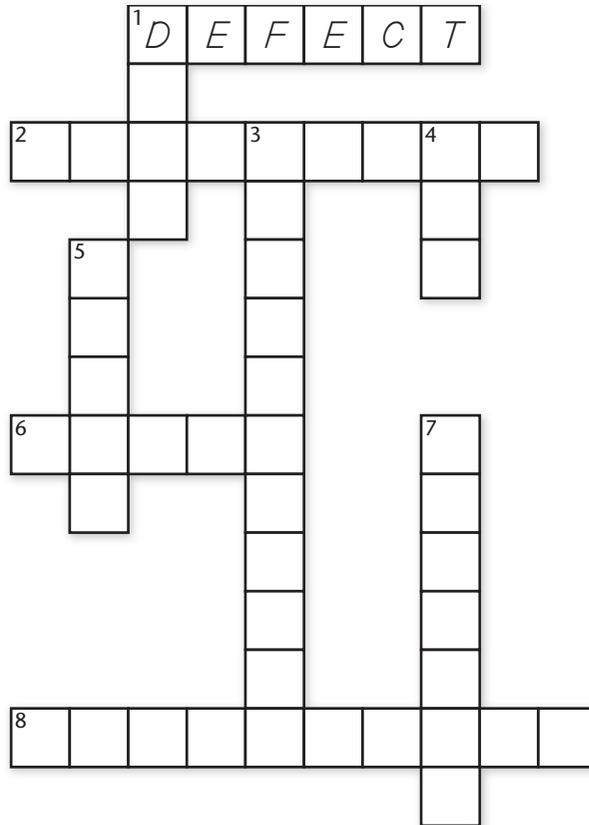
Chapter 4

The next morning, my teacher and I went into her room. Then she gave me a doll that the blind children of the Perkins Institution had sent to me. Later, I was so happy to find out that this doll was dressed by Laura Bridgman. After I played with the doll a little, Miss Sullivan spelled the word "d-o-l-l" into my hand. This finger play bored me and I didn't try to copy it. Feeling pleasure and pride in what I had done, I leaped down the stairs to my mother. I held up my hand and showed her that I could make the letters.

FOCUS ON DETAILS

Crossword Puzzle

To complete this crossword puzzle, you'll need to remember or search for details in the reading. Use the word box to help you. Not all the words in the word box are in the puzzle. Fill in the crossword with answers to the clues below.



- DEFECT
- WELL HOUSE
- BEADS
- WATER
- HONEYSUCKLE
- SIX
- BARRIER
- DOLL
- SEVEN
- BOOK
- CLOTH
- BITTERNESS
- EXCITEMENT

Across

1. Something lacking that is supposed to be there
2. Where water is pumped (two words, no hyphen)
6. The solution for the doll's eyes
8. The emotion Helen felt before her teacher arrived

Down

1. A gift from the children at the Perkins Institution
3. A fragrant flower
4. Helen's age when she met her teacher
5. The first word Helen understood
7. Something that divides

READ FOR FLUENCY

1. Silently read the text below. Make sure you understand the point that each sentence is making.
2. Underline the word or words in each sentence that are most important. When you read, you should say these underlined words with expression.
3. Look again at the punctuation in the paragraph. Remember that when a sentence ends in a period, you should read the words as a statement and take a breath before beginning a new sentence. When you see a comma, you should pause briefly. When you see an exclamation mark, you should sound excited. When you see a question mark, you should read as though you are asking a question.
4. Now read the paragraph below out loud. Pay attention to the important words and punctuation as you read.
5. Write down any words that slowed you down. Practice saying these words out loud.
6. Read the text below out loud two more times. You may want to ask a friend or family member to listen to you and tell you their reactions to your reading.

Chapter 4

Someone was drawing water and my teacher placed my hand under the spout. As the cool stream gushed over one hand she spelled into the other the word *water*, first slowly, then rapidly. I stood still, my whole attention fixed upon the motions of her fingers. Suddenly I felt a misty consciousness as of something forgotten—a thrill of returning thought; and somehow the mystery of language was revealed to me. I knew then that “w-a-t-e-r” meant the wonderful cool something that was flowing over my hand. That living word awakened my soul, gave it light, hope, joy, set it free! There were barriers still, it is true, but barriers that could in time be swept away.

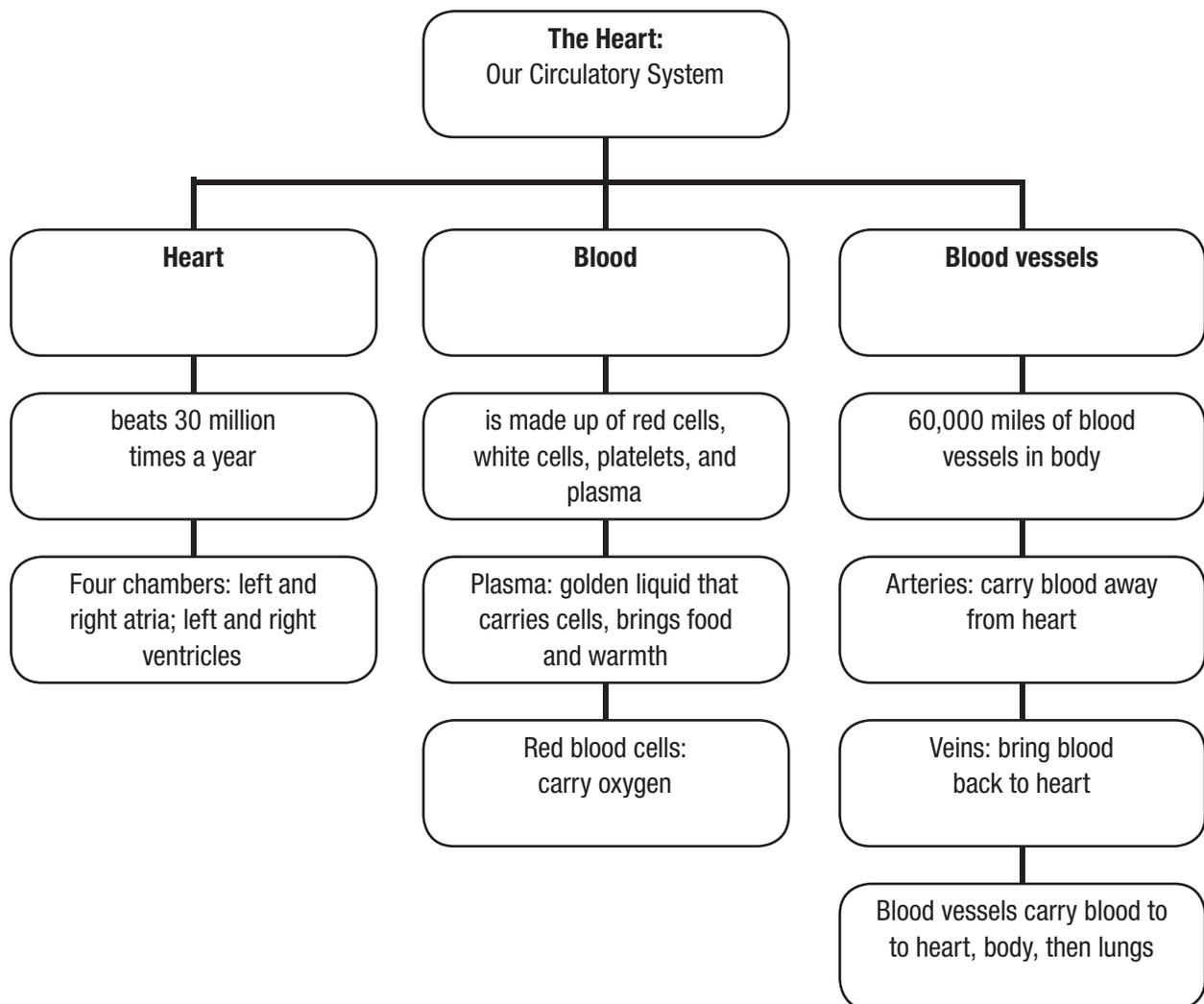
Can we think with the heart?

“The Heart: Our Circulatory System”

SUMMARY

This science article explains how our heart and circulatory system work together. The heart is a powerful pump. It pushes blood to every part of the body through tubes. These tubes are called blood vessels. The article also explains what blood is made of and what the different parts of the blood do. It tells us how the blood takes a 60,000 mile trip through the body. It travels from the heart to every cell in the body, back to the heart, out to the lungs, and back again to the heart.

Visual Summary



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Use What You Know

List three things you know about the heart.

1. _____
2. _____
3. _____

Text Structure

Science article titles often have subheads that explain more about an article.



Underline the system to which the heart belongs. After reading the passage, explain what this system does.

Reading Strategy: Monitor Comprehension

When you monitor comprehension, you ask yourself if you understand what you



read. Underline the sentence that tells when the heart works hardest. Rewrite the statement in your own words.

The Heart: Our Circulatory System

by Seymour Simon

Make a fist. This is about the size of your heart. Sixty to one hundred times every minute your heart muscles squeeze together and push blood around your body through tubes called blood vessels.

Try squeezing a rubber ball with your hand. Squeeze it hard once a second. Your hand will get tired in a minute or two. Yet your heart beats every second of every day. In one year your heart beats more than thirty million times. In an average lifetime a heart will beat over 2,000,000,000 (two thousand million) times.

The heart works hard when we relax or sleep and even harder when we work or exercise. It never stops for rest or repair. The heart is a most incredible pump.



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Every minute, the heart pushes a pulsing stream of blood through a network of blood vessels to every cell in your body. The constantly moving blood brings food and oxygen to each cell, carries away such wastes as carbon dioxide, and serves as an important component in the body's **immune system**. The heart, blood, and web of blood vessels make up your circulatory system.

Your heart is in the middle of your chest, tilted slightly to the left. It weighs only about ten ounces, about as much as one of your sneakers. It is divided into two halves by a thick wall of muscle called the septum, and each side has two hollow chambers, one above the other. Blood enters the heart in the atria, which then pump it down to the lower chambers. Each atrium has a one-way valve that opens when the blood is pushed to the ventricles and then closes so the blood can't flow backward.

immune system, system that protects the body against illnesses

Reading Strategy: Monitor Comprehension

One good strategy for monitoring comprehension is putting what you read in your own words. Underline the sentence that tells what blood brings to every cell in your body. Describe how your heart helps the blood get to those cells in your own words.



Text Structure

Science articles often give readers an overview of important facts. Underline the sentence that explains what makes up the circulatory system. How does this information help to give you an overview of this article?



Comprehension Check

Underline where the heart is located. Why might this fact be important to the circulatory system?



Comprehension Check

Circle the strongest chamber of the heart. Why do you think this chamber needs to be the strongest?



Reading Strategy: Monitor Comprehension

One important way to monitor comprehension is by making sure of the meaning of important words in an article. Underline the color of plasma. Then write your own definition of plasma.



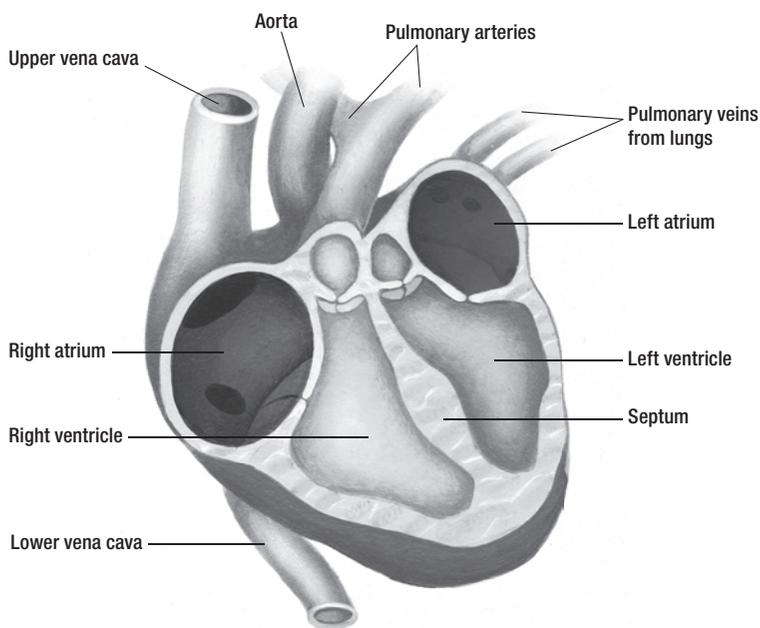
Comprehension Check

Underline the sentence that tells the four elements that make up blood. What important job does plasma perform?



The ventricles, the lower chambers of the heart, are heavier and stronger than the atria. The muscular right ventricle pumps blood into the lungs. The even more muscular left ventricle pumps blood to every cell in the body, from the head to the toes. Each ventricle also has a one-way valve to prevent blood from going backward.

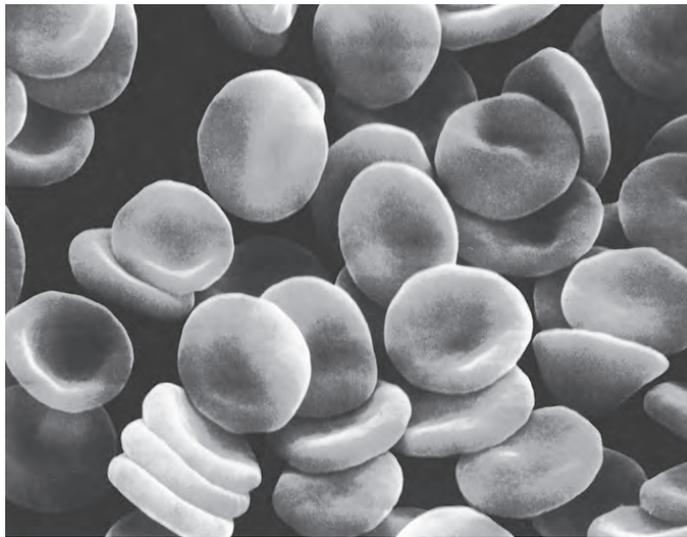
Blood is made up of red cells, white cells, and platelets, all floating in the clear pale gold fluid called plasma that makes up a little more than half of our blood. Plasma is mostly water but also contains many proteins, minerals, and sugars used by the body to build and repair cells. Going all around the body, the plasma carries nutrients from the food that has been digested in the stomach and small intestine to the cells for use as fuel.



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Because plasma is a liquid, it can pass through the walls of small blood vessels right into the cells. Blood plasma also helps to regulate the body's temperature, moving heat from deep within the body to the skin, head, arms, and legs.

Red blood cells are the most common cells in the human body. We each have about twenty-five trillion red blood cells, hundreds of times more blood cells than there are stars in the Milky Way galaxy. Shaped something like a doughnut without a hole, each red blood cell is too tiny to see without a microscope. Yet stacked one upon another in a single column, the red blood cells in our bodies would tower thirty thousand miles high!



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Comprehension Check

Underline the sentence that tells how plasma reaches cells. Because plasma can pass through the walls of cells, how does plasma help keep you comfortable on a cold day?



Reading Strategy: Monitor Comprehension

If all the red blood cells in our body were stacked into a single column, how high would that column be? Underline the answer. How does this image help a reader understand the huge number of red blood cells in the body?



Comprehension Check

Circle the sentence that tells how red blood cells are shaped. Why might the shape of a red blood cell help it to move through the circulatory system?



Comprehension Check

Circle the two main jobs of hemoglobin. Why might getting oxygen from the lungs to the cells and carrying wastes from the cells back to the lungs be very important in keeping the body healthy?



Text Structure

Science articles often tell the sequence, or order, in which things happen. Underline where blood goes after it leaves the heart. What three places does it go next on its double journey?



1. _____
2. _____
3. _____

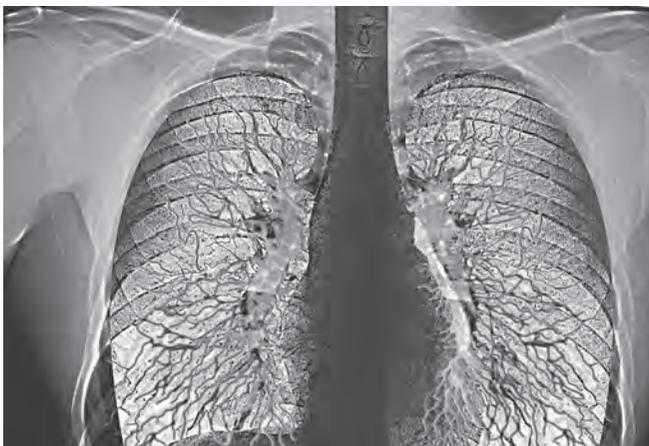
Comprehension Check

Underline where blood goes when it leaves the left ventricle. Why do you think it is necessary that the contraction of the heart is powerful when it sends blood into the aorta?



Red blood cells contain a chemical called hemoglobin, which combines with oxygen in the lungs and gives these blood cells their bright red color. The hemoglobin is the part of the blood that carries oxygen from the lungs to the body's cells and then transports such wastes as carbon dioxide from the cells back to the lungs.

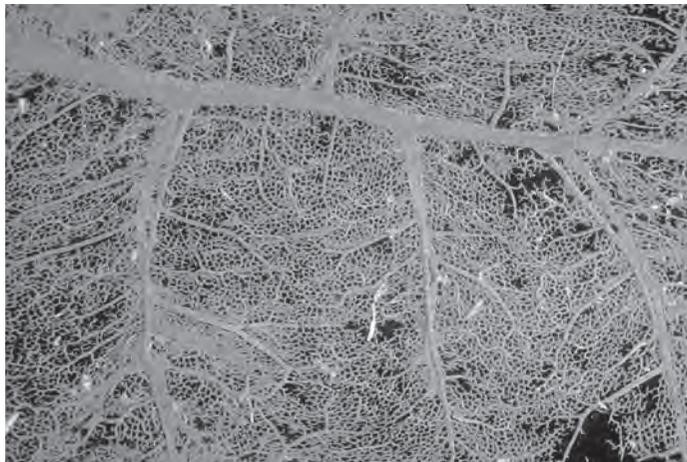
Some one hundred thousand times a day, the muscles of the heart squeeze together. The contraction of the heart is so powerful it could send a jet of water six feet high into the air. As the blood pushes out of the left ventricle of the heart, it smashes with great force into the aorta, the largest blood vessel in the body. This is the beginning of a double journey that will take the blood from the heart to every cell in your body, back to the heart, out to the lungs, and back again to the heart.



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The aorta is an artery, a type of blood vessel that carries blood away from the heart. The walls of an artery have three layers: a slippery, waterproof inner lining; a middle layer of elastic tissue and muscle; and an outer casing. The main arteries are as thick as your thumb. They bulge out with each jet of blood from the heart, then squeeze back to their normal width, pushing the blood forward. As they get farther from the heart, the arteries branch into smaller and smaller vessels called arterioles. Compared to the walls of the larger arteries, those of the arterioles are made mostly of muscle and are less elastic. The arterioles squeeze and relax regularly, forcing blood into the billions of tiny capillaries that fan out all over the body.

elastic, able to stretch and return to its original shape



▲ Blood vessels branching into smaller and smaller vessels (capillaries)

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Comprehension Check

Underline the sentence that tells about the three layers of an artery's wall. Why might these walls have so many layers?



Text Structure

Science articles often define or explain terms. Find and underline the highlighted word on this page. Circle the definition. Then give an example of an object that can be described as *elastic*.



Reading Strategy: Monitor Comprehension

When monitoring comprehension, you understand what something is by comparing it to something you know. Underline how the walls of arteries are different from arterioles. Then compare arteries and arterioles to something you know.



Comprehension Check

Underline the sentence that tells the part of the body where blood flows most quickly.



Why do you think blood flows more quickly in some places than others?

Text Structure

Many science articles support their claims with numbers.



Underline the passage that tells how close each cell is to a capillary. Explain how that closeness helps oxygen enter each cell.

Comprehension Check

Circle how many blood cells can squeeze through capillaries at one time. Why might only one blood cell squeeze through a capillary at one time?



Blood doesn't flow at the same speed in all parts of the body. It spurts from the heart very quickly, but by the time it reaches the capillaries, it has slowed down to a gentle stream. One at a time, red blood cells squeeze through the narrow channels of the capillaries.

In most parts of the body, each cell is only a millionth of an inch from a capillary. Oxygen in the blood passes through the thin walls of the capillaries into the cells. These walls are only one cell thick, thinner than a human hair. Nutrients from food also pass into the cells. At the same time, carbon dioxide and other wastes move out of the cells and into the blood in the capillaries.

After being pushed through the capillaries, blood passes into small blood vessels called venules, which join to form larger blood vessels called veins. The largest veins are about as thick as a pencil. The bluish-looking blood vessels you see beneath your skin are veins.

Veins, which carry blood toward the heart, have muscular walls like arteries, but the walls are much thinner. Whenever we move, the muscles of our body press against the veins, helping the blood to circulate. The larger veins contain one-way valves that are like little parachutes. They flap open and then close to trap the blood and keep it from flowing backward.

Comprehension Check

Underline the sentence that tells why moving your body around helps blood to circulate. Why is exercise important?



Text Structure

A science article presents factual information to readers. Underline the sentence that describes the size of the largest veins. Name two differences between veins and arteries.



Comprehension Check

Underline the sentence that explains what prevents blood from flowing backward in the veins. Why do you think it is important that blood cannot flow backward?



Comprehension Check

Underline words that tell how the speed of blood flow changes as it gets closer to the heart. Why do you think the speed changes?



Text Structure

Some science articles use figures of speech to make a point. A simile is a comparison between two things using the word *like*. Underline the sentence that tells what blood leaving capillaries is compared to in this paragraph. How are those two things alike?



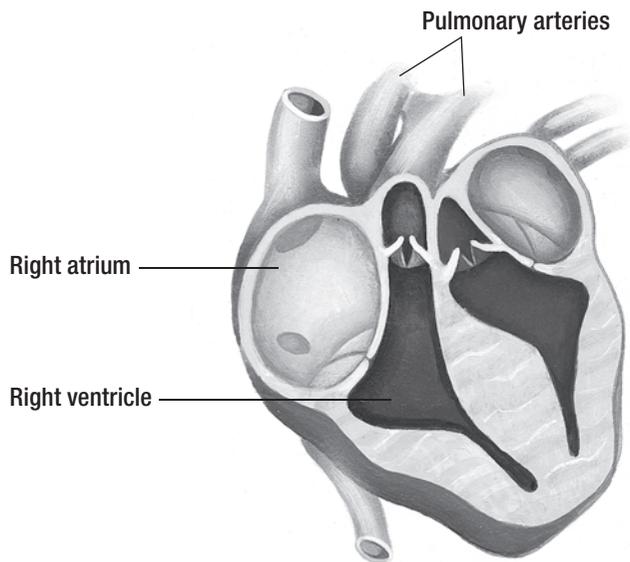
Comprehension Check

Underline the name of the large vein that brings blood from the brain into the heart. If one large artery takes blood away from the heart, why might two large veins be needed to carry it back?



Like the water in streams that joins rivers that return to the sea, blood flows slowly at first after it leaves the capillaries, but then, as veins link together, blood speeds up and comes back to the heart in a steady current. Two large veins feed blood into the heart. The upper vena cava carries blood returning from the brain and the chest, and the lower vena cava carries blood from the stomach and the lower body.

The right atrium receives blood that has just traveled through the body. This blood is dark red, because it has little oxygen. As soon as the blood enters the heart, the muscles of the right atrium squeeze together and push the blood through a one-way valve into the right ventricle. In the next instant, the muscles of the right ventricle squeeze even more powerfully and send a surge of blood into the pulmonary arteries, which lead to the lungs. From there the blood goes into pulmonary arterioles and finally into pulmonary capillaries.



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Comprehension Check

Circle the sentence that tells what blood looks like as it enters the heart. How might a doctor know where blood is coming from or going to just by the color?



Reading Strategy: Monitor Comprehension

To monitor comprehension, it is important to understand words in context. Underline where the pulmonary arterioles are located. How can you figure out what the word *pulmonary* means?



Comprehension Check

Underline the sentence that tells where blood goes from the right ventricle. What do you think might happen if the muscles of the right ventricle did not squeeze powerfully enough?



Comprehension Check

Underline the waste product the lungs take away. What might happen if this waste product is not taken out of the body?



Reading Strategy: Monitor Comprehension

One way to monitor comprehension is to understand the order in which things take place. Underline how oxygen gets into the lungs. List the steps it takes for oxygen to get from the lungs into the blood.



1. _____
2. _____
3. _____

Comprehension Check

Underline the names of the two kinds of circulation. How are pulmonary circulation and systemic circulation important for the health of the body?



The lungs are spongy, filled with hundreds of millions of tiny air-filled sacs called alveoli. Each air sac is surrounded by capillaries. Oxygen that has been breathed into the lungs passes through the walls of the sacs and into the capillaries, where it binds to the hemoglobin in the blood. Carbon dioxide escapes from the blood into the alveoli and is exhaled. The blood returns to the left atrium by way of the pulmonary veins.

* * *

The heart pushes over three million quarts of blood a year through sixty thousand miles of blood vessels in the human body. Our bodies have a double circulation, one to the lungs, called the pulmonary circulation, the other to the rest of the body, called the systemic circulation. Each red blood cell makes the trip out to the body and back to the lungs over one thousand times a day.



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Within each of us flows a river unlike any river on planet Earth. This river of blood flows past every part of the body on an incredible sixty-thousand-mile voyage, enough to travel two and a half times around the world. It is a journey as strange and wonderful as any journey to the stars.

Heart-Healthy Recipe

Guacamole

Guacamole is good for your heart. Avocados, the main ingredient, contain a kind of fat that may lower cholesterol, a substance that can clog your arteries.

This recipe makes about 2 cups.

Ingredients:

- 2 large ripe avocados
 - 1/4 medium onion
 - 1/4 teaspoon salt
 - Optional: 1 jalapeño pepper
1. Finely chop onion and set aside.
 2. Carefully cut each avocado in half. Remove the pits.
 3. With a spoon, scoop out the avocado and place in a bowl.
 4. Using a fork, mash the avocado with onion and salt.
 5. If you like it spicy, add finely chopped jalapeño pepper.

Choose one and complete:

1. Make a diagram that compares the sizes of different blood vessels, such as the aorta, arteries, veins, and venules. Explain why these vessels might be different sizes.
2. Research what you can do to keep your heart healthy. Write a report about your findings.
3. Make up a song about the journey of a blood cell through the body. Where does it go on its trip? Write down the lyrics or record them on a tape recorder.

Comprehension Check

Circle how many times a person's sixty thousand miles of blood vessels could stretch around the world. How could so many miles of blood vessels fit inside one person?



Reading Strategy: Monitor Comprehension

One good strategy for monitoring comprehension is putting what you read in your own words. Summarize the first paragraph on this page in your own words.

Comprehension Check

Circle the ingredients in the Heart-Healthy Recipe. Why is this recipe healthy for your heart?



READING WRAP-UP

Retell It!

Imagine you are giving a presentation to a class of second graders about how the circulatory system works. Which facts that you learned in this article are the most important? What would you most want them to remember?

Reader's Response

Why is it important to understand how your circulatory system works?

Think About the Skill

How did monitoring comprehension help you to better understand this article?

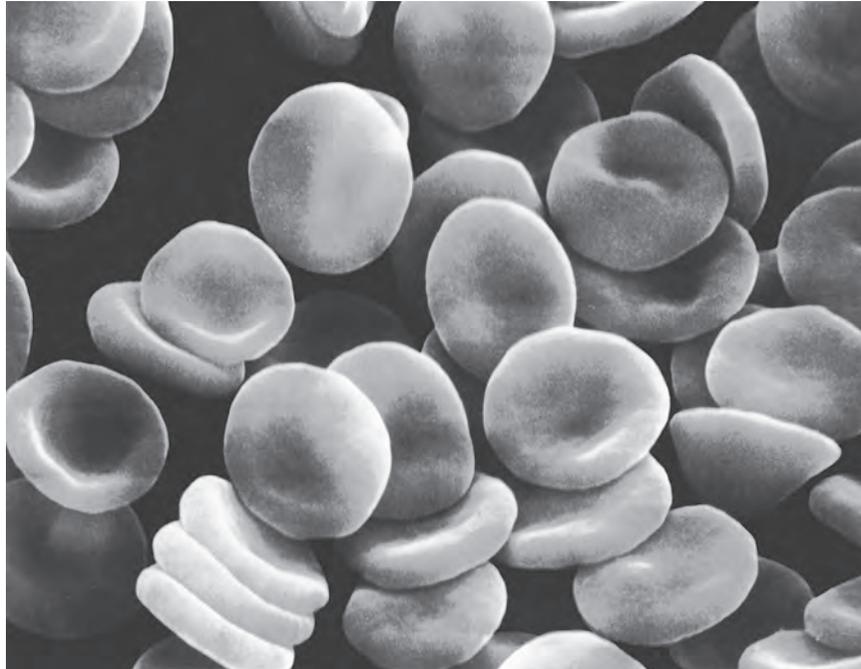
EDIT FOR MEANING

Read

You have read "The Heart: Our Circulatory System." Now read one paragraph from it again.

The Heart: Our Circulatory System

Red blood cells are the most common cells in the human body. We each have about twenty-five trillion red blood cells, hundreds of times more blood cells than there are stars in the Milky Way galaxy. Shaped something like a doughnut without a hole, each red blood cell is too tiny to see without a microscope. Yet stacked one upon another in a single column, the red blood cells in our bodies would tower thirty thousand miles high!



Fix the Error

Each paragraph below contains the same information as the paragraph you just read. However, each paragraph contains one error. First, find the error. Then fix it by editing the sentence so that the information is correct.

1. Find and fix the error.

The Heart: Our Circulatory System

There are many more red blood cells in the human body than any other kind of cell. Every person has about twenty-five trillion red blood cells. This number of red blood cells outnumbers the stars in the Milky Way by hundreds of times. Red blood cells are shaped like square blocks of wood with holes in the center. Stacked on top of each other, the red blood cells would reach thirty thousand miles into the sky!

2. Find and fix the error.

The Heart: Our Circulatory System

What are the most common cells in the human body? If you answered red blood cells, you would be correct. If you could count all the red blood cells, you would total up about twenty-five trillion. There are almost as many red blood cells as there are planets in our solar system. Red blood cells have the shape of doughnuts without a hole. A red blood cell is so tiny that you have to use a microscope to see it. But if you could stack all the red blood cells straight up, you would make a tower about thirty thousand miles high.

FOCUS ON DETAILS

Word Search Puzzle

To complete this word search puzzle, you'll need to remember or search for details in the reading. Look at the clues and circle the answers in the puzzle below. Check off each clue after you've found the answer. Write the word next to the clue.

1. A waste product carried in the blood (2 words) carbon dioxide
2. The top chambers of the heart _____
3. Thick wall of muscle that divides the heart in half _____
4. The lower chambers of the heart _____
5. The largest blood vessel in the body _____
6. Blood vessels that carry blood toward the heart _____
7. The part of blood that carries oxygen from the lungs _____
8. Blood vessels that carry blood away from the heart _____
9. Arteries that lead to the lungs _____
10. Tiny air-filled sacs _____

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

READ FOR FLUENCY

1. Silently read the text below. Make sure you understand the point that each sentence is making.
2. Underline the word or words in each sentence that are most important. When you read, you should say these underlined words with expression.
3. Look again at the punctuation in the paragraphs. Remember that when a sentence ends in a period, you should read the words as a statement and take a breath before beginning a new sentence. When you see a comma, you should pause briefly. When you see an exclamation mark, you should sound excited. When you see a question mark, you should read as though you are asking a question.
4. Now read the paragraphs below out loud. Pay attention to the important words and punctuation as you read.
5. Write down any words that slowed you down. Practice saying these words out loud.
6. Read the text below out loud two more times. You may want to ask a friend or family member to listen to you and tell you their reactions to your reading.

The Heart: Our Circulatory System

Red blood cells contain a chemical called hemoglobin, which combines with oxygen in the lungs and gives these blood cells their bright red color. The hemoglobin is the part of the blood that carries oxygen from the lungs to the body's cells and then transports such wastes as carbon dioxide from the cells back to the lungs.

Some one hundred thousand times a day, the muscles of the heart squeeze together. The contraction of the heart is so powerful it could send a jet of water six feet high into the air. As the blood pushes out of the left ventricle of the heart, it smashes with great force into the aorta, the largest blood vessel in the body. This is the beginning of a double journey that will take the blood from the heart to every cell in your body, back to the heart, out to the lungs, and back again to the heart.

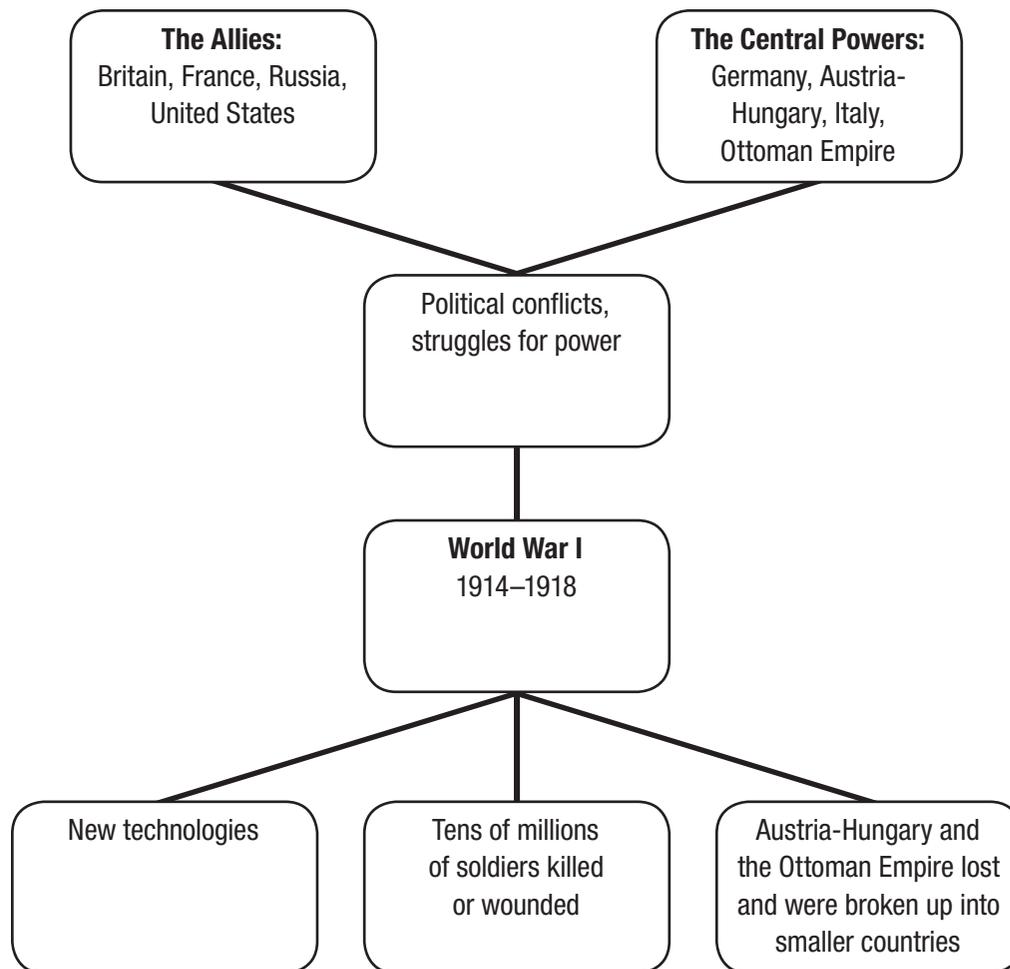
What can we learn from times of war?

“World War I”

SUMMARY

From 1914 to 1918, Europe was at war. Britain, France, Russia, Italy, and the United States fought against Germany, Austria-Hungary, and the Ottoman Empire. Over 65 million soldiers fought in the war. More than half were killed or wounded. This social studies article explains the causes of the war and how the war was fought. It also describes the new technology that was effective in killing so many people. The article explains how the map of Europe changed after the war. Germany, Austria-Hungary, and the Ottoman Empire were forced to break up into smaller countries and give up land.

Visual Summary



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Use What You Know

List three things you know about World War I.

1. _____
2. _____
3. _____

Text Structure

A social studies article provides information about a subject related to history, geography, or current events. Circle the subject of this article. What area of social studies does this article relate to?



Reading Strategy: Identify Cause and Effect

A cause is a reason something happens; an effect is the result. Underline the sentence that tells how countries in Europe were getting along at the beginning of the twentieth century. What caused the tension among these countries?



World War I

Background to the Conflict

At the beginning of the twentieth century, there was tension among countries in Europe. One reason for this tension was the shifting balance of power. Each country worked hard to ensure that no other country had more power than it did. Britain, France, and Germany were competing against one another for overseas trade. The British were alarmed that the Germans were building larger, more modern factories. The Germans were anxious that France was gaining power and wealth in the form of colonies. Germany wanted more land and resources and greater military strength. In addition, Russia and Austria-Hungary were struggling for power in the Balkan states in southeastern Europe. Because of these tensions, six countries formed two powerful alliances:

- Britain, France, Russia
- Germany, Austria-Hungary, Italy

By the middle of 1914, Europe was close to war.

The Assassination

In 1914, Austria-Hungary ruled Bosnia and Herzegovina, a province in the Balkans in southeastern Europe. Bosnia and Herzegovina and Serbia, a country in the same area, were at one time both part of the **Ottoman Empire**. Serbia won its independence, but Bosnia and Herzegovina was made part of Austria-Hungary. Because many Serbs lived in Bosnia and Herzegovina, Serbia wanted control over the province. This rivalry caused tension between Serbia and Austria-Hungary.

Archduke Franz Ferdinand, the nephew of the emperor of Austria-Hungary and heir to the throne, visited Sarajevo, the capital of Bosnia and Herzegovina. The Serbs living in the province were angered by the archduke's visit. On June 28, 1914, a Bosnian student, supported by a group of Serbian **terrorists**, assassinated him. Austria-Hungary declared war on Serbia on July 28. The war quickly spread as other countries defended their allies. By mid-August 1914, most of Europe was at war.

Ottoman Empire, empire based in Turkey, which included large parts of Eastern Europe, Asia, and North Africa. It began about 1300 and ended in 1922.

terrorists, people who use violence against ordinary people to obtain political demands

Text Structure

Social studies articles often have highlighted vocabulary terms. Their definitions appear at the bottom of the page. Draw a box around the term *Ottoman Empire* and place a check mark next to the definition. Then choose another word in the text that you have trouble understanding. Look up the word in a dictionary. Write the definition.



Comprehension Check

Underline what the passage says about how the Serbs in Bosnia and Herzegovina felt about the archduke's visit. Why were the Serbs angry about the visit?



Reading Strategy: Identify Cause and Effect

Circle the sentence that explains how terrorists responded to the archduke's visit. What did the terrorists do?



Comprehension Check

Underline how long it took for many countries to join the war. Why do you think the war involved so many other countries so quickly?



Text Structure

Some social studies articles organize information in charts. Draw boxes around the headings in this chart. How does the chart help you understand the information in the article?



Comprehension Check

Circle the section of the chart that shows which group the colonies in Africa, Asia, the Pacific, and the Caribbean joined. Why do you think the French and British colonies chose to join the Allies?



Within a year, many countries had joined in the war. This chart shows how the countries were divided.

Allied Nations ("The Allies")		Central Powers (Fighting against the Allies)
Britain	Australia	Germany
France	New Zealand	Austria-Hungary
Russia	Canada	Bulgaria
Belgium	South Africa	Ottoman Empire (Turkey, etc.)
Portugal	Soldiers from	Italy (changed sides and joined the Allies in 1915)
Greece	French and	
Serbia	British	
Montenegro	colonies in	
Romania	Africa, Asia, the Pacific, and the Caribbean	



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The First Modern War

World War I is often called the first modern war because new technology made the weapons deadlier than ever. In addition, factories could produce larger quantities of weapons. Here are some of the modern weapons used during the war:

Machine guns These guns, invented by an American, shot many bullets very quickly.

Submarines These underwater ships shot torpedoes—bombs that are fired underwater.

Poison gas and gas masks Poison gas caused choking, blindness, blisters, and sometimes death. Gas masks protected soldiers from poison gas.

Tanks These combat vehicles carried two machine guns apiece and had metal belts over their wheels to help them climb over obstacles five feet high. They were covered with heavy armor, so they were difficult to destroy.

Periscope rifles Two mirrors were attached to a rifle, so that when lifted over the top of the trenches, the soldier could see the enemy.

Fighter airplanes These small planes were armed with machine guns.

Life in the Trenches

Soldiers dug trenches for protection from the enemy. The trenches were muddy after it rained, so soldiers put wooden boards—called duckboards—on the ground to help keep their feet dry. The trenches were stifling in the summer and bitterly cold in the winter. Rats and lice spread diseases such as a brand-new illness called trench fever.

blisters, bumps on the skin containing clear liquid, often caused by a burn

obstacles, objects that block a person's way

armor, a strong metal layer or shell that protects

stifling, very hot and difficult to breathe in

Reading Strategy: Identify Cause and Effect

Underline the passage that explains why World War I is considered the first modern war. What effect do you think technology had on the war?



Text Structure

Social studies articles sometimes include lists. Listing items in boldface makes them stand out. Draw boxes around the items in the list on this page. What do all these items have in common?



Comprehension Check

Circle what the passage says about why soldiers dug trenches. What were two problems with staying in the trenches?



Comprehension Check

Underline the text that tells when the fighting usually took place. What did soldiers do in the daytime?



Text Structure

A social studies article presents factual information. Often the article has headings that help a reader know when the topic changes. Draw a box around the heading on this page. What topic will this section cover?



Reading Strategy: Identify Cause and Effect

Circle the sentence that tells why the United States entered the war. Why would the sinking of ships have caused the United States to enter the war?



Soldiers spent about a week at a time in the trenches. Then they went to a rest area where they could wash and change clothes before returning to their underground posts. Most of the fighting was at night, so soldiers often slept during the day. They wrote letters home or kept diaries. Many soldiers were homesick. They had a hard life in the trenches.

The United States Enters the War

From the beginning of the war, President Woodrow Wilson wanted the United States to stay neutral. People in the United States were divided about the war. Many U.S. citizens were from European countries, so there was support for both sides. In 1915, Germany announced it would attack all neutral ships headed to Britain. In 1917, Germany announced **unrestricted** submarine warfare.

This meant that Germany's submarines would attack all foreign cargo ships to stop supplies from getting to Britain. When Germany sank some U.S. ships, President Wilson declared war on Germany and joined the Allies.

unrestricted, not limited by anyone or anything

Germany Surrenders

By 1918, the Allies had stopped supplies from going to Germany, where people were starving because there was so little food. By October, the Allies had defeated Bulgaria and Turkey. In November, Germany asked the Allies for an armistice. They signed an armistice on November 11, 1918. After more than four years, the war finally ended. Germany surrendered and a peace treaty was signed on June 28, 1919.

After the War

With the end of World War I, the map of Europe changed. Some countries, such as Germany, had to give up land. Other countries, such as Greece, gained land. Austria-Hungary and the Ottoman Empire were broken up into separate countries.

More than 65 million soldiers fought in the war, of whom more than half were killed or injured—8 million killed, 2 million dead of illness and diseases, 21 million wounded, and nearly 8 million taken prisoner or missing. More than 6 million civilians died, too. People hoped it would be the “war to end all wars,” but it wasn’t. World War II followed only twenty-one years later.

Country	Soldiers Killed
Germany	1,773,700
Russia	1,700,000
France	1,357,800
Austria-Hungary	1,200,000
British Empire	908,371
United States	116,516
Serbia	45,000

Comprehension Check

Underline the sentence that tells what many people called World War I. Why did this later become an inaccurate way to refer to the war?



Text Structure

A social studies article often includes charts that compare information. Circle the chart on this page. What information does it compare?



Choose one and complete:

1. Use a current map to find many of the countries mentioned in this article. Then look at a historical map that shows the borders of European countries before World War I. Write a paragraph that tells how the borders changed.
2. Make a poster that shows some of the new weapons introduced during World War I. Write a few sentences about each one.
3. Imagine you are a soldier in the trenches in World War I. Write a letter to a friend or family member to describe the experience and your feelings.

READING WRAP-UP

Retell It!

Explain in your own words the events that led up to the start of World War I.

Reader's Response

What did you find especially interesting about this article? Why?

Think About the Skill

How did identifying causes and effects help you to better understand the article?

EDIT FOR MEANING

Read

You have read "World War I." Now read one paragraph from it again.

Life in the Trenches

Soldiers spent about a week at a time in the trenches. Then they went to a rest area where they could wash and change clothes before returning to their underground posts. Most of the fighting was at night, so soldiers often slept during the day. They wrote letters home or kept diaries. Many soldiers were homesick. They had a hard life in the trenches.



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Fix The Error

Each paragraph below contains the same information as the paragraph you just read. However, each paragraph contains one error. First, find the error. Then fix it by editing the sentence so that the information is correct.

1. Find and fix the error.

Life in the Trenches

Soldiers stayed in the trenches for about a month at a time. Then they went to an area to rest. There they washed and changed their clothes before returning to the trenches. Most of the fighting was during darkness, so soldiers often took naps during daylight. They wrote to their families or kept diaries. Many soldiers wished they were home and away from the war. Life was not easy in the trenches.

2. Find and fix the error.

Life in the Trenches

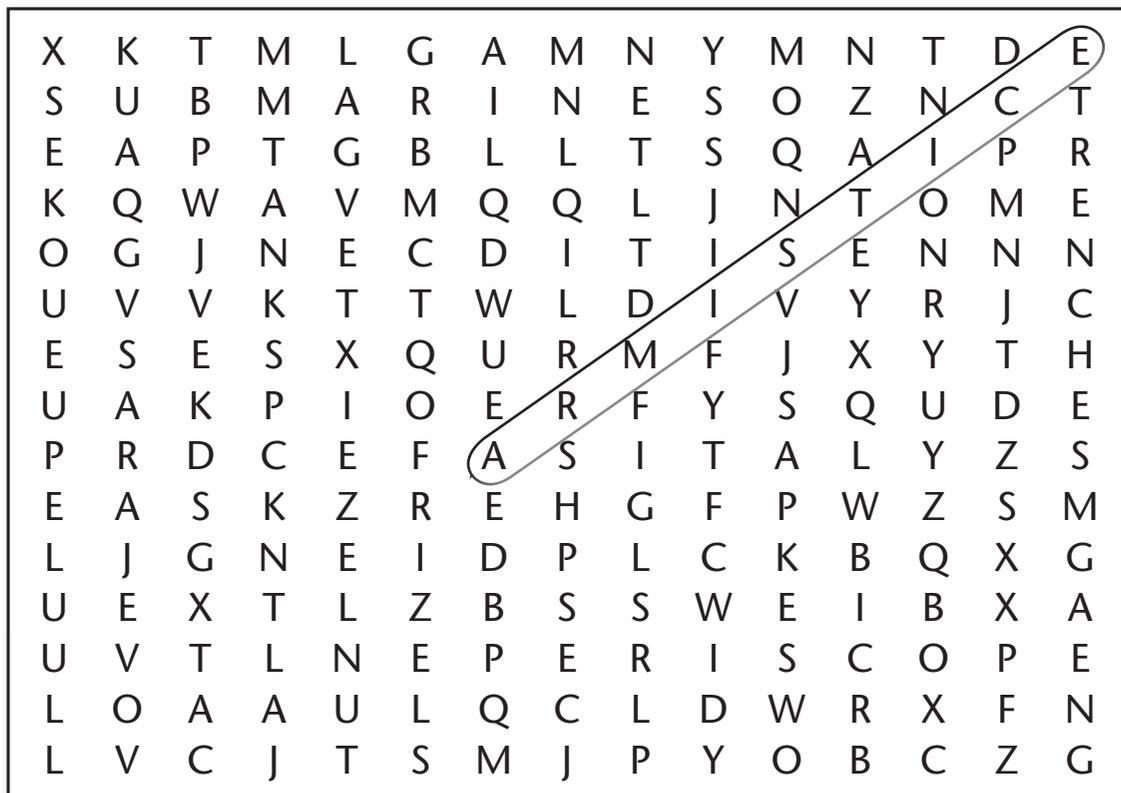
Soldiers were in the trenches for about a week at a time. Then they went to a rest area where they could change their clothes and wash up before going back to their posts in the trenches. Most of the fighting was during the day, so soldiers were able to sleep peacefully at night. Some soldiers wrote their thoughts in diaries. Others wrote letters to their families or friends. Many soldiers wanted to be safe at home. Life in the trenches was difficult.

FOCUS ON DETAILS

Word Search Puzzle

To complete this word search puzzle, you'll need to remember or search for details in the reading. Look at the clues and circle the answers in the puzzle below. Check off each clue after you've found the answer. Write the word next to its clue.

1. What the Germans asked the Allies for in 1918 Armistice
2. The capital of Bosnia and Herzegovina _____
3. Country that changed sides in 1915 _____
4. Group of countries that included Britain and France _____
5. He was assassinated in Sarajevo _____
6. Underwater ships that shot torpedoes _____
7. Combat vehicles covered with heavy armor _____
8. These were dug by soldiers for protection from the enemy _____
9. President who wanted the United States to stay neutral _____
10. Made of mirrors and used to see over the tops of trenches _____



READ FOR FLUENCY

1. Silently read the text below. Make sure you understand the point that each sentence is making.
2. Underline the word or words in each sentence that are most important. When you read, you should say these underlined words with expression.
3. Look again at the punctuation in the paragraphs. Remember that when a sentence ends in a period, you should read the words as a statement and take a breath before beginning a new sentence. When you see a comma, you should pause briefly. When you see an exclamation mark, you should sound excited. When you see a question mark, you should read as though you are asking a question.
4. Now read the paragraphs below out loud. Pay attention to the important words and punctuation as you read.
5. Write down any words that slowed you down. Practice saying these words out loud.
6. Read the text below out loud two more times. You may want to ask a friend or family member to listen to you and tell you their reactions to your reading.

The Assassination

Archduke Franz Ferdinand, the nephew of the emperor of Austria-Hungary and heir to the throne, visited Sarajevo, the capital of Bosnia and Herzegovina. The Serbs living in the province were angered by the archduke's visit. On June 28, 1914, a Bosnian student, supported by a group of Serbian terrorists, assassinated him. Austria-Hungary declared war on Serbia on July 28. The war quickly spread as other countries defended their allies. By mid-August 1914, most of Europe was at war.

What can we learn from times of war?

“In the Name of His Father”

SUMMARY

During World War II, the Nazi government of Germany tried to kill the Jewish people of Europe. German soldiers forced Jews to live in places called concentration camps. There they lived in terrible conditions. Many people were killed. This social studies article tells the story of a Japanese diplomat named Chiune Sugihara. His government supported the Nazis. But Sugihara helped over 6,000 Jews escape to safe countries. After the war, people asked Sugihara why he risked his life to help strangers. Sugihara answered that doing what was right was more important than his own safety.

Visual Summary

Who?	Chiune Sugihara
What?	He helped thousands of Jews escape the Nazis.
Where?	Lithuania
When?	During World War II
Why?	Sugihara helped Jewish refugees, because if he did not, they would be killed.
How?	Sugihara helped the refugees by writing exit visas for them.

Use What You Know

List three things you know about World War II.

1. _____
2. _____
3. _____

Text Structure

A social studies article often starts with an introduction that tells what the article will be about. Circle the introduction on this page. What do you expect to read about?



Reading Strategy: Draw Conclusions

A writer does not always give his or her point of view. Sometimes, the writer expects the reader to draw a conclusion based on the facts presented. Underline the passage that tells how Chiune Sugihara's government felt about what he was doing. Why do you think he continued to write exit visas for Polish Jews?



In the Name of His Father

by Fred Tasker

The Miami Herald
January 24, 2000

It's with a certain awkwardness that Hiroki Sugihara, 63, travels the world to lecture about the heroic acts of his late father during World War II. It violates a cultural sense of modesty. "For a Japanese, it sounds like you are showing off," he says.

Yet he must. Too few in the world are aware of that heroism, he believes. Too few know what his father, Chiune Sugihara, "the Japanese Schindler," did in 1940 when, as a mid-ranking diplomat in Lithuania, against the orders of his own government, he wrote 6,000 exit visas to get desperate Polish Jews out of the way of the approaching Nazi Holocaust.

Schindler, German man who saved the lives of 1,200 Jews during World War II

“Thanks to him, I’m alive,” says George Borenstein, then a 36-year-old Polish Army soldier, now 86, retired in Delray Beach, Florida. Borenstein had fled to Lithuania after the Germans defeated the Polish Army. And he knew the German Army was killing Jews and the Soviet Army was sending such refugees to Siberia. “They were starving in Siberia. I lost a brother there. But he [Sugihara] got me a visa. I got out.”

Ousted from the foreign ministry after the war, Sugihara lived in obscurity for decades, selling light bulbs, then importing oil, until an Israeli diplomat in Tokyo, another of the refugees he saved, sought him out and set about making things right.

retired, no longer working
 obscurity, the state of not being known



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Text Structure

A social studies article often contains quotations. Circle the quotations on this page. How do the quotations add to your understanding of this article?



Comprehension Check

Underline what Sugihara did for Borenstein. Why do you think having a visa was so important to Borenstein?



Reading Strategy: Draw Conclusions

Draw a box around the passage that tells what Sugihara did after the war. What do you think the author means when he says the Israeli diplomat set about making things right for Sugihara?



Comprehension Check

Draw a box around the government that has honored Chiune Sugihara. Who else have they honored in this way?



Reading Strategy: Draw Conclusions

Circle how old Hiroki Sugihara was when his father helped the refugees. Why do you think Hiroki remembers this event so well?



Text Structure

Social studies articles often have highlighted vocabulary terms. Their definitions appear at the bottom of the page. Underline the highlighted term on this page. Then rewrite the sentence in your own words.



Now he has been honored by the Israeli government as one of “the righteous among nations”—non-Jews who helped save Jews during the Holocaust. It’s the same honor given German businessman Oskar Schindler and Swedish diplomat Raoul Wallenberg, whose efforts to save Jews from death at the hands of the Nazis are far better known.

Sugihara has been the subject of an Oscar-winning documentary, and on Feb. 6, his family will be given a heroism award from The Immortal Chaplains’ Foundation.

Finally his story is being told.

Hiroki Sugihara remembers it well, even though he was not quite 4 when it happened. It was 1940. German troops invading Poland had expelled that country’s Jews, and hundreds were huddled in the square in Kaunas, Lithuania, where his father’s consulate stood, seeking permission to flee to any safe country that would take them. And the United States and Great Britain were **balking at** accepting new refugees.

balking at, refusing to

“I asked my father why I couldn’t go outside to play as usual,” Sugihara says. “He told me it might be dangerous. The refugees were very agitated. I asked him what would happen to them, and he said they might be killed. I was concerned for the children, because some of them were my age. So I said, ‘Why can’t you help them?’ And he said, ‘I might.’”

For seven fevered weeks that July and August, the elder Sugihara worked 20 hours a day, writing an estimated 6,000 to 10,000 exit visas for the refugees. Three times he wired his government for permission to write more; three times he was told to stop. He kept writing.

agitated, very nervous and upset



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Comprehension Check

Underline the passage that tells why Sugihara wouldn’t let his son go outside to play. Why was Sugihara’s son concerned for the refugee children?



Text Structure

Circle the highlighted vocabulary word on this page. Why were the refugees agitated?



Reading Strategy: Draw Conclusions

Circle the paragraph that tells what Sugihara did to help the refugees. Based on Sugihara’s actions, what conclusions can you draw about his personality?



Reading Strategy: Draw Conclusions

Draw a box around the quotation in the first paragraph. Why would the refugees never forget Sugihara?



Comprehension Check

Underline the passage that tells what the refugees did with the visas. Why do you think it was important to have documentation?



Text Structure

Circle the highlighted vocabulary term on this page. Read the definition. Then explain what the term means in your own words.



Even as he and his family boarded the train to leave Lithuania for Berlin on his government's orders, Sugihara kept writing visas, throwing them out the window to refugees running alongside. "We will never forget you," one of them called, according to one book on Sugihara's exploits.

With documentation, the refugees were able to travel across Russia, take the Siberian Express railway to Vladivostok and eventually reach Japan or other countries. There they were treated well during the war. Despite its alliance with Nazi Germany, [Japan] had little history of **anti-Semitism**.

"When there were shortages, the [Japanese] people even shared their food with them," says Anne Akabori, the Sacramento librarian who, in 1996, translated into English the book *Visas for 6,000 Lives*, written by Sugihara's wife, Yukiko.

anti-Semitism, hatred of Jewish people



As the war ended, Sugihara, then posted in Romania, was captured by the Soviets and sent to a concentration camp with his wife and son for 18 months. Arriving back in Japan in 1947, he approached the country's postwar foreign ministry, hoping for a sympathetic reception and perhaps even a new assignment. Instead, they demanded his **resignation**.

The world knew little of [Sugihara] until 1968, when Joshua Nisri, economic attaché to the Israeli Embassy in Tokyo, sought him out. Nisri was a Polish teen in 1940, one of the refugees Sugihara saved. Since then, Sugihara's story has been slowly **seeping into the world consciousness**.

In 1985, just a year before Sugihara died, the Israeli government honored him as "A Man of Justice of the Peoples of the World."

resignation, leaving his job permanently **seeping into the world consciousness**, becoming known to the world

Comprehension Check

Underline the sentence that tells what the Soviets did to Sugihara. What do you know about concentration camps?



Reading Strategy: Draw Conclusions

Circle what happened when Sugihara contacted the foreign ministry in Japan. Why do you think the foreign ministry demanded his resignation?



Text Structure

Social studies articles often include dates. Circle all the dates on this page. How many years passed between when Sugihara helped the refugees and when the world first learned about him?



Reading Strategy: Draw Conclusions

Underline the passage that tells what happened after the fall of communism. What happened in Lithuania in 1991?



Text Structure

Draw a box around the highlighted vocabulary term on this page. Read the definition. Then use the word in a new sentence.



Comprehension Check

Circle the title of Levine's book. Do you think this is a good title for a book about Chiune Sugihara? Why or why not?



His story spread further after the fall of communism freed Lithuania and other Eastern European countries to express their true feelings. It was only in 1991, during a celebration of Lithuanian independence, that a **monument** was erected and a street named after Sugihara in Kaunas.

In 1996, Boston University religion Professor Hillel Levine published a book, *In Search of Sugihara* (The Free Press, \$25), calling Sugihara's exploits braver even than those of Wallenberg and Schindler, both of whom also rescued thousands of Jews during the war.

monument, large structure built to remind people of an important event or to honor a famous person

Wallenberg was sent to Hungary by the Swedish government with its specific backing, Levine argued; Schindler had at least a partial economic motive, using the Jews he saved to work in his factories. Sugihara acted purely on principle, Levine said. Sugihara's story became better known in the United States after 1994, when the movie *Schindler's List* raised the world's interest in those who had helped Jewish refugees during the war. In 1997, a documentary about Sugihara, *Visas and Virtue*, by Chris Tashima and Chris Donahue, won an Oscar in the Live Action Short Category.

More recently, Sugihara was honored by the Holocaust Oral History Project and the Wiesenthal Museum of Tolerance in Los Angeles at a ceremony attended by *Schindler's List* filmmaker Stephen Spielberg.

Oscar, film awards granted by the Academy of Motion Picture Arts and Sciences

Reading Strategy: Draw Conclusions

Circle the passage in which Levine contrasts Sugihara's motives with Wallenberg's and Schindler's. What point is Levine trying to make?



Text Structure

Social studies articles often include the titles of movies, books, or other projects. Circle the title of the documentary about Sugihara. Explain the significance of the title.



Comprehension Check

Underline the names of two organizations that have honored Sugihara. Why do you think it is important to publicly honor people like Sugihara?



Text Structure

Circle the highlighted vocabulary word in the first paragraph. Read the definition. Does this word describe Sugihara after he began helping refugees? Why or why not?



Reading Strategy: Draw Conclusions

Draw a box around the passage that tells how survivors remember Sugihara. From what survivors say about Sugihara, what conclusions can you draw about his character?



Comprehension Check

Underline the sentence that gives a definition of *bushido*. Why do you think the idea of *bushido* might inspire someone to help others?



One of the first questions the younger Sugihara is asked during his lectures is why an **obedient** Japanese diplomat would take such a risk to himself and his family to help strangers.

Levine's book says survivors remember him as "the angel," a kind man who "treated them with respect, smiled at them and offered a cup of tea."

Says Akabori, the Sacramento librarian: "I believe it was deeply rooted in the Japanese spirit called 'bushido,' which means reaching the highest level of physical, mental, and spiritual **attainment**. When you think something is right you do it, without worrying about yourself." After all, she says, Sugihara's family is descended from Samurai, the ancient warrior **caste** to whom honor came before money or personal safety.

obedient, rule-following
attainment, something you have succeeded in getting
caste, group of people who have a particular position in society

The younger Sugihara credits that explanation: “When he was growing up, he was taught that code. You have to sacrifice yourself to help somebody else.”

The elder Sugihara, in a speech in 1985, a year before he died, put it more simply: “It is the kind of sentiment anyone would have when he actually sees the refugees face to face, begging with tears in their eyes.”

“He just cannot help but sympathize with them.”

Choose one and complete:

1. Use the Internet to research Chiune Sugihara. Write a paragraph about any additional information you find.
2. Suppose Sugihara had been arrested for his actions during the war. Write a speech defending him.
3. Use a map of Europe and Asia to locate the countries mentioned in this article.

**Reading Strategy:
Draw Conclusions**

Underline the sentence that describes the code Chiune Sugihara was taught when he was growing up. How did this code relate to what he did later in life?



Text Structure

Social studies articles often include dates. Draw a box around the date on this page. What happened that year?



Comprehension Check

Underline the sentence that explains why Sugihara felt such a strong loyalty to the refugees. Do you think many people felt the same way? Why or why not?



READING WRAP-UP

Retell It!

Imagine you are Chiune Sugihara's son, Hiroki. What would you say to an audience about your father's heroic acts during the war?

Reader's Response

The article describes Sugihara's selflessness and bravery. Describe another person you know of who demonstrates these qualities.

Think About the Skill

How did drawing conclusions help you to better understand the article?

EDIT FOR MEANING

Read

You have read "In the Name of His Father." Now read one paragraph from it again.

In the Name of His Father

Hiroki Sugihara remembers it well, even though he was not quite 4 when it happened. It was 1940. German troops invading Poland had expelled that country's Jews, and hundreds were huddled in the square in Kaunas, Lithuania, where his father's consulate stood, seeking permission to flee to any safe country that would take them. And the United States and Great Britain were balking at accepting new refugees.



Fix The Error

Each paragraph below contains the same information as the paragraph you just read. However, each paragraph contains one error. First, find the error. Then fix it by editing the sentence so that the information is correct.

1. Find and fix the error.

In the Name of His Father

Hiroki Sugihara easily remembers the events, even though he was not quite 4 years old when they happened. It was 1940. German troops had invaded Poland and forced Polish Jews to leave their own country. Hundreds of Jews stood in the square in Kaunas, Lithuania, where Hiroki's father's consulate was located. They wanted permission to travel to any country that would provide them safety. And the United States and Great Britain were delighted to accept the new refugees.

2. Find and fix the error.

In the Name of His Father

Though he was not quite 4 when it happened, Hiroki Sugihara remembers everything very well. The year was 1940. German troops invading Poland had expelled that country's Jews. Hundreds of Jews had volunteered to leave Poland. Now they were huddled in the square in Kaunas, Lithuania, where his father's consulate stood. The refugees were asking to leave Lithuania and go to any country that would accept them and give them safety. Unfortunately, the United States and Great Britain did not want to take in new refugees.

FOCUS ON DETAILS

Mystery Word Puzzle

To complete this mystery word puzzle, you'll need to remember or search for details in the reading. Use the clues to help you unscramble each of the words. Write the words in the boxes. The numbered letters will form the mystery word.

1. The name of Sugihara's wife

IOKYKU

Y	O	K	I	K	O
---	---	---	---	---	---

2. The nationality of Chiune Sugihara

JENSAPAE

--	--	--	--	--	--	--	--

7

3. The name for the Nazi campaign to massacre to all Jews in Europe

LOCTUHSOA

--	--	--	--	--	--	--	--	--

1 9

4. Japanese idea of reaching the highest physical, mental, and spiritual level

SUBOHDI

--	--	--	--	--	--	--

4

5. The place where the Soviet Army sent many refugees

BAERISI

--	--	--	--	--	--	--

2 6

6. A type of film based on real-life events (one was made about Sugihara)

TEMRUACYNDO

--	--	--	--	--	--	--	--	--	--

3

7. The city where Sugihara's consulate was located

KUNSAA

--	--	--	--	--	--

5

8. A document that allows a person to travel to a foreign country

ASIV

--	--	--	--

8

The place Sugihara's family located during the war

--	--	--	--	--	--	--	--	--

1 2 3 4 5 6 7 8 9

READ FOR FLUENCY

1. Silently read the text below. Make sure you understand the point that each sentence is making.
2. Underline the word or words in each sentence that are most important. When you read, you should say these underlined words with expression.
3. Look again at the punctuation in the paragraphs. Remember that when a sentence ends in a period, you should read the words as a statement and take a breath before beginning a new sentence. When you see a comma, you should pause briefly. When you see an exclamation mark, you should sound excited. When you see a question mark, you should read as though you are asking a question.
4. Now read the paragraphs below out loud. Pay attention to the important words and punctuation as you read.
5. Write down any words that slowed you down. Practice saying these words out loud.
6. Read the text below out loud two more times. You may want to ask a friend or family member to listen to you and tell you their reactions to your reading.

In the Name of His Father

“I asked my father why I couldn’t go outside to play as usual,” Sugihara says. “He told me it might be dangerous. The refugees were very agitated. I asked him what would happen to them, and he said they might be killed. I was concerned for the children, because some of them were my age. So I said, ‘Why can’t you help them?’ And he said, ‘I might.’”

For seven fevered weeks that July and August, the elder Sugihara worked 20 hours a day, writing an estimated 6,000 to 10,000 exit visas for the refugees. Three times he wired his government for permission to write more; three times he was told to stop. He kept writing.

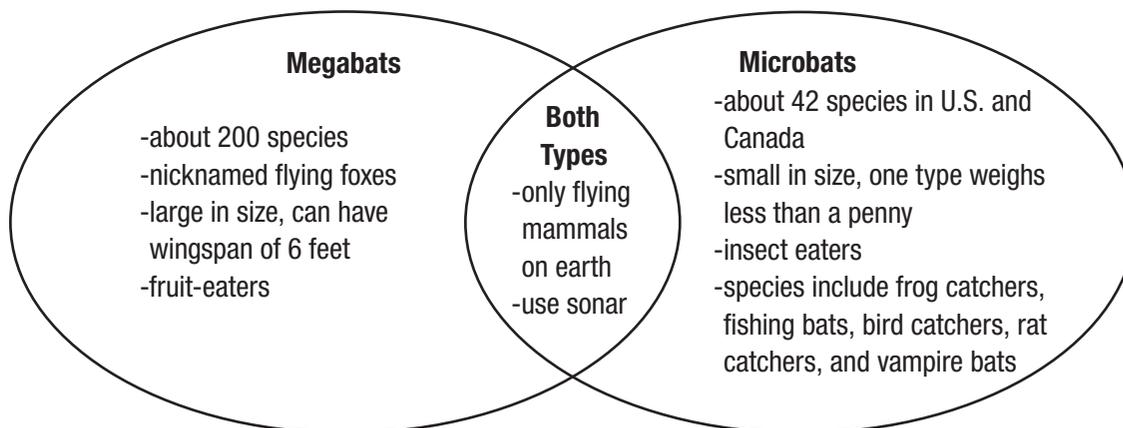
What makes animals so amazing?

“Getting to Know Real Bats”

SUMMARY

This science article is about bats. Some people believe that bats are dangerous. They think that bats carry deadly diseases such as rabies. The authors want to educate people about the true nature of bats. Bats are shy, gentle animals. They are helpful because they eat a lot of insects. Bats are not a threat to humans. The article describes one of the author’s experiences photographing bats for a magazine article. He wanted to show that bats are not scary monsters. His photos of the charming and playful bats changed many people’s negative attitudes.

Visual Summary



Use What You Know

Write down three things you know about bats.

1. _____
2. _____
3. _____

Text Structure

Science articles often define key concepts within the text. Underline the definition of *megabats* and circle the definition of *microbats*. What are the two characteristics scientists use to define microbats and megabats?



Reading Strategy: Evaluate New Information

There are several things you can do to evaluate, or try to understand, new information. Underline new facts about bats that you have learned on the page. How did these facts broaden your knowledge of bats?



Getting to Know Real Bats

by Laurence Pringle

Bats. To some people, this word means scary, ugly, disease-carrying creatures that are almost blind and sometimes fly into and become **entangled** in women's hair. These are make-believe bats. Real bats are quite different.

Bats make up nearly a quarter of all mammals on earth and live on all continents except Antarctica. They are the only mammals that fly. "Just as dolphins have mastered the sea," says Merlin Tuttle, "bats have mastered the sky."

There are two main groups of bats. About two hundred species—the megabats—are large, fruit-eating bats called flying foxes. They live in the tropics of Asia and Africa. Some have wingspans of nearly six feet, and others fly about in the daytime, not at night. Flying foxes have big eyes and see very well.

Nearly eight hundred species of small, insect-eating bats make up the second group—the microbats—with forty-two kinds living in Canada and the United States. The smallest mammal on earth is a bat: the bumblebee bat of Thailand. It weighs less than a penny.

_____ **entangled**, twisted and caught in

Also in this group is a species of bat that catches frogs, one that scoops fish out of the water, others that catch birds and rats, and three species that lap blood from little bites they nip in the skin of cattle and other warm-blooded prey. These vampire bats live in the warmest regions of South and Central America.

Microbats have small eyes, but they can probably see as well as mice and other small mammals. Their food is mostly flying insects, which they catch in the air at night. To accomplish this, a bat flies with its mouth open, emitting high-pitched squeaks that humans cannot hear. Some of the sounds echo off flying insects as well as tree branches and other obstacles that lie ahead. The bat listens to the echoes and gets an **instantaneous** picture in its brain of the objects in front of it.

instantaneous, immediate



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Reading Strategy: Evaluate New Information

There are several things you can do to evaluate, or try to understand, new information.



Underline new information you have learned about vampire bats in the first paragraph. Sum up this information in your own words.

Text Structure

Science texts often include highlighted words. Their definitions are at the bottom of the page. Circle the highlighted word on this page. Look at its definition. Reread the sentence in which the word appears. Rewrite the sentence without using the word.



Comprehension Check

Underline the sentence that tells the kind of food microbats eat. How do they find their food?



Comprehension Check

Underline what the text says about what bats can perceive. Why might scientists express admiration about the abilities of bats?



Comprehension Check

Underline what the text says about why people still fear bats. How is the author trying to lessen that fear?



Comprehension Check

Underline the sentence that tells what the National Geographic Society asked Merlin Tuttle to do. Based on the text of this page, what do you think the photographs of the bats showed?



From this echolocation, or sonar, as it is called, a bat can tell a great deal about a mosquito or another flying insect. “With extreme **precision**,” Merlin Tuttle says, “bats can perceive motion, distance, speed, **trajectory**, and shape. They can detect and avoid obstacles no thicker than a human hair, and millions of bats sometimes fly at the same time in a large cave without jamming each other’s sonar. Their abilities far surpass our present understanding.”

Some people still shudder at the thought of being face-to-face with a bat. Most of this fear is a result of ignorance about bats and of seeing only images of bats looking their worst, with mouths open and teeth bared.

In 1978 Merlin Tuttle began to think about the image that many people have of bats. He was asked to write a chapter about bats for a book on mammals to be published by the National Geographic Society. Then he saw the photographs that were going to illustrate his words.

precision, accuracy, exactness
trajectory, curved path of a flying object

Merlin recalls, “I had never considered the impact of the bat pictures that were then typical; most showed bats snarling in self-defense. Because of their shy nature and nocturnal habits, bats are exceptionally difficult to portray photographically as they really are in the wild. When first captured, they either try to fly away, bare their teeth in a threat display, or **hunker down**, eyes closed, expecting the worst. Impatient photographers typically held a bat by its wings, blew into its face, and snapped a quick picture when the bat tried to defend itself with a snarl.”

Photos like these, enlarged and published in books and magazines, reinforced the **notion** that bats were vicious and fearsome. Merlin wanted his chapter to show bats accurately, and the book editors agreed to try. A *National Geographic* staff photographer, Bates Littlehales, was assigned to take bat photos, under Merlin’s direction. After several weeks, however, only a few good photos were taken, despite their best efforts.

hunker down, crouch, keep low to the ground
notion, idea

Reading Strategy: Evaluate New Information

There are several things you can do to evaluate, or try to understand, new information.



Underline new information you have learned about photographing bats. Sum up this information in your own words.

Text Structure

Science texts sometimes include quotations. Draw a box around the quotation on this page. Who is speaking? Does he believe photographers have done a good job taking pictures of bats?



Comprehension Check

Circle the text that describes the results of Merlin’s and Littlehales’s efforts at photographing bats. Why do you think they were able to take only a few good photographs?



Comprehension Check

Underline the sentence that tells how Tuttle learned to photograph bats. Write a question you might ask about this information.



Text Structure

Circle the second highlighted word and underline its definition. How does knowing the definition of this word help you understand the passage better?



Comprehension Check

Underline the sentence that tells about how fishing bats acted after several hours of gentle care. Why do you think the bats refused food?



Merlin was an **amateur** photographer when he met Bates Littlehales, who generously shared his knowledge. After Littlehales left to return to *National Geographic*, Merlin began to experiment with the high-speed photography needed to capture bats in flight. When an editor tried to arrange for Littlehales and Tuttle to travel to Mexico to take photos of fishing bats, Littlehales said that Merlin had learned enough about photography to try it alone.

From other **mammalogists**, Merlin learned where to look in Mexico for fishing bats. After several nights of great effort, he and his assistants caught seven of the bats in nets. The bats became **docile** after several hours of gentle care but refused to take food.

amateur, someone who does something for pleasure or interest, not as a job

mammalogists, scientists who study mammals

docile, quiet, calm, easy to control



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After much frustration, Merlin was about to give up and release the bats, but first he tried tucking bits of cut-up minnow under their lips. Eventually one bat ate a piece of minnow. “Then,” Merlin recalls, “to our great elation, he grabbed a whole minnow from my hand, eating it with gusto. The others continued to refuse even small pieces, but we perched them on each side of the feeding bat until, one by one, each **succumbed** to the temptation. An hour later, all seven bats were eagerly eating from our hands and allowing themselves to be photographed with their meals, some in flight.

“When I returned from the trip and had the film developed, I was amazed to see the spectacular photographs that resulted. Even more impressive, when I showed the photographs to others, I soon saw that most people’s negative attitudes about bats could be changed in minutes. They simply needed an opportunity to see bats as they really are. Bats that are not afraid can be just as curious, **winsome**, and even comical as any household pet.”

succumbed, gave in
winsome, pleasant and attractive

Comprehension Check

Underline the sentence that states how Merlin first tried to get the bats to eat. In your own words, state how Merlin felt once the first bat started eating.



Comprehension Check

Underline the sentence that tells what happened after the bats started eating the minnows. Why might photographs of the bats that Tuttle took help change people’s ideas about bats?



Text Structure

Draw a box around the last highlighted word on this page and underline its definition. Write a new sentence using this word.



Text Structure

Paragraphs in science articles usually have a topic sentence that contains the main idea of the paragraph. Underline the topic sentence of the first paragraph. Why might people who like bats still think they carry a disease?



Reading Strategy: Evaluate New Information

Underline the two sentences in the first paragraph that tell about research on rabies. What notes would you take on this information?



Comprehension Check

Circle Tuttle's quotation in the second paragraph. How is this quote important to the author's purpose in providing accurate information about bats?



People who acknowledge that bats are appealing may still fear them because they believe that bats commonly carry the disease **rabies**. This idea originated in the early 1960s, when research seemed to show that bats were not harmed by rabies, yet passed the deadly disease on to other animals. Further study showed that this was not true, but most people and health officials heard about only the first, **erroneous** research.

Merlin Tuttle notes that “bats can get rabies, the same as dogs and cats can, but when they do get it they die quickly, just as other animals do. Anyway, less than half of one percent of bats contract rabies, and, unlike most mammals, even when bats are **rabid** they rarely become aggressive.”

rabies, disease that kills animals, including people
erroneous, incorrect or wrong
rabid, infected with rabies



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The greatest threat posed by bats is an indirect one: the actions of **unscrupulous** or uninformed pest control companies using poisons to kill bats in attics of homes. One widely used poison, chlorophacinone (Rozel), has been clearly shown to pose a serious health threat to people. At least fifteen states still allow its use, and some pest control operators in other states use it illegally.

There are simple, non-chemical ways to keep bats out of houses. Besides, some people are pleased to have a colony of insect-eating bats in or near their homes. “Just leave bats alone,” Merlin concludes, “and the odds of being harmed are infinitesimally small.”

unscrupulous, behaving in an unfair or dishonest way

Choose one and complete:

1. Create a poster that illustrates true and amazing facts about bats.
2. Use the Internet or other sources to research a type of bat that especially interests you. Write a one-page report on what you find out. Include a drawing of the bat in its natural environment.
3. Read about another person besides Merlin Tuttle who has studied bats. Make a chart that compares and contrasts this person’s findings with Tuttle’s discoveries.

Text Structure

Circle the highlighted word on this page and underline its definition.



Why do you think the author uses this word to describe some pest control companies?

Reading Strategy: Evaluate New Information

One way to evaluate new information is to summarize it, or restate the main points in your own words. How might you sum up the first paragraph in your own words?

Comprehension Check

Underline Merlin’s advice to homeowners. What might be two, non-chemical ways to keep bats out of a home?



1. _____
2. _____

READING WRAP-UP

Retell It!

Imagine you are a scientist who has done research on bats. Write about the common myths associated with bats. Then include as many details as you can about their true nature.

Reader's Response

Why do you think the author wrote this article? Did discussing Merlin Tuttle's work help the author achieve his purpose? Why or why not?

Think About the Skill

How did evaluating new information help you to better understand the article?

EDIT FOR MEANING

Read

You have read "Getting to Know Real Bats." Now read one paragraph from it again.

Getting to Know Real Bats

From this echolocation, or sonar, as it is called, a bat can tell a great deal about a mosquito or another flying insect. "With extreme precision," Merlin Tuttle says, "bats can perceive motion, distance, speed, trajectory, and shape. They can detect and avoid obstacles no thicker than a human hair, and millions of bats sometimes fly at the same time in a large cave without jamming each other's sonar. Their abilities far surpass our present understanding."



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Fix the Error

Each paragraph below contains the same information as the paragraph you just read. However, each paragraph contains one error. First, find the error. Then fix it by editing the sentence so the information is correct.

1. Find and fix the error.

Getting to Know Real Bats

Sonar, or echolocation, helps bats perceive motion, distance, speed, trajectory, and shape in a very precise way. They use it to find food, such as mosquitoes or other flying insects. In fact, with sonar, they can only detect and avoid obstacles that are as thick as a human hair. Sometimes, millions of bats fly at the same time in a large cave without jamming each other's sonar. Their abilities exceed our understanding.

2. Find and fix the error.

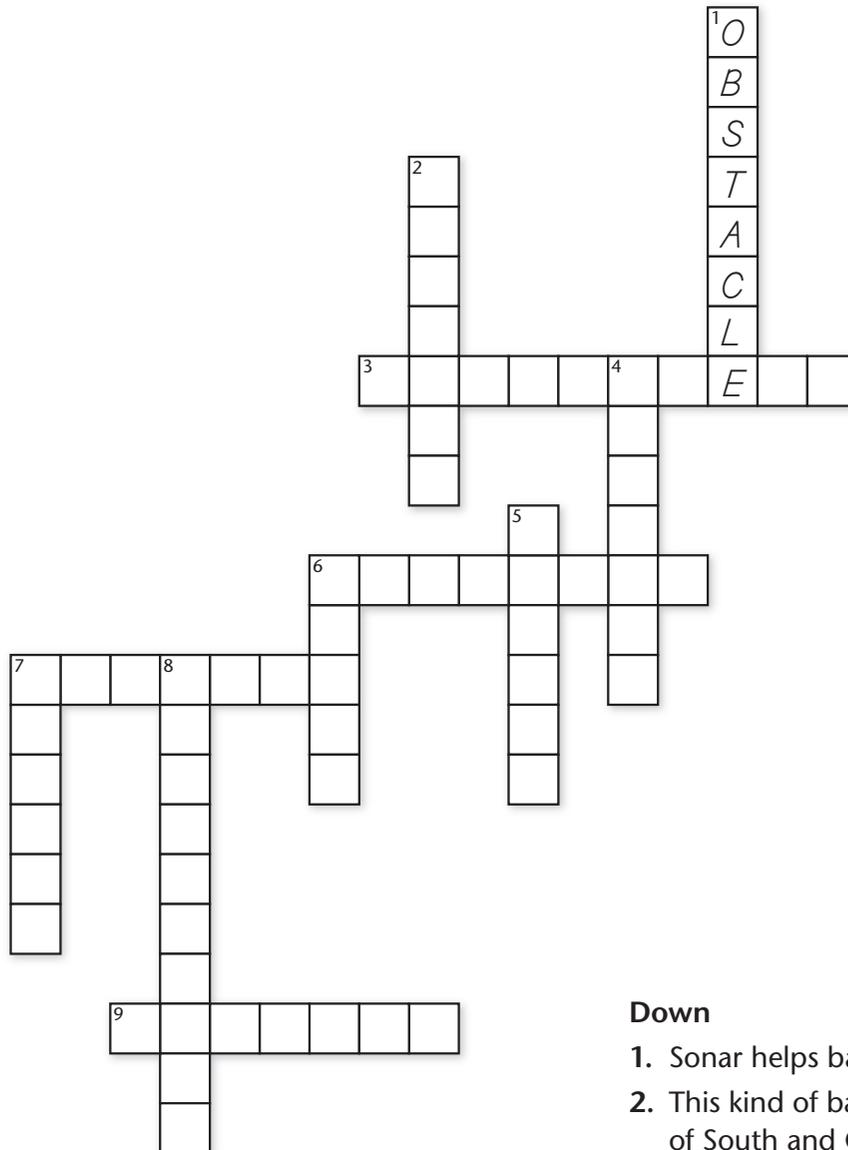
Getting to Know Real Bats

Bats use echolocation, or sonar, to learn a great deal about the things around them, such as flying insects. Sonar allows them to perceive trajectory, shape, motion, distance, and speed. They can detect and avoid obstacles no thicker than a human hair. Millions of bats sometimes fly in a large cave without jamming each other's sonar. At present, our understanding of what they can do is right in line with their abilities.

FOCUS ON DETAILS

Crossword Puzzle

To complete this crossword puzzle, you'll need to remember or search for details in the reading. Use the words in the word box. Not all of the words in the word box are in the puzzle. Fill in the crossword with answers to the clues below. The first answer has been done for you.



- ANTARCTICA
- MAMMAL
- MOSQUITO
- RABIES
- ERROR
- MEGABAT
- MYTHS
- ROZEL
- FISHING
- MICROBAT
- OBSTACLE
- SQUEAKS
- HIGH-SPEED
- MINNOW
- POISON
- VAMPIRE

Across

3. Type of photography Tuttle learned so he could photograph bats
6. This kind of bat eats mostly flying insects
7. This kind of bat eats mostly fruit
9. The type of bat Tuttle photographed in Mexico

Down

1. Sonar helps bats detect and avoid this
2. This kind of bat lives in the warmest regions of South and Central America
4. Bats emit these at a high pitch to "see" the things around them
5. Pest control companies should stop using this to kill bats
6. False information about bats
7. Bats are this kind of animal
8. Bats live on all continents except this one

READ FOR FLUENCY

1. Silently read the text below. Make sure you understand the point that each sentence is making.
2. Underline the word or words in each sentence that are most important. When you read, you should say these underlined words with expression.
3. Look again at the punctuation in the paragraphs. Remember that when a sentence ends in a period, you should read the words as a statement and take a breath before beginning a new sentence. When you see a comma, you should pause briefly. When you see an exclamation mark, you should sound excited. When you see a question mark, you should read as though you are asking a question.
4. Now read the paragraphs below out loud. Pay attention to the important words and punctuation as you read.
5. Write down any words that slowed you down. Practice saying these words out loud.
6. Read the text below out loud two more times. You may want to ask a friend or family member to listen to you and tell you their reactions to your reading.

Getting to Know Real Bats

Merlin recalls, “I had never considered the impact of the bat pictures that were then typical; most showed bats snarling in self-defense. Because of their shy nature and nocturnal habits, bats are exceptionally difficult to portray photographically as they really are in the wild. When first captured, they either try to fly away, bare their teeth in a threat display, or hunker down, eyes closed, expecting the worst. Impatient photographers typically held a bat by its wings, blew into its face, and snapped a quick picture when the bat tried to defend itself with a snarl.”

Photos like these, enlarged and published in books and magazines, reinforced the notion that bats were vicious and fearsome. Merlin wanted his chapter to show bats accurately, and the book editors agreed to try. A *National Geographic* staff photographer, Bates Littlehales, was assigned to take bat photos, under Merlin’s direction. After several weeks, however, only a few good photos were taken, despite their best efforts.

What makes animals so amazing?

From *The Chimpanzees I Love*

SUMMARY

This passage was written by the scientist Jane Goodall. She has devoted her life to studying and protecting chimpanzees and gorillas. Goodall explains that chimpanzees have brains like humans. They can do many things that we thought only humans could do. They can use tools to solve problems. They can learn from each other. They can even speak with sign language. Goodall points out that we treat chimpanzees and gorillas very badly. Hunters injure them in animal traps and hunt them for food. Zoos put them in cages. Scientists use them for medical research. We destroy the natural environments they live in. Goodall describes her program called "Roots and Shoots." It teaches people to care about animals and the environment.

Visual Summary

Chimps' Humanlike Behaviors
Use simple tools, such as sticks to fish termites from their nests or to catch biting army ants
Make tools, such as crumpled leaves as a sponge to soak water from hollows in trees
Use leaves as napkins to clean their faces
Use sticks as clubs to intimidate enemies or each other
Infants learn from their parents
Can join two sticks together to make a longer tool
Recognize others after a long period of separation
Can plan what they are going to do
Learn to ride a bicycle
Learn to sew
Learn to communicate with each other
Learn to communicate with humans

Use What You Know

List three things you know about chimpanzees.

1. _____
2. _____
3. _____

Text Structure

Paragraphs in science texts usually have a topic sentence that contains the main idea of the paragraph. Underline the topic sentence on this page. Then list three details that support the main idea.



1. _____
2. _____
3. _____

Reading Strategy: Make Generalizations

A generalization is a broad statement that applies to many examples and can be supported by facts. Underline two facts on this page. Then write a generalization about them.



From The Chimpanzees I Love

by Jane Goodall

The Mind of the Chimpanzee

The more we have learned about chimpanzees, the clearer it is that they have brains very like ours and can, in fact, do many things that we used to think only humans could do. The Gombe chimps use grass stems and twigs to fish **termites** from their nests. The chimps also use long smooth sticks to catch vicious biting army ants. They use crumpled leaves to soak up water from hollows in trees that they cannot reach with their lips, then suck the homemade sponge. They wipe dirt from their bodies with leaf napkins. They use stout sticks to open up holes in trees to get at birds' nests or honey and as clubs to **intimidate** one another or other animals. It seems that infant chimps learn these behaviors by watching the adults, and then imitating and practicing what they have seen. So the chimps have their own **primitive** culture.

termites, insects that eat and destroy wood

intimidate, frighten

primitive, simple

Many scientists are finding out more about the chimpanzee mind from tests in **captive situations**. For example, chimps will go and find sticks to pull in food that has been placed outside the cage, beyond their reach. They can join two short sticks together to make one long tool. They have excellent memories—after eleven years' separation, a female named Washoe recognized the two humans who had brought her up. A chimp can plan what he or she is going to do. Often I've watched a chimp wake up, scratch himself slowly, gaze around in different directions, then suddenly get up, walk over to a clump of grass, carefully select a stem, trim it, and then travel quite a long way to a termite mound that was out of sight when he made his tool.

Chimpanzees can be taught to do many of the things that we can do, such as riding bicycles and sewing. Some love to draw or paint. Chimps can also recognize themselves in mirrors. But they cannot learn to speak words because their vocal cords are different. Two scientists, the Hayeses, brought up a little chimp named Vicky and tried to teach her to talk. After eight years she could say only four words, and only people who knew her could understand even those.

captive situations, situations in which they are kept in cages

Comprehension Check

Underline the sentence that tells about a situation in which scientists are able to learn even more about chimps' minds. Why do you think scientists can learn a lot about chimps in captive situations?



Reading Strategy: Make Generalizations

A generalization is a broad statement that applies to many examples or details. Underline the generalization in the second paragraph. What are three examples that support this generalization?



1. _____
2. _____
3. _____

Comprehension Check

Underline the sentence that explains why chimps can't speak. What is one other way that chimps might be able to communicate?



Comprehension Check

Underline the type of language that Washoe learned to use. Why might chimps be able to learn American Sign Language?



Reading Strategy: Make Generalizations

In the first paragraph, the author states that chimps can invent signs. What are three examples that support this generalization?

1. _____
2. _____
3. _____

Comprehension Check

Underline the sentence that describes how chimps are often treated in captivity. Why do you think people sometimes treat chimps this way?



The Gardners had another idea. They got an infant chimpanzee, named her Washoe, and began teaching her American Sign Language (ASL) as used by deaf people. Then other infant chimps were taught this language. Chimps can learn 300 signs or more. They can also invent signs. The chimp Lucy, wanting a Brazil nut but not knowing its name, used two signs she knew and asked for a “rock berry.” A fizzy soda became “listen drink,” a duck on a pond, “water bird,” and a piece of celery, “pipe food.” Washoe’s adopted son learned fifty-eight signs from Washoe and three other signing chimps by the time he was eight years old. He was never taught these signs by humans. These experiments have taught us, and continue to teach us, more and more about the chimpanzee mind.

Chimpanzees in Captivity

Unfortunately chimpanzees, so like us in many ways, are often very badly treated in many captive situations. Chimpanzees were first brought to Europe from Africa in the middle of the seventeenth century. People were amazed by these humanlike creatures. They dressed them up and taught them tricks.

Since then we have often treated chimpanzees cruelly, shooting their mothers in Africa, shipping them around the world, caging them in zoos, training them to perform, selling them as pets, and imprisoning them in medical research laboratories. A young male called Ham was sent up into space. He was shot up in a Mercury Redstone rocket in January 1961, and because he survived the ordeal (he was terrified), it was decided that it was safe for the first human astronauts. Ham was taught his routine by receiving an electric shock every time he pressed the wrong button.

Infant chimpanzees are adorable and, for the first two or three years, are gentle and easy to handle. People buy them and treat them like human children. But as they grow older they become more and more difficult. They are, after all, chimpanzees, and they want to behave like chimpanzees. They resent discipline. They can—and do—bite. And by the time they are six years old they are already as strong as a human male. What will happen to them then? Zoos don't want them, for they have not been able to learn chimpanzee social behavior and they do not mix well with others of their kind. Often they end up in medical research labs.

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Comprehension Check

Underline the text that tells how Ham was taught to ride in a rocket. Do you think this way of teaching is helpful or harmful? Why?



Reading Strategy: Make Generalizations

Underline a generalization the author makes about infant chimpanzees in the second paragraph. How could you find facts to support this statement?



Comprehension Check

Underline two examples of how chimpanzees become more difficult when they get older. Why do you think the author included this information?



Comprehension Check

Underline the text that tells why chimps are often used for medical research. What are some other ways that scientists might do medical research without using chimps?



Reading Strategy: Make Generalizations

Underline the generalization the author makes about the way chimps are treated. What fact does the author provide to support this statement?



Comprehension Check

Underline the text that tells how chimps must feel when they are locked up. What are some things that scientists might do to keep chimps from feeling this way?



It is because their bodies are so like ours that scientists use chimps to try to find out more about human diseases and how to cure and prevent them. Chimpanzees can be infected with almost all human diseases. It is very unfair that, even though chimpanzees are being used to try to help humans, they are almost never given decent places to live. Hundreds of them are shut up in 5' x 5' x 7' bare, steel-barred prisons, all alone, bored, and uncomfortable.



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I shall never forget the first time I looked into the eyes of an adult male chimpanzee in one of these labs. For more than ten years he had been living in his tiny prison. The sides, floor, and ceiling were made of thick steel bars. There was a car tire on the floor. His name, I read on the door, was JoJo. He lived at the end of a row of five cages, lined up along a bare wall. Opposite were five more cages. At either end of the room was a metal door. There was no window. JoJo could not touch any of his fellow prisoners—only the ends of his fingers fitted between the bars. He had been born in an African forest, and for the first couple of years he lived in a world of greens and browns, leaves and vines, butterflies and birds. Always his mother had been close to comfort him, until the day when she was shot and he was snatched from her dead or dying body. The young chimpanzee was shipped away from his forest world to the cold, bleak existence of a North American research lab. JoJo was not angry, just grateful that I had stopped by him. He groomed my fingers, where the ridges of my **cuticles** showed through the surgical gloves I had to wear. Then he looked into my eyes and with one gentle finger reached to touch the tear that rolled down into my mask.

_____ **cuticles**, the hard edge of skin around your fingernails

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Reading Strategy: Make Generalizations

Circle two details about JoJo's living conditions at the research lab.



What generalization could you make about these details?

Comprehension Check

Sometimes authors write in the first person, using the pronouns "I," "me," and "my."



Underline two sentences that are written in the first person. Why do you think the author used the first person in this passage?

Text Structure

Science texts often include highlighted words. Their definitions are at the bottom of the page. Draw a box around the highlighted word on this page. Look at its definition. Then use the word in a new sentence.



Comprehension Check

Underline the sentence that tells about the efforts animal welfare groups are making for “surplus” chimpanzees. Why do these groups wish to provide sanctuary for the chimps?



Text Structure

Draw a box around the second highlighted word on this page. Look at the definition. Reread the sentence the word appears in. Then rewrite it without using the word.



Reading Strategy: Make Generalizations

Making generalizations helps you apply new information to what you already know. Circle the conclusion the author makes about innovations in zoos. How would we determine if this generalization were true?



In the United States, several hundred chimpanzees have been declared “surplus”—they are no longer needed for medical research. Animal welfare groups are trying to raise the money to build them sanctuaries so that they can end their lives with grass and trees, sunshine and companionship. Some lucky ones—including JoJo—have already been freed from their laboratory prisons. Many others are waiting.

Zoos are getting better, but there are still many chimps in small concrete and metal cages with no soft ground and nothing to occupy them. Good zoos keep their chimpanzees in groups and provide them with all kinds of stimulating things to do, different things each day, so that they don’t get bored. Many zoos now have artificial termite mounds. Chimps use sticks or straws to poke into holes for honey or other foods. These innovations make a world of difference.

surplus, more than is wanted, needed, or used
artificial, not real but made to look real
innovations, new ideas, methods, or inventions

Protecting the Chimpanzees

One hundred years ago we think there were about two million chimpanzees in Africa; now there may be no more than 150,000. They are already **extinct** in four of the twenty-five countries where they once lived. They are disappearing for various reasons:

1. All over Africa, their forest homes are being destroyed as human populations grow and need ever more land for their crops and wood for their homes.
2. In many places chimpanzees are caught in **snares** set for bushpigs or antelopes. Some chimps die; others lose a hand or a foot, after months of **agony**.
3. There are still dealers who are trying to smuggle chimpanzees out of Africa for the live animal trade. Mothers are shot so that hunters can steal their infants for entertainment or medical research. The dealers pay the hunters only a few dollars while they themselves can sell an infant chimp for \$2,000 or more.

extinct, no longer in existence

snares, traps using a wire or rope to catch an animal by its foot

agony, very severe pain

Text Structure

Science texts often include important numbers or amounts.



Underline the sentence that tells how many chimps once lived in Africa and how many may live there now. Has that number increased or decreased, and by how much?

Reading Strategy: Make Generalizations

Circle the first generalization that appears in the list on this page. Then rewrite the generalization in your own words.



Comprehension Check

Underline what the text says about why mother chimpanzees are often shot. What do you think might be done about this problem?



Comprehension Check

Underline what the text says is the greatest threat to chimpanzees living in the Congo.

Why does commercial hunting continue to be a problem?



Reading Strategy: Make Generalizations

Circle the generalization the author makes at the beginning of the second paragraph. Do you agree with this statement? Why or why not?



Comprehension Check

Underline the name of the program the author began. In your own words, why did she start it?



4. The greatest threat to chimpanzees in the great Congo basin is commercial hunting for food. Logging companies have made roads deep into the heart of the last remaining forests. Hunters ride the trucks to the end of the road and shoot everything—chimps, gorillas, bonobos, elephants, antelopes—even quite small birds. The meat is smoked or even loaded fresh onto the trucks and taken for sale in the big towns. The trouble is that so many people living there prefer the taste of meat from wild animals, and they will pay more for it than for that from domestic animals. If this trade (known as the “bushmeat” trade) cannot be stopped, there will soon be no animals left.

It is easy to feel depressed when you think about all the problems in the world. When I think of all that humans have done to spoil our planet during the sixty-six years of my own life, I feel very sad—and ashamed of our own species. But I am full of hope, too. That is why I started a program called Roots & Shoots.

Roots & Shoots is the education program of the Jane Goodall Institute. I'd love you to be part of it. It began in Tanzania, but now there are groups in more than fifty countries. Every group chooses at least one hands-on activity in each of three areas to show care and concern: 1) for animals, including dogs, cats, cows, and so on; 2) for the human community; 3) for the environment we all share. The projects you choose depend on whether you live in the inner city or in a rural area, in the United States or Africa or China or wherever. People of all ages, from kindergarten to college, have joined Roots & Shoots. It's growing very fast.

I get so excited when I hear what all the Roots & Shoots groups are doing to make the world a better place. Everywhere more and more people have begun to understand that their own lives *do* matter, that we are all here for a purpose, and we can each of us make a difference. We shall not let the chimpanzees become extinct in Africa, and we shall not let them go on being cruelly treated in captivity. Chimpanzees make us realize that there is not, after all, a sharp line dividing humans from the rest of the **animal kingdom**. So we think of all animals with new respect and greater **compassion**.

animal kingdom, a main classification of living organisms that includes all animals

compassion, strong feeling of sympathy for those who are suffering

Choose one and complete:

1. Write a news article that highlights some of the problems chimpanzees have faced in captivity.
2. Imagine you are working on a documentary about chimpanzees. Write a one-page script of voiceover narration to introduce your film.
3. Use the Internet or other resources to find out where the largest and smallest populations of chimpanzees live in Africa. Write a brief description of the environment in each area.

Comprehension Check

Underline the sentence that lists three areas that Roots & Shoots addresses. How are these three areas related?



Text Structure

Circle the last highlighted word on this page and underline its definition. Write a new sentence using this word.



**Reading Strategy:
Make Generalizations**

Underline the generalization the author makes at the conclusion of the article about what chimpanzees help us realize. Rewrite the generalization in your own words.



READING WRAP-UP

Retell It!

Imagine you are a scientist who has studied a chimpanzee from the time of its birth to its death. Use details from the article to chronicle events in the chimp's life, including where it was born, whether it was studied in the wild or in captivity, what it learned, and how it lived in its old age.

Reader's Response

In your opinion, what are some other things that can be done to help protect chimpanzees from extinction?

Think About the Skill

How did making generalizations help you better understand the article?

EDIT FOR MEANING

Read

You have read an excerpt from the book *The Chimpanzees I Love*. Now read one paragraph from it again.

Chimpanzees in Captivity

Zoos are getting better, but there are still many chimps in small concrete and metal cages with no soft ground and nothing to occupy them. Good zoos keep their chimpanzees in groups and provide them with all kinds of stimulating things to do, different things each day, so that they don't get bored. Many zoos now have artificial termite mounds. Chimps use sticks or straws to poke into holes for honey or other foods. These innovations make a world of difference.



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Fix the Error

Each paragraph below contains the same information as the paragraph you just read. However, each paragraph contains one error. First, find the error. Then fix it by editing the sentence so the information is correct.

1. Find and fix the error.

Chimpanzees in Captivity

Despite the fact that zoos are getting better, far too many chimpanzees are still kept in inhumane conditions, where they sleep in small concrete and metal cages. Good zoos keep their chimpanzees in separate cages and give them nothing to do so that they are always bored. Artificial termite mounds are a new innovation in zoos that enable chimps to use sticks or straws to retrieve honey or other food from them. Innovations such as this one can greatly affect the lives of captive chimps.

2. Find and fix the error.

Chimpanzees in Captivity

Too many zoos still don't provide the humane care chimpanzees need and deserve. Often, chimps are still housed in metal and concrete cages with no soft ground. Fortunately, there are zoos that provide for the complete needs of chimps. These zoos keep the chimps in social groups. They also provide many activities to prevent boredom. Some zoos are working on new innovations, such as artificial termite mounds. These mounds have holes that zookeepers fill with tasty foods. Chimps can use straw or sticks to poke in the mounds. The changes in zoos do not make any real differences in the lives of the chimps living there.

FOCUS ON DETAILS

Mystery Word Puzzle

To complete this mystery word puzzle, you'll need to remember or search for details in the reading. Use the clues to help you unscramble each of the words. Write the words in the boxes. The numbered letters will form the mystery word.

1. Type of chimp that uses twigs to catch food

BOEGM

--	--	--	--	--	--

3

2. The way baby chimps learn

EAMITIT

--	--	--	--	--	--	--	--	--	--

10

3. Lucy's name for a Brazil nut

KOCR RREBY

--	--	--	--	--

9

--	--	--	--	--	--	--

1

4. Name of the first chimp to learn sign language

AWHEOS

--	--	--	--	--	--

6

5. Animal welfare groups are working to build these for surplus chimps

SNACEURISAT

--	--	--	--	--	--	--	--	--	--	--	--	--	--

4

6. Wild meat sold for human consumption

HUSB TAME

--	--	--	--	--

5

--	--	--	--	--	--

7

7. In this area of Africa, the greatest threat to chimps is commercial hunting

COOGN SABIN

--	--	--	--	--	--

8

--	--	--	--	--	--	--

8. Sometimes, chimps are kept in these in research labs

CEGSA

--	--	--	--	--	--

11

9. Chimps sometimes get their feet caught in snares that had been set for these animals

LOTPENSEA

--	--	--	--	--	--	--	--	--	--	--

2

What is the education program of the Jane Goodall Institute called?

--	--	--	--	--	--

2 3 4 5

&

--	--	--	--	--	--	--	--	--	--

6 7 8 9 10 11

READ FOR FLUENCY

1. Silently read the text below. Make sure you understand the point that each sentence is making.
2. Underline the word or words in each sentence that are most important. When you read, you should say these underlined words with expression.
3. Look again at the punctuation in the paragraphs. Remember that when a sentence ends in a period, you should read the words as a statement and take a breath before beginning a new sentence. When you see a comma, you should pause briefly. When you see an exclamation mark, you should sound excited. When you see a question mark, you should read as though you are asking a question.
4. Now read the paragraphs below out loud. Pay attention to the important words and punctuation as you read.
5. Write down any words that slowed you down. Practice saying these words out loud.
6. Read the text below out loud two more times. You may want to ask a friend or family member to listen to you and tell you their reactions to your reading.

The Chimpanzees I Love

The Gardners had another idea. They got an infant chimpanzee, named her Washoe, and began teaching her American Sign Language (ASL) as used by deaf people. Then other infant chimps were taught this language. Chimps can learn 300 signs or more. They can also invent signs. The chimp Lucy, wanting a Brazil nut but not knowing its name, used two signs she knew and asked for a “rock berry.” A fizzy soda became “listen drink,” a duck on a pond, “water bird,” and a piece of celery, “pipe food.” Washoe’s adopted son learned fifty-eight signs from Washoe and three other signing chimps by the time he was eight years old. He was never taught these signs by humans. These experiments have taught us, and continue to teach us, more and more about the chimpanzee mind.



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