

# Week 2

## 5th Grade

Name:

Teacher:

# Week 2 Assignment 1- Biography Anchor Chart

Use the information on pages 322-323 to complete this assignment.

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\* Required

Read pages 322-323 in your textbook and select three features of a biography. Hint: Use your anchor chart on page 323. \* \* 0 points

- The purpose is to tell the story of a person's life.
- Written in first person point of view.
- Shows the relationships between the person and other people and events.
- Written by the person that the story is about.
- Uses chronological text structure.

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Week 2- Assignment 2-Vocabulary Preview

Please use your book (pages 325-341) or a dictionary to write the correct definition in a complete sentence. Then use thesaurus.com to find 2 synonyms or make up your own. If you cannot find a synonym, come up with 2 examples of the word.

Word	Correct Definition	Synonyms (2)
Segregation (page 329)		
Mistreated (page 330)		
Qualified (page 332)		
Demonstrators (page 336)		
Sympathise (page 338)		

# BIOGRAPHY

## anchor chart

PURPOSE: To tell the story of a (usually notable) person's life

### ELEMENTS of BIOGRAPHY



★ Uses third-person point of view

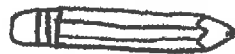
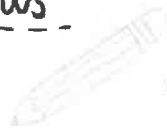


★ Uses chronological text structure



★ Shows relationships between the person and other people and events

★ Is written by another person





As a child in the segregated South, **Jim Haskins** attended a school that used out-of-date, inaccurate textbooks. He became an elementary school teacher and then a university professor. He made it his mission to write books that would give children an accurate and positive view of African Americans and their accomplishments.

# Delivering Justice

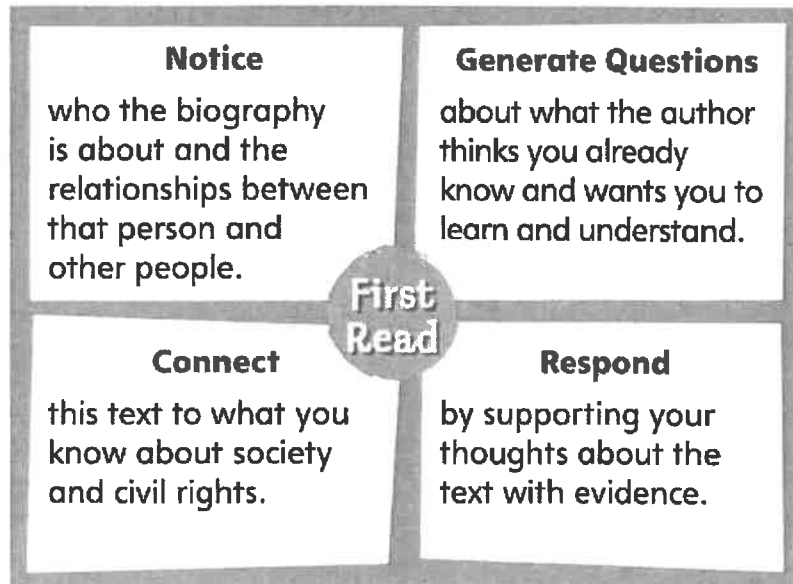
## Preview Vocabulary

As you read *Delivering Justice*, pay attention to these vocabulary words. Notice how they connect to the topic of civil rights.

	<b>segregation</b>	<b>mistreated</b>	
<b>qualified</b>	<b>demonstrators</b>	<b>sympathize</b>	

## Read

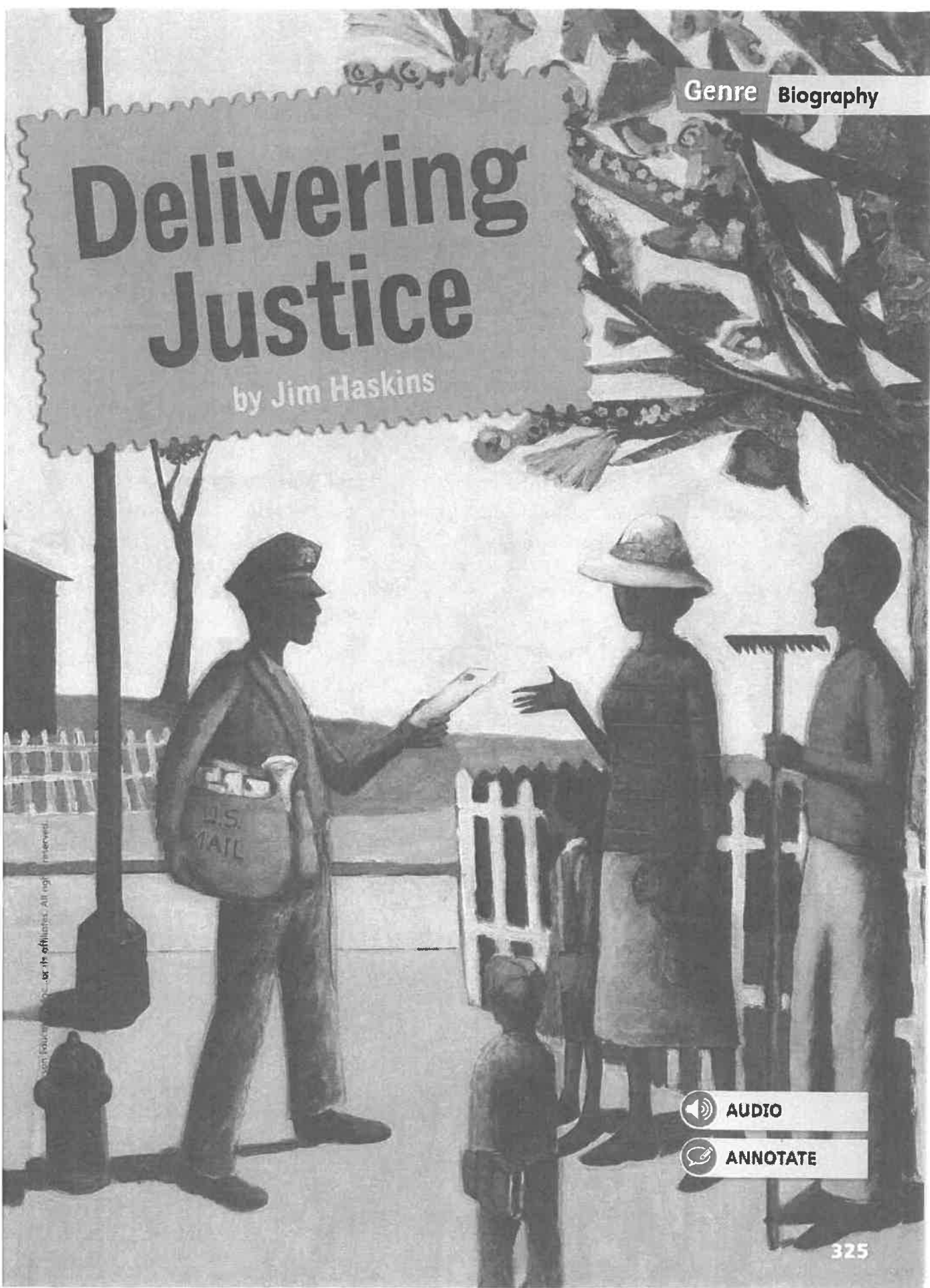
Before you read, make predictions and ask questions about the text. Look for transition words that give you clues about the text's structure. As you read, confirm or correct your predictions. Use these strategies when you read a **biography** for the first time.



Genre Biography

# Delivering Justice

by Jim Haskins



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 AUDIO

 ANNOTATE

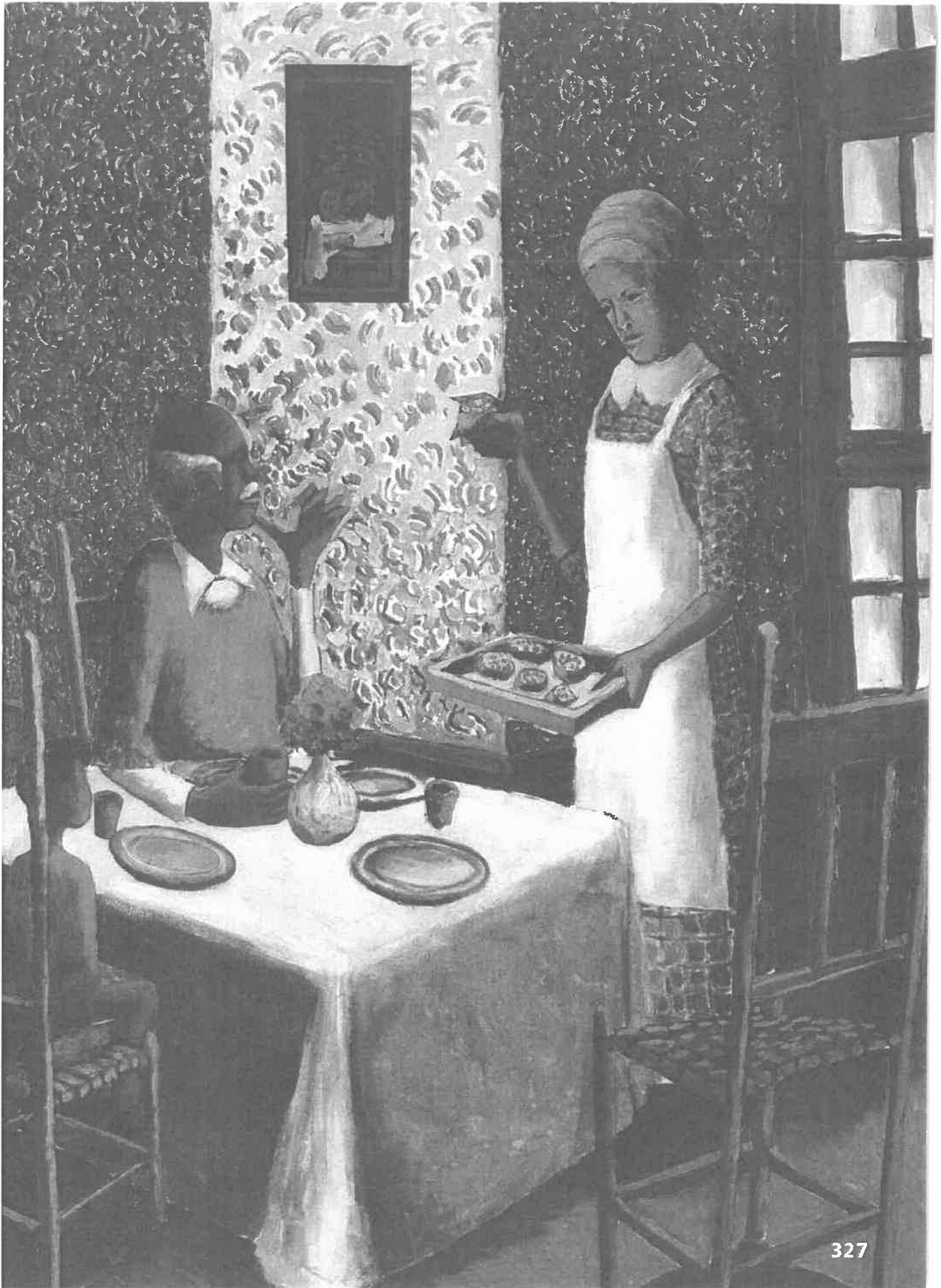
## CLOSE READ

### Generate Questions

Highlight details that help you ask or answer a question about Westley's relationship with his mother.

## Savannah, Georgia, 1932

- 1 The smell of his grandma's biscuits lured Westley to the kitchen. Westley was excited because today was Thursday, the day he would see his mother. The rest of the week, she worked for a white family just outside Savannah, cooking, cleaning, and taking care of their children. This was her day off.
- 2 Grandma's friend Old John was sitting at the table. Westley loved listening to the old man's stories. Old John had been born a slave. He had been taken from his mother and had never known her. He was nine—Westley's age—when he and all the slaves were freed in 1865. Westley felt lucky—at least he saw his own mama once a week.





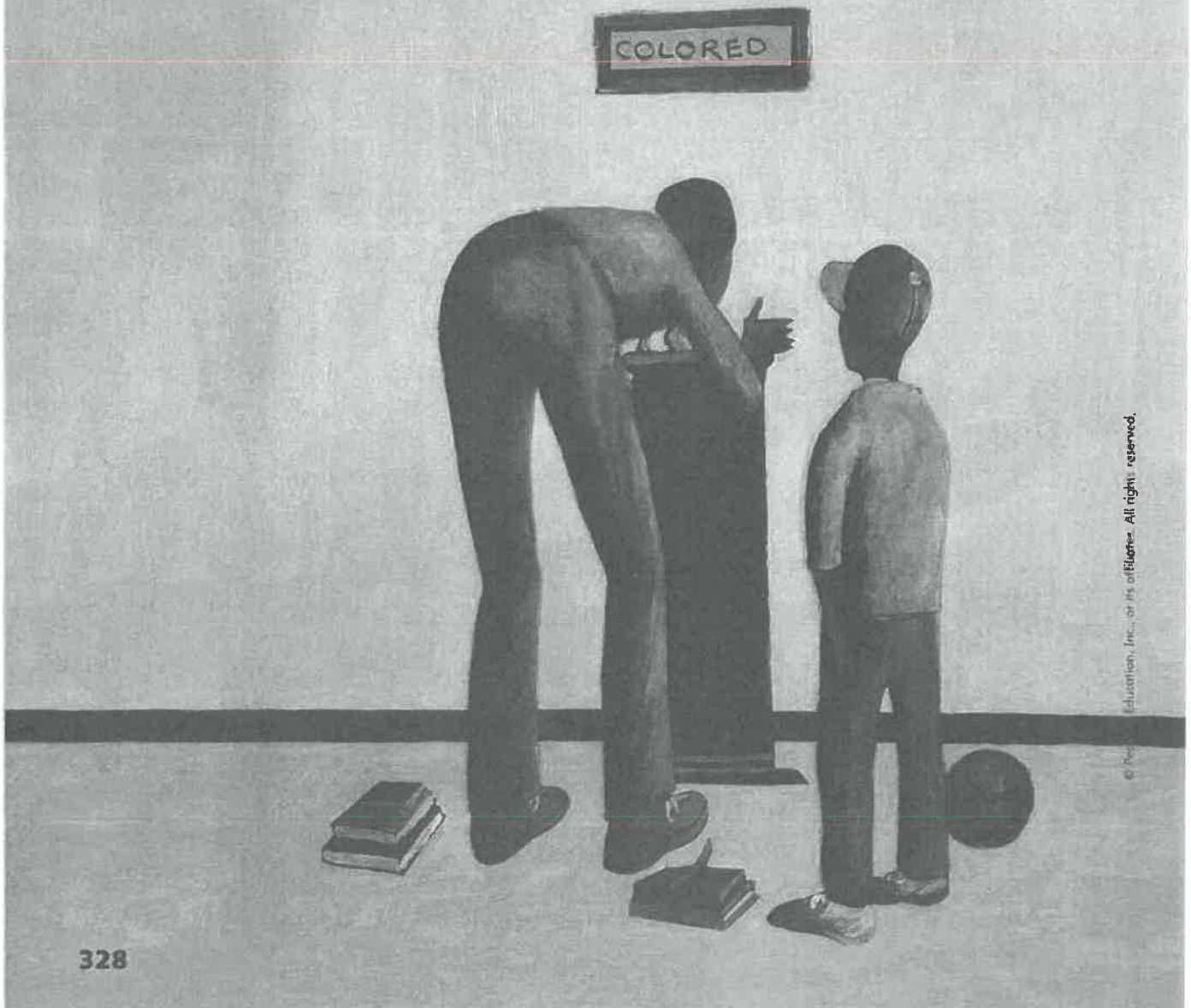
## CLOSE READ

### Explain Relationships Between Ideas

Underline details that help you understand inequality in Savannah in 1932.

## Easter Shopping at Levy's

- 3 Once a year, sometime before Easter, Grandma would take Westley downtown to Levy's Department Store on Broughton Street to buy one nice outfit. They used a Levy's charge card and then paid a little bit each month.
- 4 On one shopping trip, the saleswoman would not serve them until after all the white customers had been helped. Westley had heard the saleswoman politely call the white women customers "Miss" and "Mrs." But she treated his grandma as if she were a child, a nobody.



5 Westley's grandma pretended not to notice. She was polite. But she was also proud. "Come on," she said, "it's time to go home." They left the store without buying a thing.

## Segregation

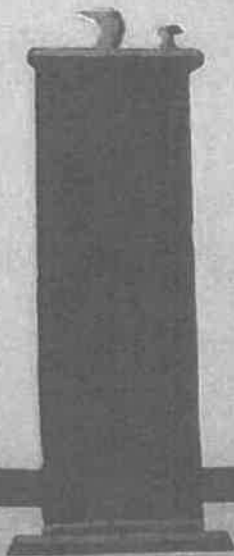
6 Back then, black people weren't treated as well as white people. Most of the time, they were kept segregated from whites. Westley went to a separate school for black children. He had to drink from water fountains marked "Colored." He could not sit and eat at the Levy's lunch counter.

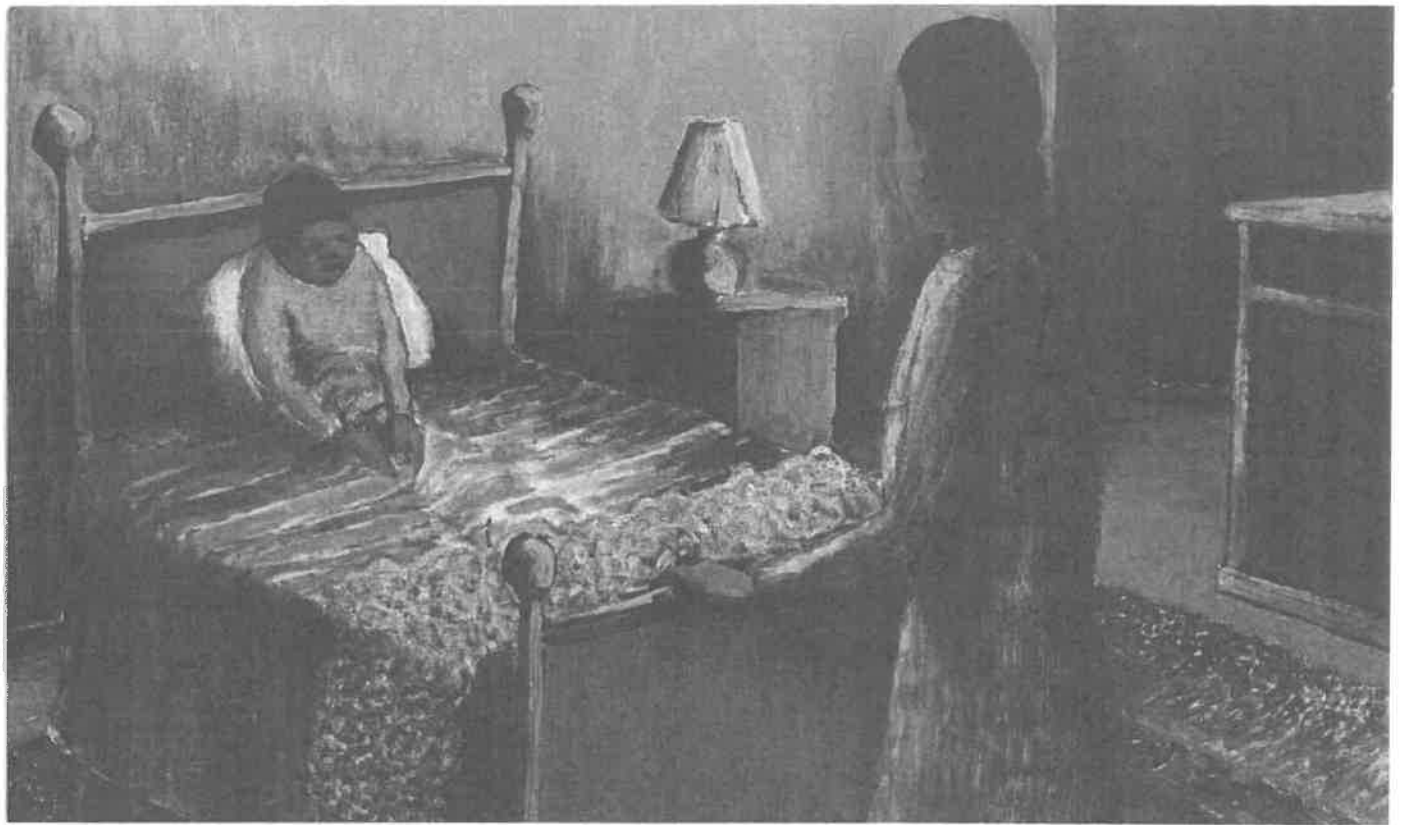
### CLOSE READ

#### Generate Questions

Highlight details that raise questions about how black people were treated in the South.

**segregation** official separation of groups of people based on a characteristic such as race or gender





## CLOSE READ

### Generate Questions

Highlight details that help you ask or answer a question about Westley's motivation to work hard.

**mistreated** treated in an unkind or cruel way

## His Grandma's Prayers

- 7 Sometimes Westley got angry that black people were mistreated and that no matter how hard his mother worked, they were still poor. But his grandma was always there to talk with him. She understood why he was upset, but she didn't want him to have bad feelings about himself.
- 8 She said that no matter how he was treated, he had no excuse not to "be somebody." She told him again about the day he was born. She said, "I got on my knees and prayed that you would grow up to be a leader of our people."
- 9 Westley promised himself that he would fulfill his grandma's prayer. He also promised himself that he would work hard so that one day his mother would not have to work in someone else's house.

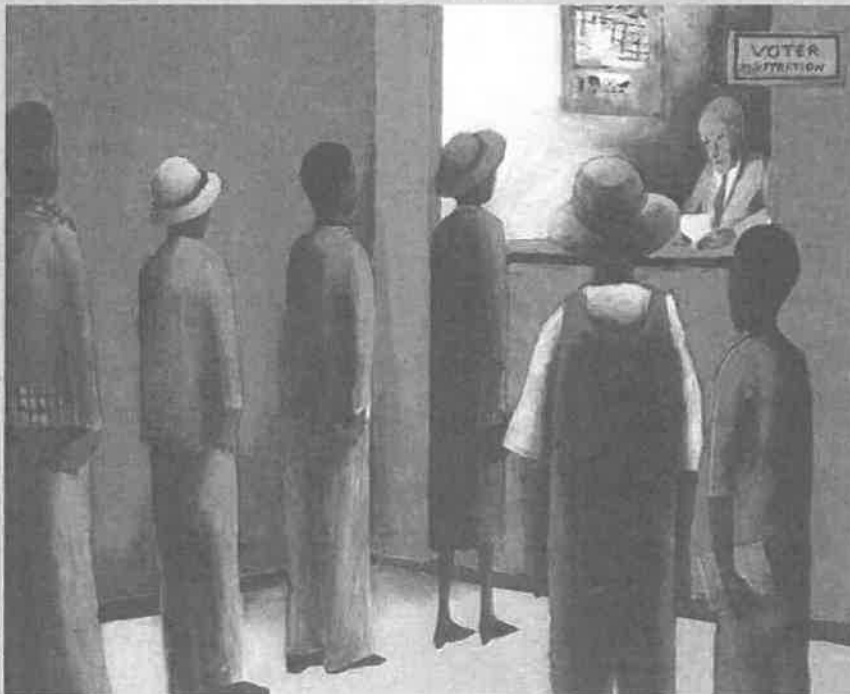
## Voter Schools, 1942

- 10 Westley knew that many black people didn't vote because they had to pass a test to register. The test was designed to be difficult for black folk to pass. It was intended to keep them from voting.
- 11 Westley was a member of the Youth Council of the NAACP—the National Association for the Advancement of Colored People. The Youth Council started a special “Voter school” in the basement of a church.
- 12 With his friend Clifford, Westley talked to everyone, even passersby, about voting. When he found someone who, scared by the test, had never registered to vote, he took them to the voter school. When they felt ready to take the test, Westley went with them to the courthouse and stayed until they were registered. With Westley's help and encouragement, many black people in Savannah became registered voters.

### CLOSE READ

#### Explain Relationships Between Ideas

Underline the central or main idea on this page.



## CLOSE READ

### Explain Relationships Between Ideas

Underline details that help you understand the relationship between the students and Westley.

**qualified** has met the necessary requirements to do or be something

## Working as a Mailman, 1949

- 13 After college and the army, Westley wanted to be a teacher. But because of his membership in the NAACP, no one in Savannah would hire him.
- 14 So Westley became a mailman. The postal service hired qualified people, regardless of their color. As it turned out, this job suited Westley just fine.
- 15 "Good morning, Miss Sally Lawrence Jenkins," Westley sang out to a young woman in her garden. "Here's a letter from your sister."
- 16 Westley liked to address people by their full names. He could trace a person's history in their name. And history was important to Westley. "If you don't know where you've been, how do you know where you're going?" he loved to ask.

## At the NAACP Office, February 1960

- 17 After work, Westley spent long evenings at the NAACP office. One night, he was visited by a group of students who were excited about what was happening in Greensboro, North Carolina. Young black people there had staged a sit-in at a lunch counter in a local store. They had refused to leave until they were served.
- 18 The students standing in front of Westley wanted to do the same thing at the department stores on Broughton Street. But they needed a leader. Westley remembered how his grandma had been treated at Levy's, and he agreed to help. But first, the students had to be trained. They had to protest without ever using violence, even if the other side did. If they were attacked and they fought back, Westley told them, their cause would be lost.

N.A.A.C.P.

SIT-IN STRATEGY

- 1 DRESS NEATLY
- 2 ENTER TOGETHER
- 3 SIT TOGETHER
- 4 ORDER POLITELY
- 5 DO NOT REACT TO INSULTS
- 6 LEAVE TOGETHER



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## CLOSE READ

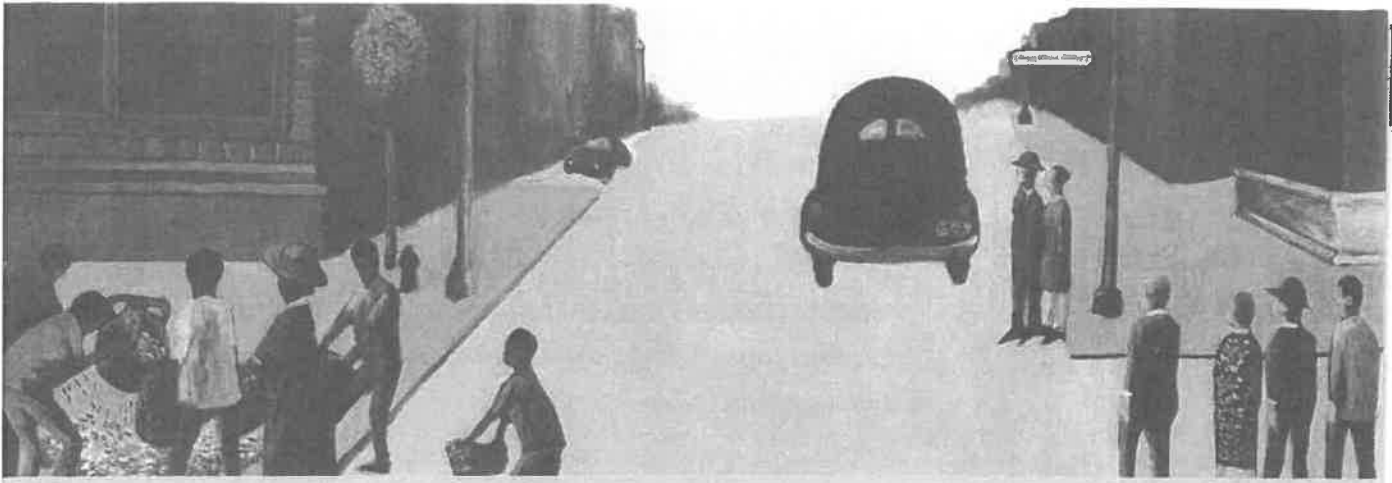
### Explain Relationships Between Ideas

Underline details that show a connection between events.

## Levy's Lunch Counter

- 19 After weeks of training, small groups of students made their way downtown, entered the big stores along Broughton Street, and sat down at the lunch counters. The stores refused to serve them. At Levy's, the manager called the police, who arrested the students for breaking the city's segregation laws.





## Throwing Down Their Cards

- 20 Westley called a mass meeting the next Sunday at the Bolton Street Baptist Church. People filled the pews and balconies. Westley opened the meeting with a hymn. All the voices singing together made a thunderous sound. And the mighty noise made people think that perhaps working together, they could really make something happen. Westley spoke about the arrests of the young people at Levy's. He said that things had to change, and he asked if people were ready to fight for their rights.
- 21 Someone shouted, "I'll never shop at that store again!" Then someone in the balcony threw down a Levy's charge card. Soon, everyone was tossing charge cards into a big pile in the church.

## The Boycott Begins March 17, 1960

- 22 The next morning, Westley led a group downtown. They carried baskets full of charge cards.
- 23 At Levy's, Westley and his group dumped the baskets of charge cards onto the sidewalk. Then Westley announced that no black people would shop at any store on Broughton Street until they were treated equally.
- 24 The Great Savannah Boycott had begun!

### CLOSE READ

#### Explain Relationships Between Ideas

Recall what you already know about Martin Luther King Jr. and his role in the civil rights movement. Underline details that show a connection between Westley and Martin Luther King Jr.



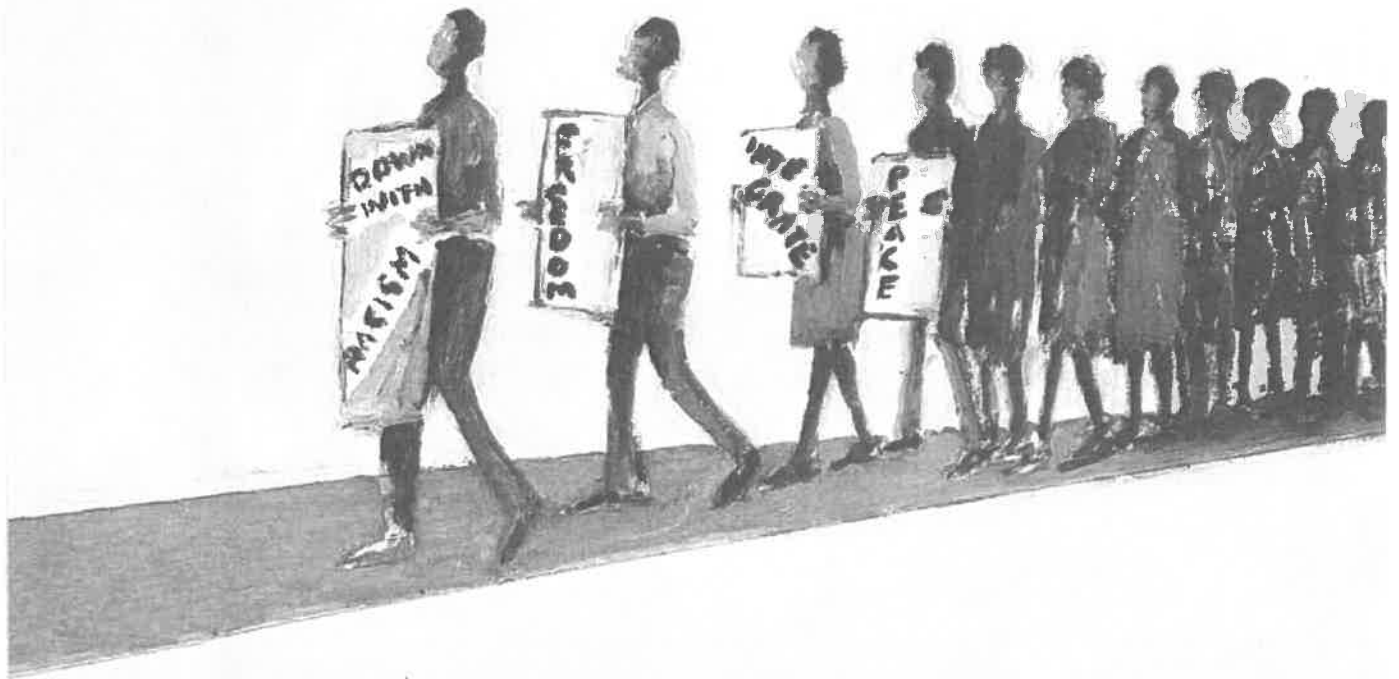
## CLOSE READ

### Generate Questions

Highlight evidence that explains why the protesters did not fight back. What question do you have about peaceful protests?

## Picket Lines

25 Westley and other members of the NAACP organized a picket line every day in front of Levy's. White people yelled and jeered at the protesters and tried to force them off the sidewalk. But day after day, the protesters returned.



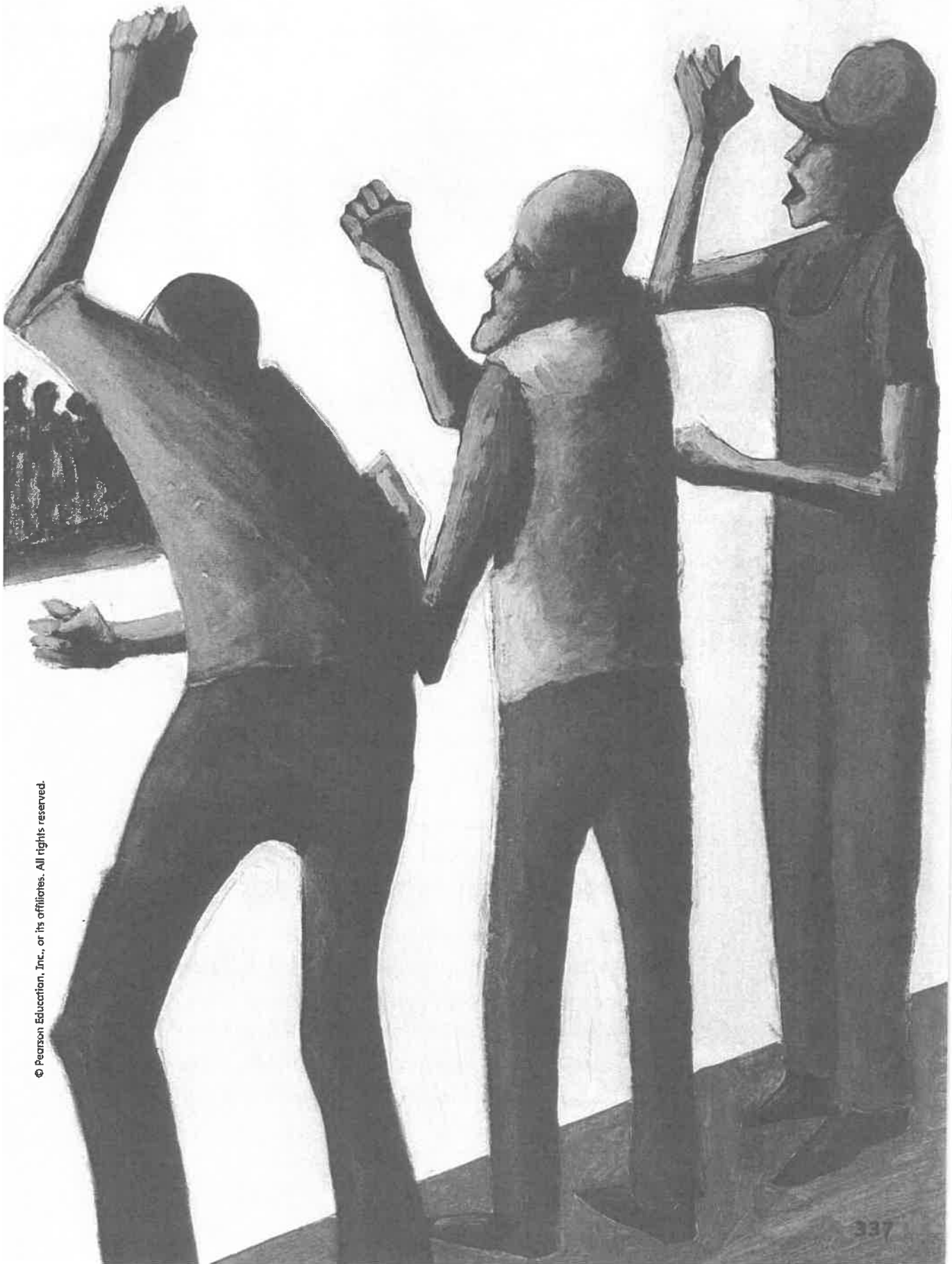
### Vocabulary in Context

Underline context clues, or words or phrases around an unfamiliar word, to define the word *jeered* in paragraph 25.

**demonstrators** people who participate in public protests or marches in support of or against something

26 One day a large, burly white man punched one of the demonstrators in the face and broke his jaw. But everyone remembered what Westley had taught them. They didn't yell or fight back, no matter how much they wanted to.

27 Westley organized other protests. There were kneel-ins at the white churches on Sundays and wade-ins at the all-white beach at Tybee. Westley wanted to end segregation everywhere in Savannah—in libraries, theaters, public pools, beaches, and restrooms, as well as at lunch counters.





## CLOSE READ

### Explain Relationships Between Ideas

Underline details that show a connection between events.

**sympathize** feel or express concern, compassion, and support for someone

## Talking About Peaceful Change

- 28 Large meetings were held every Sunday at different churches. Protesters talked about their activities; some gave fiery speeches. The meetings became so popular that no church was big enough to hold everyone who wanted to get in.
- 29 For a year and a half, no one from the black community shopped on Broughton Street.
- 30 Westley walked down the street and started counting: One, two, three, four, five GOING OUT OF BUSINESS signs. The white storeowners couldn't stay in business without black customers.
- 31 When he delivered mail to white people, Westley told them how much he loved Savannah. He wanted the city to be a better place for everyone. They respected Westley. They saw how peaceful and committed to change the protesters were. Little by little, more and more white people began to sympathize with the protesters.

## Desegregation Without Violence

- 32 White people in the community who supported Westley asked what they could do to end segregation and stop the boycott. Together, leaders from the white and black communities worked out a plan. Each evening after delivering the mail, Westley organized a group of students to sit in at a different kind of business or facility the next day. The theaters would be first, then the restaurants, then the library, and on down the line until every business had been desegregated.
- 33 Sometimes angry crowds would gather, or white people would leave in protest when the black students arrived. But most of the white and black leaders stuck together. The mayor made sure that all the signs marking separate facilities for blacks and whites at City Hall, the courthouse, health department, and hospital were taken down. City officials took the segregation laws off the books. Unlike desegregation efforts in other cities and towns in the South, there was very little violence in Savannah.

### CLOSE READ

#### Generate Questions

Highlight a detail that helps you understand how Savannah handled desegregation efforts. What question do you have about desegregation?

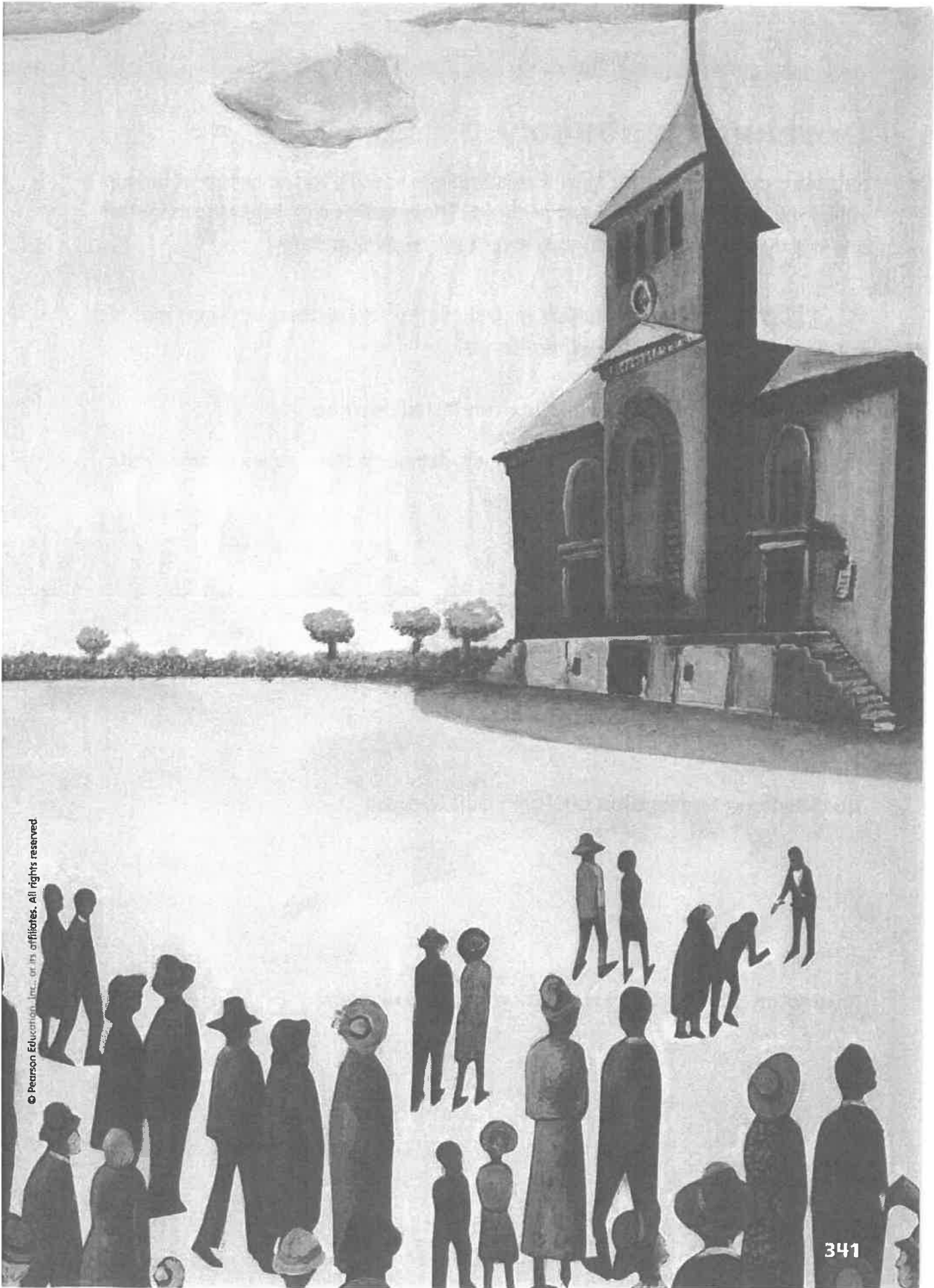
## CLOSE READ

### Explain Relationships Between Ideas

Underline details on this page that show a relationship between two important events.

## Justice Delivered

- 34 On a Sunday in September 1961, Westley greeted the hundreds of people who arrived at a downtown Savannah church. Inside, their voices joined together to sing out, "We are Soldiers in God's Army." When the song ended, Westley stood in front of the crowd. He saw his mother sitting in the front row. He saw students who had been arrested. He saw faces beaming with pride. Then he announced in a loud clear voice, "We have triumphed!"
- 35 Savannah was the first southern city in the United States to declare all its citizens equal, three years before the federal Civil Rights Act made all segregation illegal. People, both black and white, saw Westley as Savannah's hero. He had kept the protest disciplined and peaceful, even in the face of violence. Modestly, he would say, "I was just doing what every black American should be doing."
- 36 Westley Wallace Law delivered more than just the mail to the citizens of Savannah; he delivered justice, too. His grandma's prayers had been answered.



# Week 2 Assignment 3 - Read "Delivering Justice!"

## Week 2 Assignment 4- Story Quiz

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Read "Delivering Justice" on pages 225-341. Select all that are true about the story. 0 points

- Savannah was the first southern city in the United States to declare all of its citizens equal.
- Westley was a member of the Youth Council of the NAACP.
- Westley's grandmother was an angry person.
- Westley wanted to end segregation in Savannah and organized some protests.
- In 1932, black people were segregated from white people.
- After college, Westley wanted to be a mailman, but couldn't get hired.

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# Week 2 Assignment 6- Skill

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\* Required

Reread the section "Easter Shopping at Levy's" on page 328 in your textbook.  
What are 2 details that help you understand the inequality in Savannah in 1932? \*

Your answer

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# Week 2 Assignment 7- Writing

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In 3 sentences or more, compare the ways African Americans and white people were treated in Savannah in 1941 to the ways they were treated in last 1961. \*Hint- Use the story you have read this week to find the answers.

Your answer

Submit

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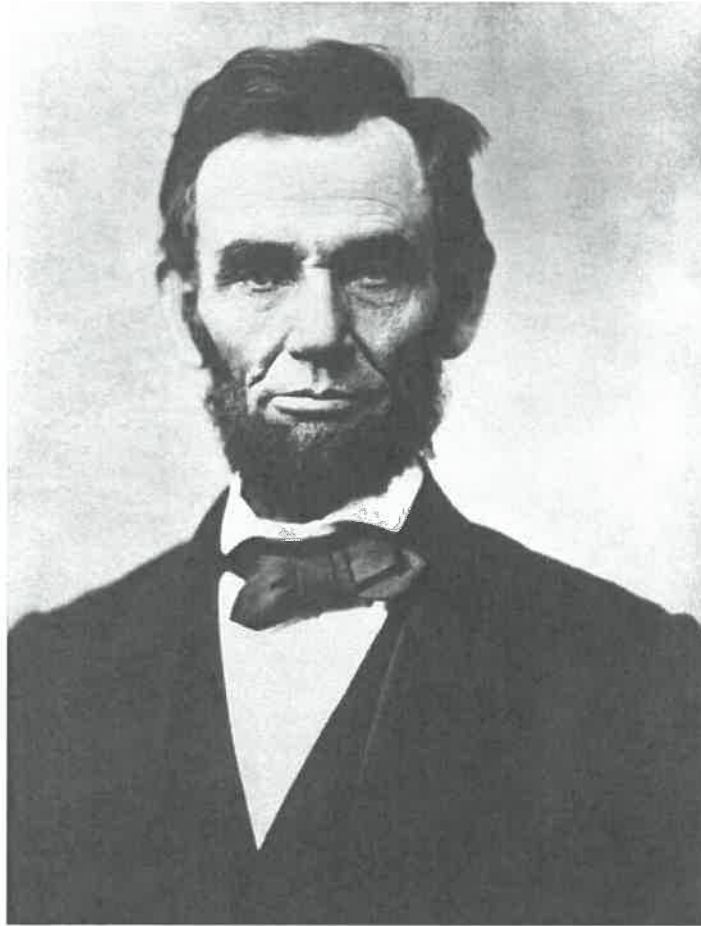
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## U.S. Presidents: Abraham Lincoln

by ReadWorks



Abraham Lincoln was America's 16th president. He is considered to be one of the greatest leaders in the nation's history. He helped guide the United States through the U.S. Civil War. Lincoln also helped to end slavery in the country. Sadly, Lincoln was assassinated near the end of the Civil War in 1865. He became the first U.S. president to be killed in office.

Lincoln was elected president in 1860. Before the election, most people did not know much about Lincoln or his humble background. He was born on February 12, 1809, in a Kentucky log cabin. In 1816, his family moved to the wild Indiana frontier. Lincoln helped his father farm and work the fields. He barely had time for school. He spent no more than one year in a classroom. In 1818, Lincoln's mother died.

Even though Lincoln had very little schooling, he learned how to read and write. Books were

scarce on the frontier, but he closely read the books he got his hands on. Lincoln pored over the family Bible. He would walk for miles to borrow books. Some books he read were Aesop's *Fables* and *Pilgrim's Progress*.

As a young man, Lincoln worked many jobs to earn a living. He was tall and strong. He split logs and fence rails for farmers. He helped take a flatboat down a river to New Orleans. Eventually, he started a general store with a friend. When the store went into debt, he paid those debts off working other jobs. By 1834, a friend encouraged Lincoln to become a lawyer. Instead of learning at a law school, Lincoln taught himself law. "Your own resolution to succeed is more important than any one thing," he would later say.

Among Lincoln's many skills, he was a great writer and speaker. In one of his most famous speeches, known as the Gettysburg Address, Lincoln's words reassured a suffering people at war that democracy would survive.

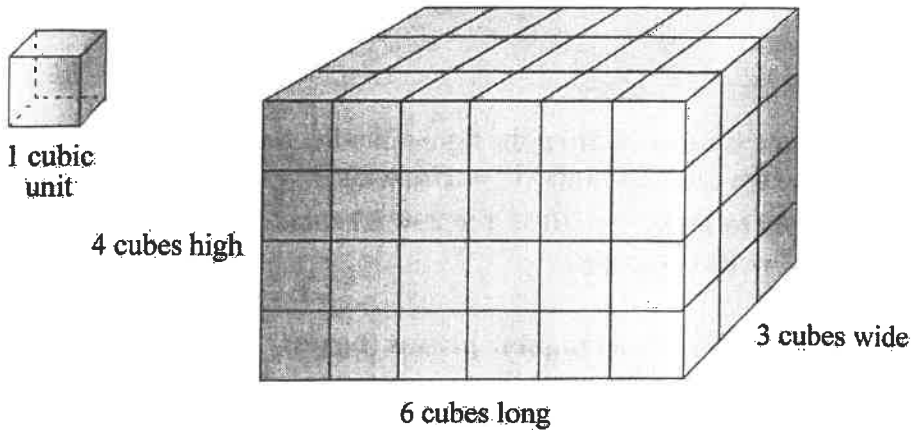
As president, Abraham Lincoln was most proud of the Emancipation Proclamation, which was issued during the Civil War. It declared that the slaves in the southern states rebelling against the U.S. government were free. The proclamation paved the way for the Thirteenth Amendment to the Constitution, which ended slavery in the U.S.

Lincoln's stand against slavery caused him to make many enemies. Even so, his assassination was felt all over the nation from the North to the South. Millions of people admired his spirit and service to his country. A train carried Lincoln's body to Springfield, Illinois, making stops at some major cities. Mourners crowded near the tracks to try and see the train. To this day, people visit Lincoln's tomb to pay their respects.

### 10.4 Understanding Volume

Measurement of volume is expressed in cubic units such as cubic inches, cubic feet, cubic meters, cubic centimeters, or cubic millimeters. The volume of a solid is the number of cubic units that can fit in the solid.

**Example 1:** How many 1 cubic units will it take to fill up the rectangular solid below?

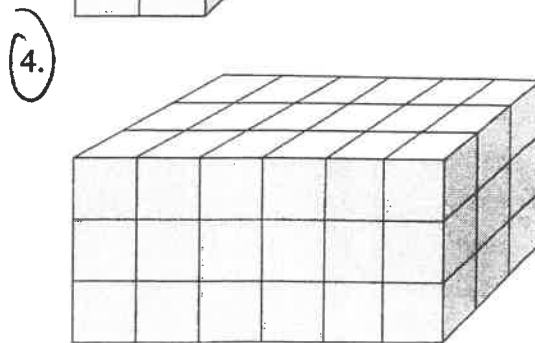
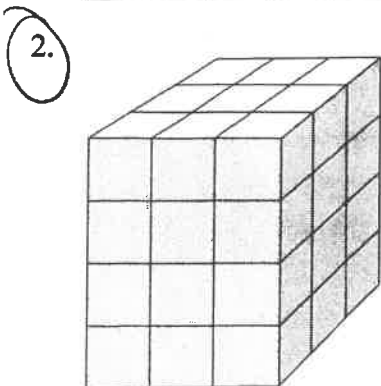
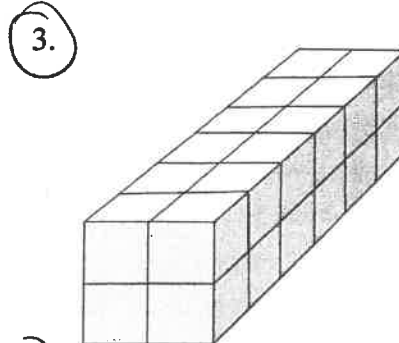
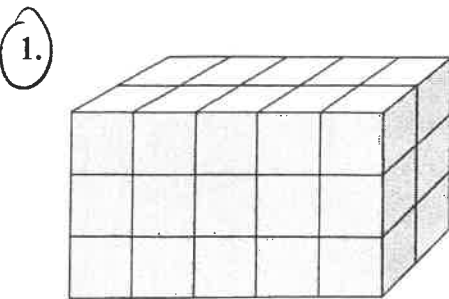


To find the volume, you need to multiply the length times the width times the height.

**Volume of a rectangular solid = length  $\times$  width  $\times$  height ( $V = lwh$ ).**

$V = 6 \times 3 \times 4 = 72$  cubic units or units<sup>3</sup>. Any measurement, inches<sup>3</sup>, cm<sup>3</sup>, etc., raised to the 3rd power means cubic inches, cm, etc.

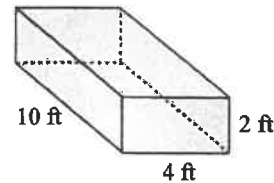
**Find the volume of the blocked figures below. Use the formula  $V = lwh$ .**



### 10.5 Volume of Rectangular Prisms

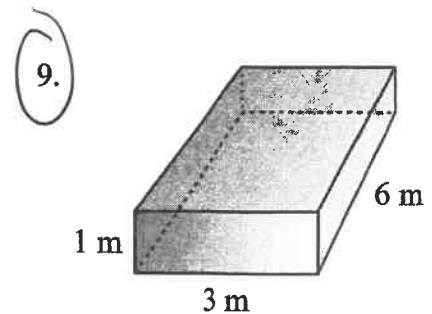
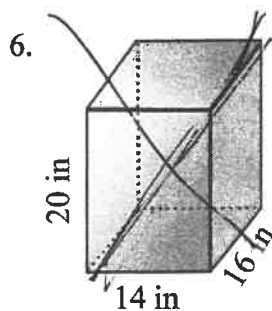
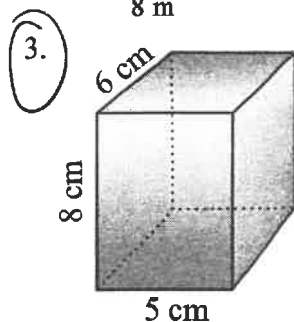
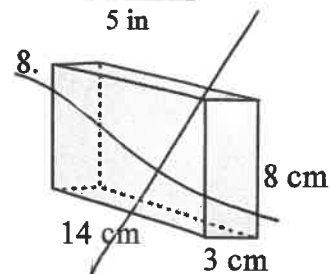
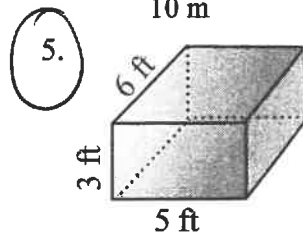
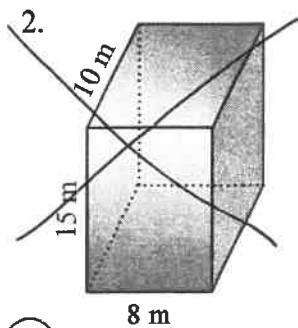
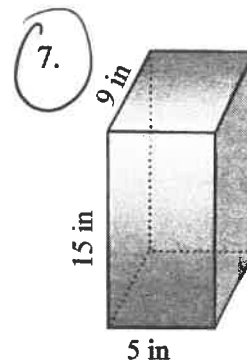
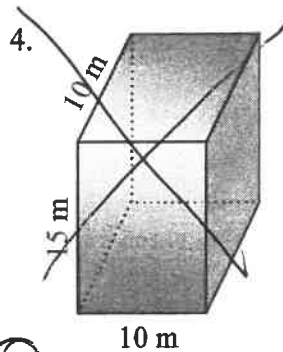
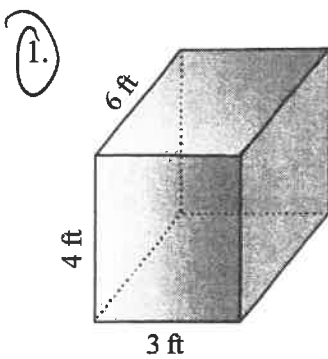
You can calculate the volume ( $V$ ) of a rectangular prism (box) by multiplying the measure of the length ( $l$ ) by the width ( $w$ ) by the height ( $h$ ), as expressed in the formula  $V = (lwh)$ . A second volume formula is  $V = Bh$ . The capital  $B$  in the formula represents the base, which is calculated as  $B = lw$ .

**Example 2:** Find the volume of the box pictured here:



- Step 1:** Insert measurements from the figure into the formula.  $V = lwh$ :  $10 \times 4 \times 2$   
 Or, use the other formula:  $V = Bh$ , with  $B = lw$ .  $B = 10 \times 4 = 40$ ,  $40 \times 2$
- Step 2:** Multiply to solve.  $10 \times 4 \times 2 = 80$  cubic feet or the other formula:  
 $40 \times 2 = 80$  cubic feet.

Find the volume of the following rectangular prisms (boxes).

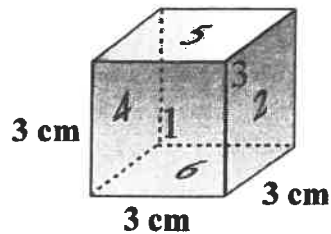


## 10.8 Surface Area of Cubes and Rectangular Prisms

The surface area of a solid is the total area of all the sides of a solid.

### Cube

There are six equal sides on a cube. To find the surface area of a cube, find the area of one side and multiply by 6.

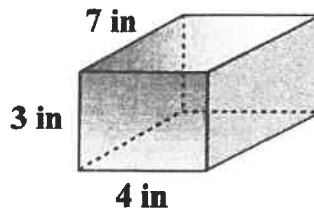


Area of each side of the cube:  $3 \times 3 = 9$  square centimeters

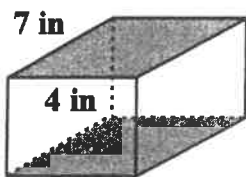
Total surface area:  $9 \times 6 = 54$  square centimeters

### Rectangular Prisms

There are 6 sides on a rectangular prism. To find the surface area, add the areas of the six rectangular sides.  $SA = 2 \times (hw + hl + wl)$



#### Top and Bottom



Area of top side:

$$7 \text{ in} \times 4 \text{ in} =$$

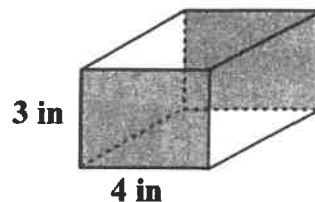
28 square in

Area of top and bottom:

$$28 \text{ square in} \times 2 =$$

56 square in

#### Front and Back



Area of front:

$$3 \text{ in} \times 4 \text{ in} =$$

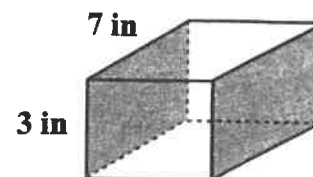
12 square in

Area of front and back:

$$12 \text{ square in} \times 2 =$$

24 square in

#### Left and Right



Area of left side:

$$3 \text{ in} \times 7 \text{ in} =$$

21 square in

Area of left and right:

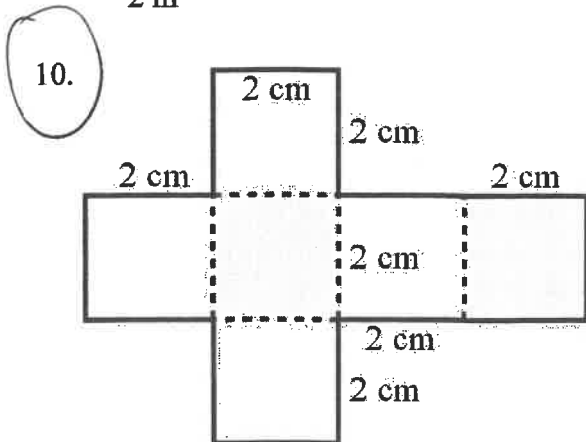
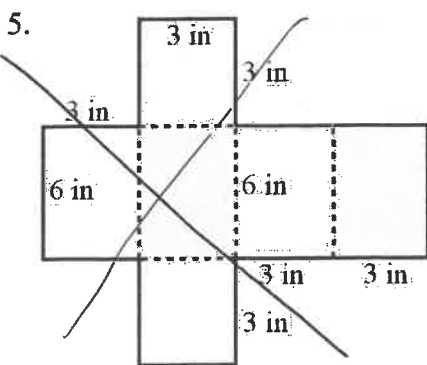
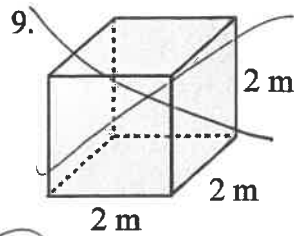
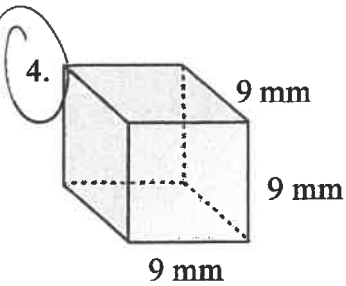
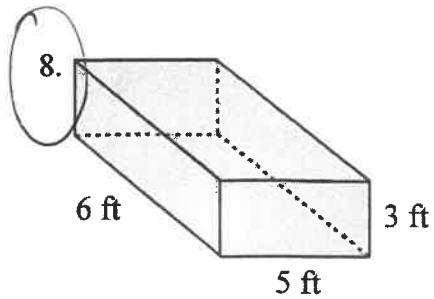
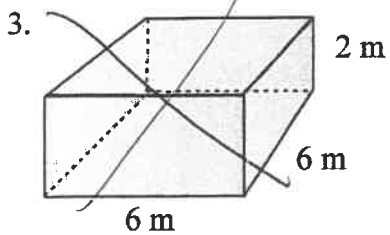
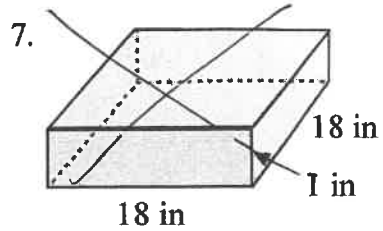
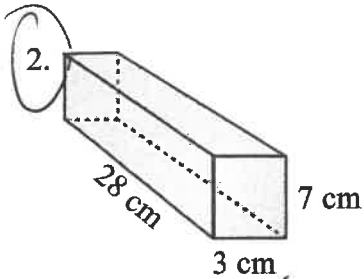
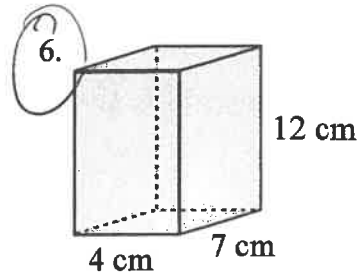
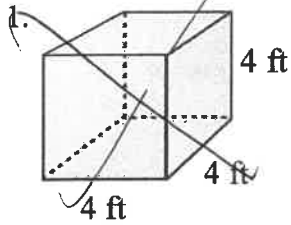
$$21 \text{ square in} \times 2 =$$

42 square in

Total surface area:  $56 \text{ square in} + 24 \text{ square in} + 42 \text{ square in} = 122 \text{ square in}$

Find the surface area of the following cubes and prisms.

$SA_{\text{cube}} = 6 \times s \times s$  and  $SA_{\text{rectangular prism}} = 2lw + 2lh + 2wh$



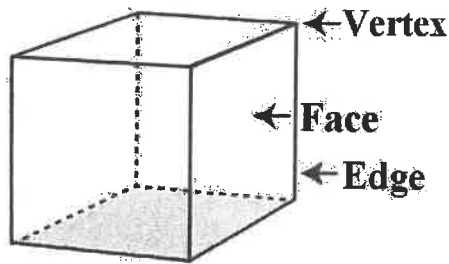
### 10.2 Classifying Solid Figures

Solid figures are classified according to the number of edges, faces, or vertices a figure has.

**Edges** are the lines that make up a figure. The cube shown below has 12 edges.

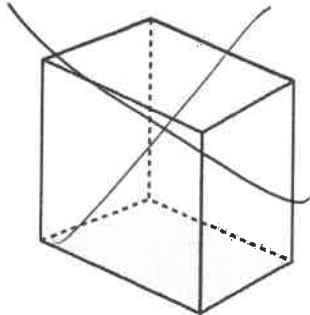
**Faces** are the flat sides that are in a figure. The faces are shaped like a plane figure such as circles, squares, rectangles, triangles, pentagons, hexagons, and octagons. The cube shown below has 6 square faces.

**Vertices** are the corners, or any pointy parts of a figure. The cube shown below has 8 vertices.

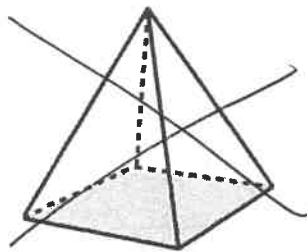


Give the number of edges, faces, and vertices for each figure below.

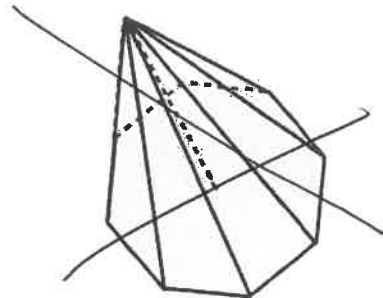
1. rectangular prism



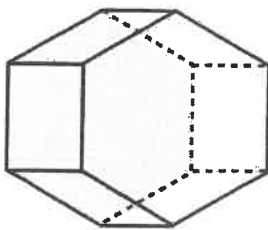
3. square pyramid



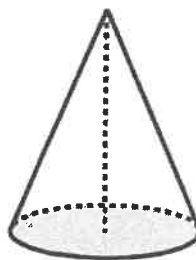
5. octagonal pyramid



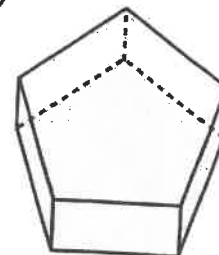
2. hexagonal prism



4. cone

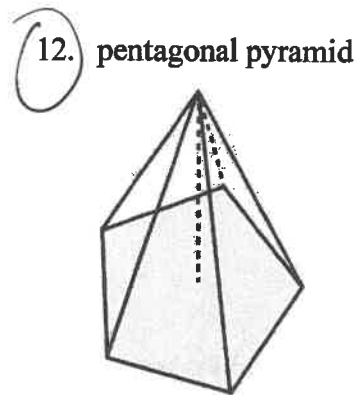
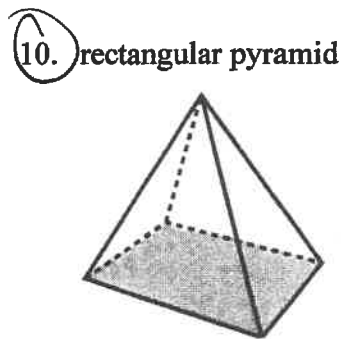
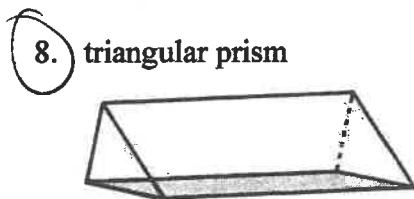
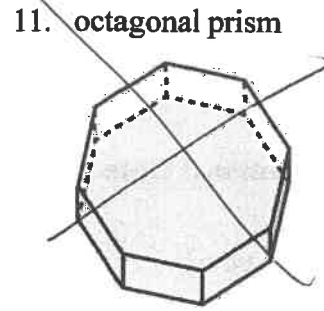
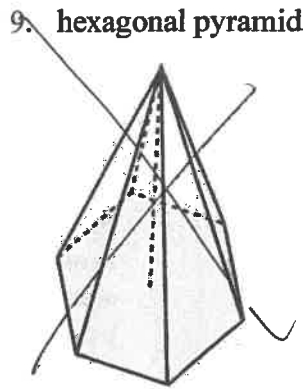
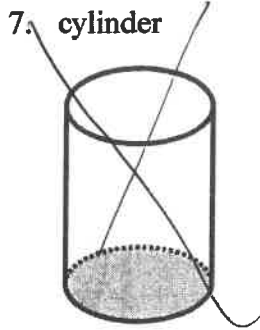


6. pentagonal prism





10.2 Classifying Solid Figures



Give the name of the solid figures described below.

~~13. Which 3 figures have 6 faces?~~

14. Which 2 figures have at least one face shaped like a circle?

~~15. Which figure has 15 edges?~~

16. Which figure has 16 edges?

~~17. Which figure has 12 vertices?~~

18. Which figure has 7 vertices?

~~19. Which 3 figures have 5 faces?~~

20. Which figure has 1 vertex?

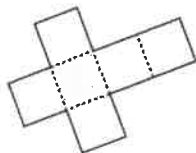
### 10.3 Nets

Nets are two dimensional representations of three dimensional objects.

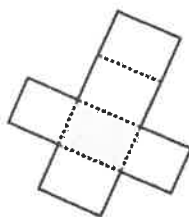
**3-Dimensional Object**

**Net**

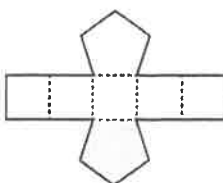
**Cube:**  
is made up of  
6 squares.



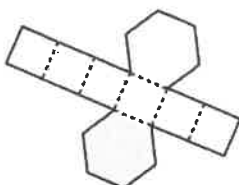
**Rectangular Prism:**  
is made up of 4  
rectangles and 2  
squares.



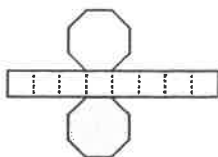
**Pentagonal Prism:**  
is made up of 2  
pentagons and 5  
squares or rectangles.



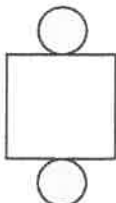
**Hexagonal Prism:**  
is made up of 2  
hexagons and 6  
squares or rectangles.



**Octagonal Prism:**  
is made up of 2  
octagons and 8  
squares or rectangles.



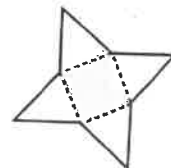
**Cylinder**  
is made up of 2  
circles and 1  
square or rectangle.



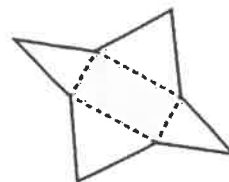
**3-Dimensional Object**

**Net**

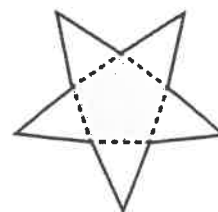
**Square Pyramid:**  
is made up of 1  
square and 4  
triangles.



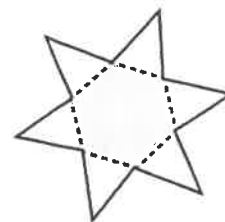
**Rectangular Pyramid:**  
is made up of 1  
rectangle and 4  
triangles.



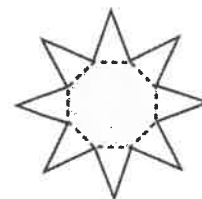
**Pentagonal Pyramid:**  
is made up of 1  
pentagon and 5  
triangles.



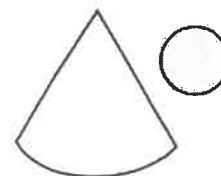
**Hexagonal Pyramid:**  
is made up of 1  
hexagon and 6  
triangles.



**Octagonal Pyramid:**  
is made up of 1  
octagon and 8  
triangles.



**Cone**  
is made up of 2 circles  
and 1 triangle with a  
round base.



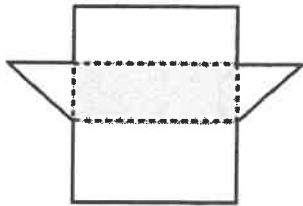
How to figure out which solid object is represented by a net:

**First:** Look for the key shape that will identify the name, such as triangle, square, pentagon, etc.

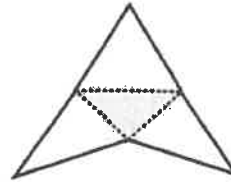
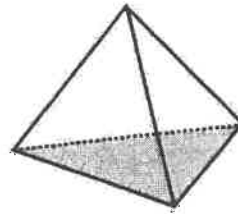
**Second:** If the shapes attached to the identifying shape are squares or rectangles, it is the net of a prism. If the shapes attached to the identifying shape are triangles, it is the net of a pyramid.

For example: the net of a triangular prism looks like 2 triangles with squares or rectangles attached. The net of a triangular pyramid looks like 1 triangle with 3 more triangles attached.

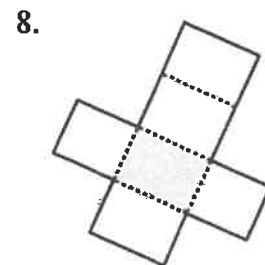
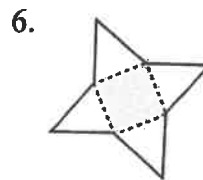
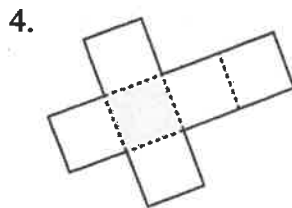
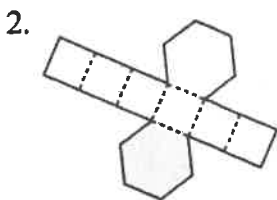
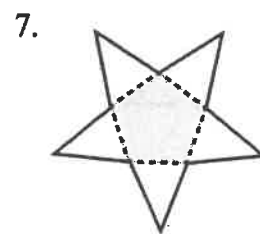
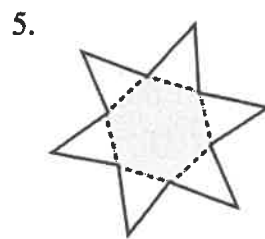
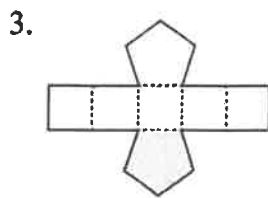
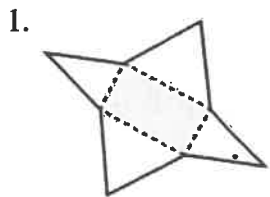
Triangular Prism



Triangular Pyramid



Which geometric solid can be formed for each net below?



# Colonists Speak Out

**DIRECTIONS** Read each numbered description. On the line provided, write the letter of the person, group, or law that goes with it.

- |          |  |                         |
|----------|--|-------------------------|
| 1 _____  | protested tax laws in Parliament                           | a. Patrick Henry        |
| 2 _____  | passed a tax on colonial newspapers                        | b. Mercy Otis Warren    |
| 3 _____  | was accused of treason by others in the House of Burgesses | c. Daughters of Liberty |
| 4 _____  | wrote plays about British leaders being greedy             | d. Crispus Attucks      |
| 5 _____  | captured British tax collectors                            | e. Stamp Act            |
| 6 _____  | wove their own cloth                                       | f. Benjamin Franklin    |
| 7 _____  | organized the first Committee of Correspondence in Boston  | g. Sons of Liberty      |
| 8 _____  | included a tax on imports to the colonies                  | h. Samuel Adams         |
| 9 _____  | was killed at the Boston Massacre                          | i. Paul Revere          |
| 10 _____ | made a picture of the Boston Massacre                      | j. Townshend Acts       |



Benjamin Franklin

# Lesson

# 2

## Time

1750

1790

1765

Britain passes the Stamp Act

1767

Britain creates the Townshend Acts

1770

The Boston Massacre takes place



### WHAT TO KNOW

Why were colonists angered by Britain's new colonial tax laws?

### VOCABULARY

representation p. 303

treason p. 303

congress p. 303

boycott p. 304

repeal p. 304

imperial policy p. 305

protest p. 305

### PEOPLE

Benjamin Franklin

Mercy Otis Warren

Patrick Henry

Samuel Adams

Crispus Attucks

Paul Revere

### PLACES

New York City

Boston



### CAUSE AND EFFECT

Cause	Effect

# Colonists Speak Out



A hush falls over the British Parliament. Benjamin Franklin is about to speak out against Britain's tax law. The year is 1766, and you have traveled to London with Franklin.

"Do you think it right that the colonies should be protected by Britain and pay no part of the cost?" asks one member of Parliament.

"That is not the case," Franklin says. "The colonies raised, clothed, and paid, during the last year, near 25,000 men, and spent many millions."

Surely, you think, Parliament must take back the law.



THE BRITISH PARLIAMENT

## Primary Sources

### Stamp Act Cartoon

**Background** This 1765 drawing shows colonists in New Hampshire reacting to the Stamp Act.

The straw figure represents a tax collector.

The coffin represents the wish to see the tax die.



**DBQ Document-Based Question** What does this drawing tell you about how some colonists felt about the Stamp Act?

## The Stamp Act

In 1765, Parliament approved another tax law. The Stamp Act put a tax on many paper items in the colonies. Newspapers, legal documents, and even playing cards had to have a special stamp on them to show that the tax had been paid.

### No Taxation Without Representation

British leaders felt the tax was fair. Many colonists, however, were angry. They said Britain could not tax them because they had no **representation** in Parliament. No one was speaking or acting for them. **Mercy Otis Warren**, a Massachusetts writer, disagreed with the new tax. She began writing plays that accused British leaders of being greedy.

In Virginia, **Patrick Henry** told other members of the House of Burgesses that Parliament did not represent the colonies. Those who supported Parliament's actions shouted "Treason! Treason!" By accusing Henry of **treason**, they were saying he was guilty of working against his own government.

In October 1765, representatives from nine colonies met in **New York City** in what became known as the Stamp Act Congress. A **congress** is a formal meeting of representatives. There, colonial leaders spoke out against the Stamp Act. Soon people began to repeat these words—"no taxation without representation."

### READING CHECK CAUSE AND EFFECT

Why were colonists angry about the Stamp Act?

## Colonists Work Together

Many colonists tried to force Britain to take back the Stamp Act. Some wrote letters to Parliament. Some chose not to buy taxed goods. Others began to **boycott**, or refuse to buy, all British goods.

### The Sons and Daughters of Liberty

Soon after the Stamp Act was passed, a group of colonists called the Sons of Liberty began to work against it. To most colonists, *liberty* meant freedom to make their own laws.

The Sons of Liberty captured several British workers who tried to collect the tax. They covered these tax collectors with sticky tar and dumped feathers on them. The Sons of Liberty also chased tax collectors out of their towns.

Women also took action against the Stamp Act. They formed their own group, known as the Daughters of Liberty. Members of the group spun thread and wove their own cloth instead of buying British cloth. The cloth was so popular that women in Providence, Rhode Island, chose a large place in which to make it—the city courthouse!

### The Stamp Act Is Repealed

By 1766, so many colonists opposed the Stamp Act that Parliament voted to **repeal**, or take back, the act. The very next day, however, Parliament passed the Declaratory Act. It said that Britain had the “full power . . . to make laws . . . [for the] people of America . . . in all cases.” This new law worried many colonists.



Members of the Committees of Correspondence wrote letters to express their points of view about British laws.



## Committees of Correspondence

The repeal of the Stamp Act showed that the colonists could work together, but they needed better ways to share information. News traveled slowly because letters were mostly delivered by riders on horseback. It could take many days for people to find out about events in other colonies.

To spread information between colonies more quickly, the colonists formed Committees of Correspondence. Members of these committees wrote letters to one another. In their letters, they told about what was happening in their town and colony.

**Samuel Adams** organized the first Committee of Correspondence in **Boston** in 1764. Adams had spoken out many times against British **imperial policies**. These were the laws and orders issued by

the king and the British Parliament. The next year, colonists in New York formed another committee.

Colonists soon spoke about the need for a Committee of Correspondence in every colony. Virginia formed a committee in 1773. Members of the Virginia committee wrote that all colonists should be “much disturbed by various rumors and reports of proceedings tending to deprive them of their . . . rights.”

Committee members then asked other colonies to start their own Committees of Correspondence. Committee members in each colony wrote letters to other cities and towns. They asked people in the other colonies to **protest**, or work against, British policies.

**READING CHECK** MAIN IDEA AND DETAILS  
**Why were the Committees of Correspondence formed?**

## Delivering the Mail

**DIAGRAM** Delivering the mail took much longer than it does today. About how long did it take mail to go from Boston to New York City? from Boston to Williamsburg?

→ Baltimore  
8–12 days from Boston

→ Williamsburg  
12–16 days from Boston

BOSTON  
5 MILES  
1779



## Supporting the Boycott

To support the boycott against British goods, sewing groups sprang up all over the colonies. Much of the spinning, weaving, and sewing was done by girls. Twelve-year-old Anna Green was part of a sewing group at her church in Boston. Each morning, as the minister read from the Bible, Anna worked away at the spinning wheel.

Fifteen-year-old Charity Clark spun wool in her home in New York City. In a letter to her cousin in Britain, she wrote, "Heroines may not distinguish themselves at the head of an Army, but freedom [will] also be won by a fighting army of [women] . . . armed with spinning wheels."

**Make It Relevant** What would you have done to support the colonial boycott? Explain.



## The Townshend Acts

In 1767, Parliament passed several new tax laws called the Townshend Acts. The Townshend Acts taxed imports, such as glass, tea, paint, and paper, that were brought into the colonies. The new laws also set up a new group of tax collectors. Even though Parliament had repealed the Stamp Act, the Townshend Acts showed that Parliament believed it still had the right to make laws for the colonists.

### More Boycotts

Once again, many colonists joined together in boycotting British goods. The Daughters of Liberty asked people to stop drinking British tea, and merchants in Boston would not import taxed goods. Some colonists would not paint their

houses because they did not want to pay the tax on paint.

Like the Stamp Act, the Townshend Acts did not last very long. Sales of British goods in the colonies went down, and tax officers collected little money. In 1770, Parliament repealed all of the Townshend Acts except for the tax on tea. However, many colonists still would not buy British tea.

As the number of people taking part in protests grew, Parliament sent more soldiers to the colonies. By 1770, about 9,000 British soldiers were in the colonies. About 4,000 of them were stationed in the city of Boston.

### READING CHECK CAUSE AND EFFECT

What were some of the effects of the Townshend Acts?

# The Boston Massacre

Having British soldiers in their towns angered many colonists. They made fun of the soldiers' bright red uniform jackets, calling them "lobsters" and "redcoats." Some of the soldiers became so angry that they destroyed colonial property.

## Shots Are Fired

As anger between the colonists and the British soldiers grew, fights often broke out. One of the worst fights took place in Boston on March 5, 1770, when a large crowd of angry colonists gathered near several British soldiers. The colonists shouted at the soldiers and threw rocks and snowballs at them.

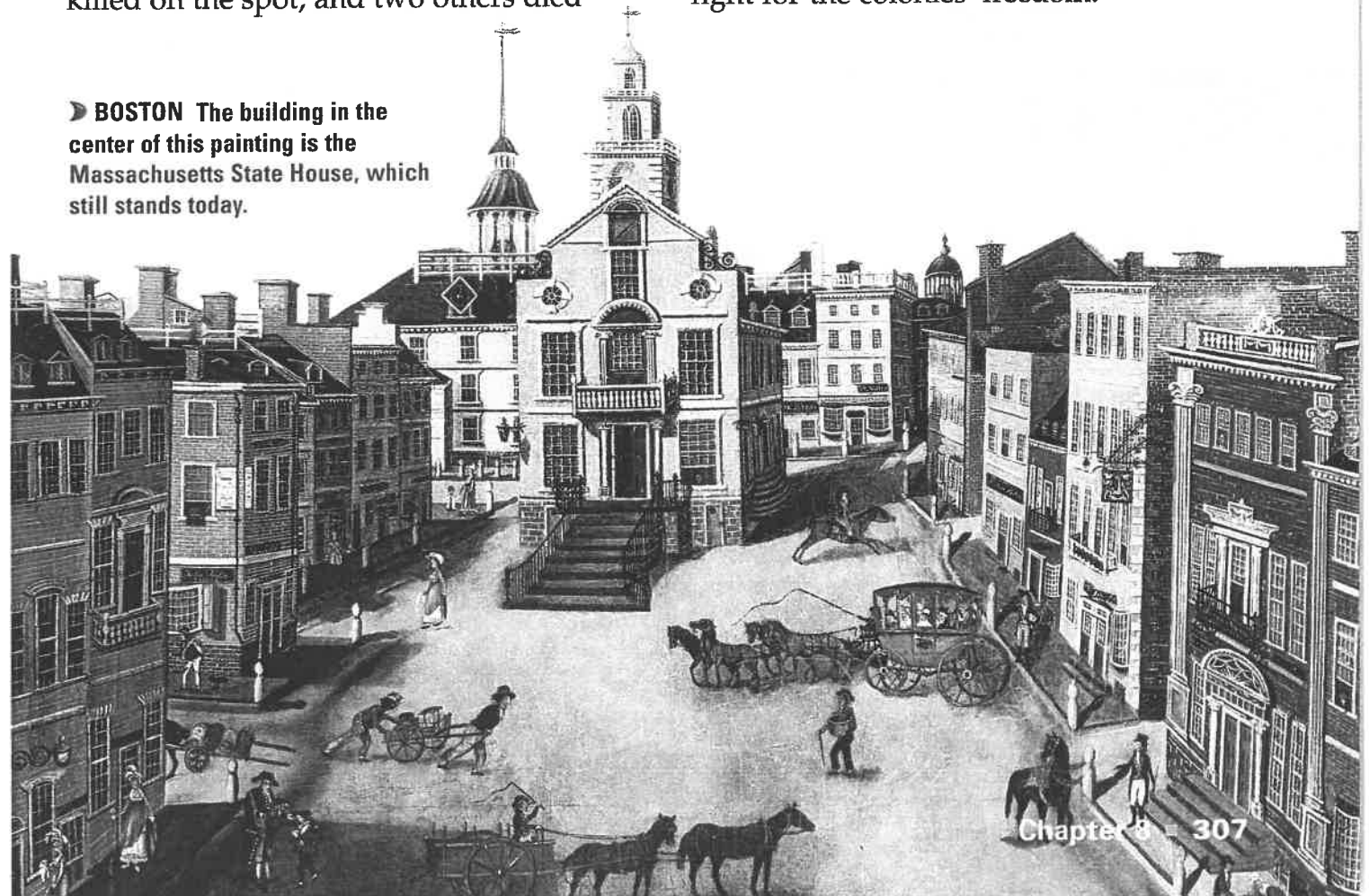
When the crowd moved forward, they knocked down some of the soldiers. The soldiers opened fire. Three colonists were killed on the spot, and two others died

► **BOSTON** The building in the center of this painting is the Massachusetts State House, which still stands today.

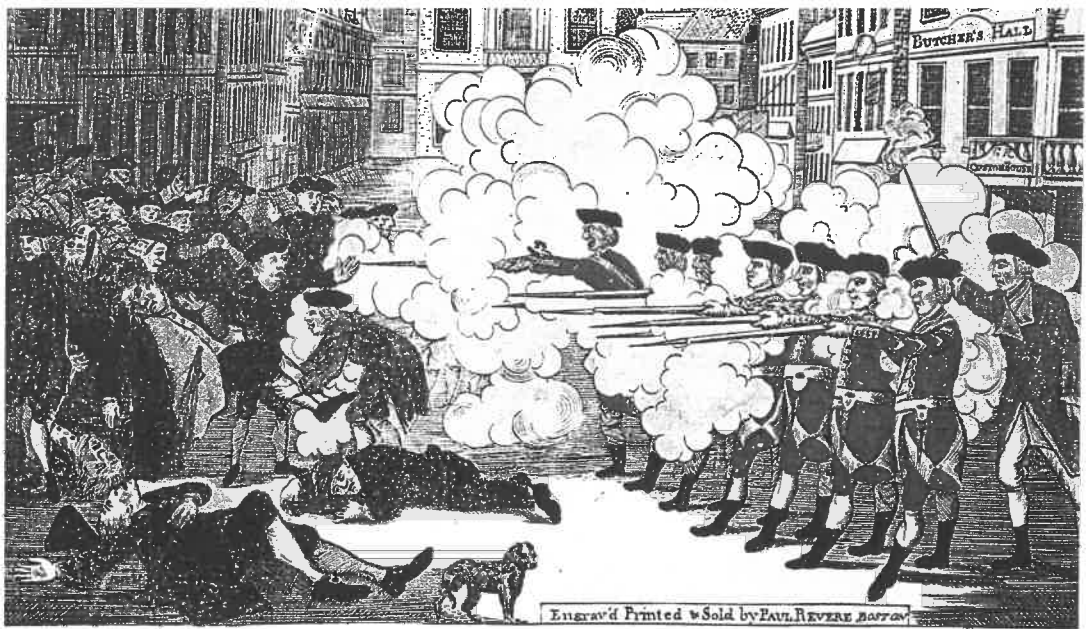


► **CRISPUS ATTUCKS** This painting shows what Crispus Attucks may have looked like.

later. Among the dead was an African American sailor named **Crispus Attucks** (A•tuhks). Many people think of Crispus Attucks as the first person killed in the fight for the colonies' freedom.



► **THE BOSTON MASSACRE** Paul Revere's engraving was meant to stir up the colonists' anger against the British.



Paul Revere, a Boston silversmith known for his simple and beautiful work, supported the colonists. He made a picture of the shooting and titled it *The Bloody Massacre* (MA•suh•ker). A massacre is the killing of many people who cannot defend themselves. The shooting soon became known as the Boston Massacre.

**READING CHECK** CAUSE AND EFFECT

What was the cause of the Boston Massacre?

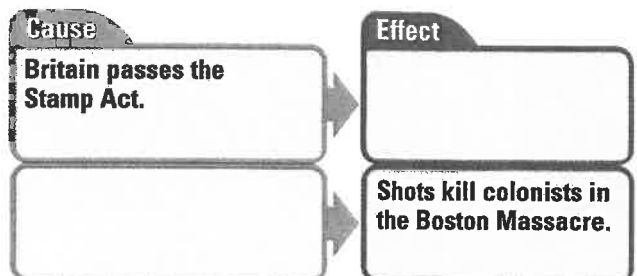
**Summary**

Britain's new tax laws upset many colonists. They believed they had a right to be represented in the government that taxed them. Many colonists worked together to protest Britain's taxes. As anger between the colonists and British officials grew, fights broke out. Some of the worst fighting took place in Boston.

**REVIEW**

- 1. WHAT TO KNOW** Why were colonists angered by Britain's new colonial tax laws?
- 2. VOCABULARY** Explain what **representation** has to do with taxation.
- 3. HISTORY** Why did some colonists accuse Patrick Henry of treason?
- 4. CRITICAL THINKING** What made Boston a likely place for fighting to begin between colonists and British soldiers?
- 5. DRAW A CARTOON** Imagine you are a colonist who is against British tax laws. Draw a cartoon that encourages others to boycott British goods.

- 6. CAUSE AND EFFECT** On a separate sheet of paper, copy and complete the graphic organizer below.



Essential Question

# What Are Mixtures and Solutions?

## Engage Your Brain!

As you read the lesson, look for the answer to the following question and record it here.

How are a smoothie and a salad alike?  
How are they different?

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## Active Reading

### Lesson Vocabulary

List each term. As you learn about each one, make notes in the Interactive Glossary.

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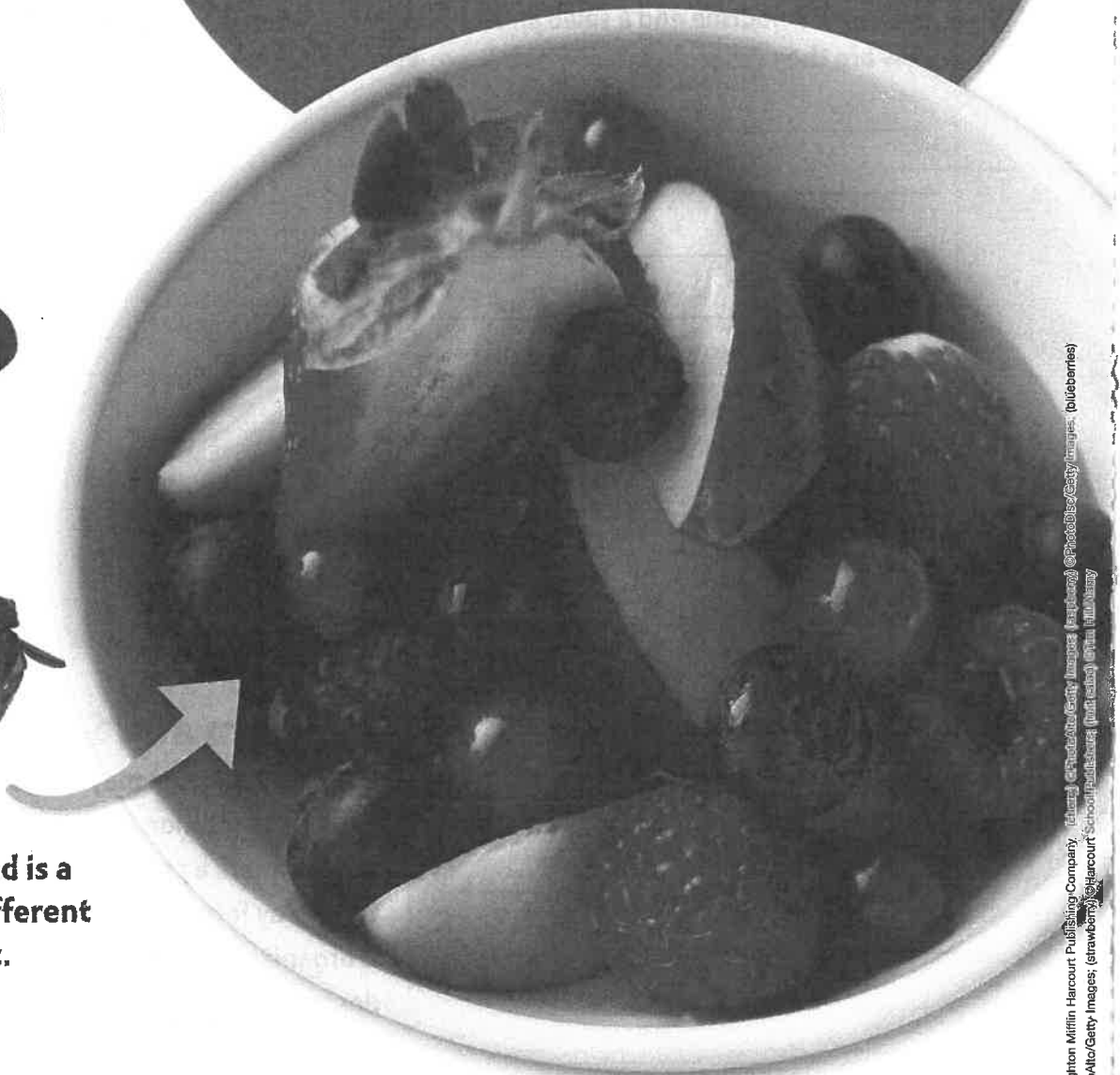
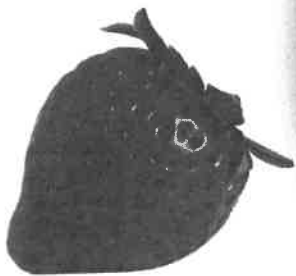
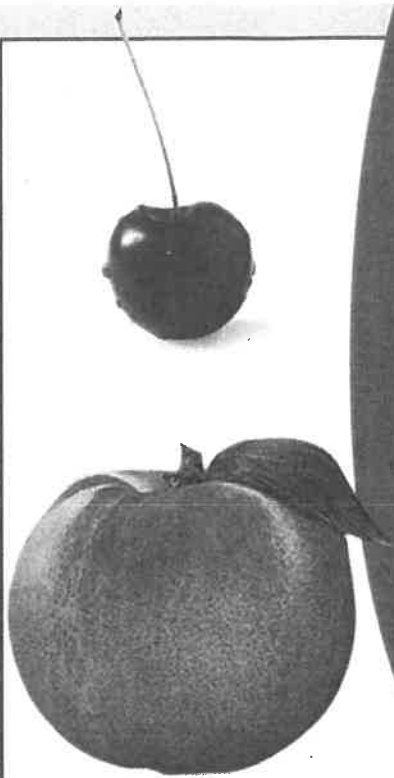
### Problem and Solution

Ideas in this lesson may be connected by a problem-solution relationship. Active readers mark a problem with a *P* to help them stay focused on the way information is organized. When multiple solutions are described, they mark each solution with an *S*.

# Matter Mix-Up

A box of colored pencils. A basket of footballs, tennis balls, and hockey pucks. A toy box full of toys. All these things are mixtures. But what is a mixture?

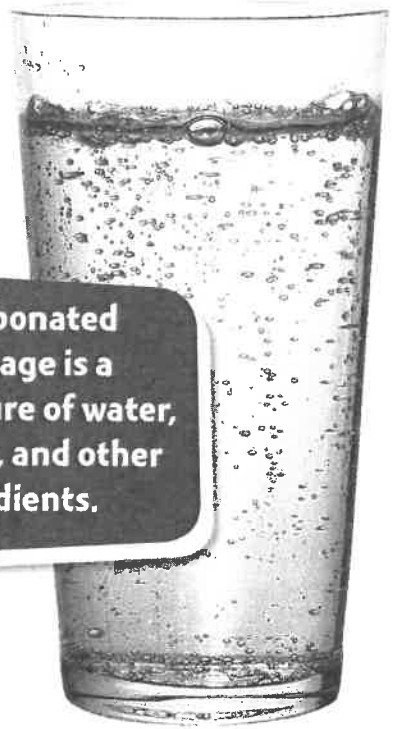
**Active Reading** As you read the next page, draw two lines under the conclusion. Draw one line under each fact that leads to the conclusion.



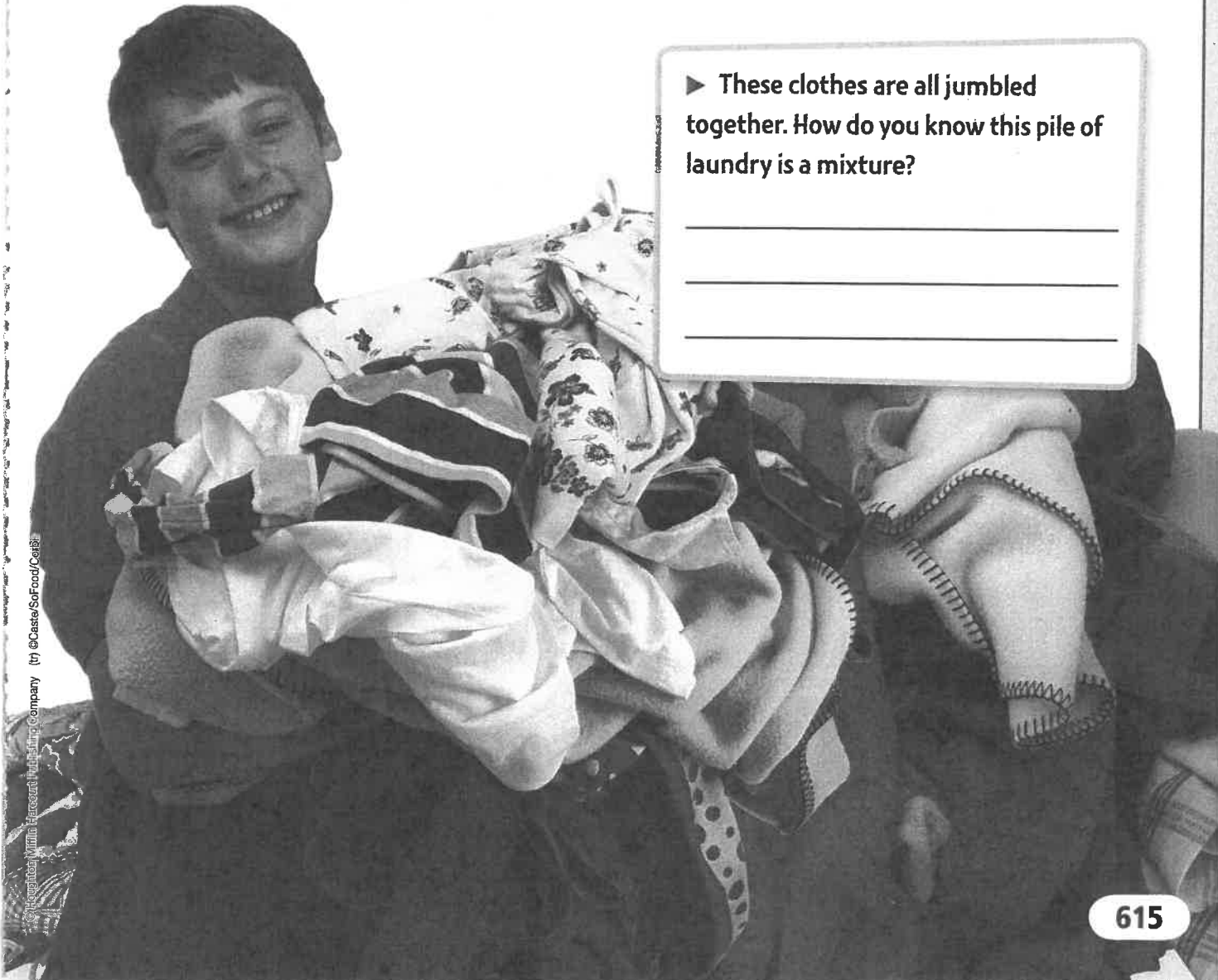
**This fruit salad is a mixture of different pieces of fruit.**

Look at the mixtures on these pages. They have a few things in common. First, two or more substances or objects were combined. The fruit salad has several types of fruit. The laundry pile has several types of clothing. Second, each type of matter in a mixture keeps its own identity. The peach in the fruit salad is the same type of matter as it was before it was mixed into the fruit salad. The jeans in the laundry pile are still jeans.

By now, you've probably figured out that a **mixture** is a combination of two or more substances that keep their identities. The parts of a mixture don't undergo a chemical change. Making a mixture is a physical change.



A carbonated beverage is a mixture of water, gases, and other ingredients.



► These clothes are all jumbled together. How do you know this pile of laundry is a mixture?

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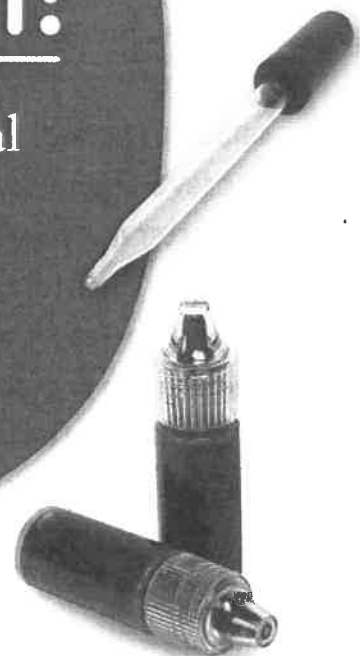
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# Find a Solution!

In some mixtures, it's easy to see the individual pieces that are mixed together. In other mixtures, small parts are very evenly mixed. What are these special mixtures?

**Active Reading** As you read these two pages, underline lesson vocabulary words each time they are used.

**E**ach bite of fruit salad contains different combinations of fruit. You can separately taste peaches and different kinds of berries. But what do you notice when you drink a glass of lemonade? Every sip tastes the same. This is because lemonade is a solution. A **solution** is a mixture that has the same composition throughout.



When food coloring is added to water, the two liquids evenly mix, forming a solution.

A solution forms when one substance *dissolves* in another. When something dissolves, it breaks up into particles so tiny they can't be seen even with a microscope. These particles then evenly mix with the other part of the solution. Not everything dissolves. If you put a rock and salt in water, the rock won't dissolve, but the salt will.

Solutions are commonly liquids, such as the mixture of the different liquids that make up gasoline. But not all solutions are liquids. Air is a solution of different gases. Tiny particles of nitrogen, oxygen, and other gases are evenly mixed in air. Brass is an example of a solid solution formed from solid copper and solid zinc.

**A mixture of sand and water forms where waves wash over the sand. Such a mixture is not a solution.**

**Ocean water itself is a solution. It contains several different dissolved substances.**

► What makes a solution different from other mixtures?

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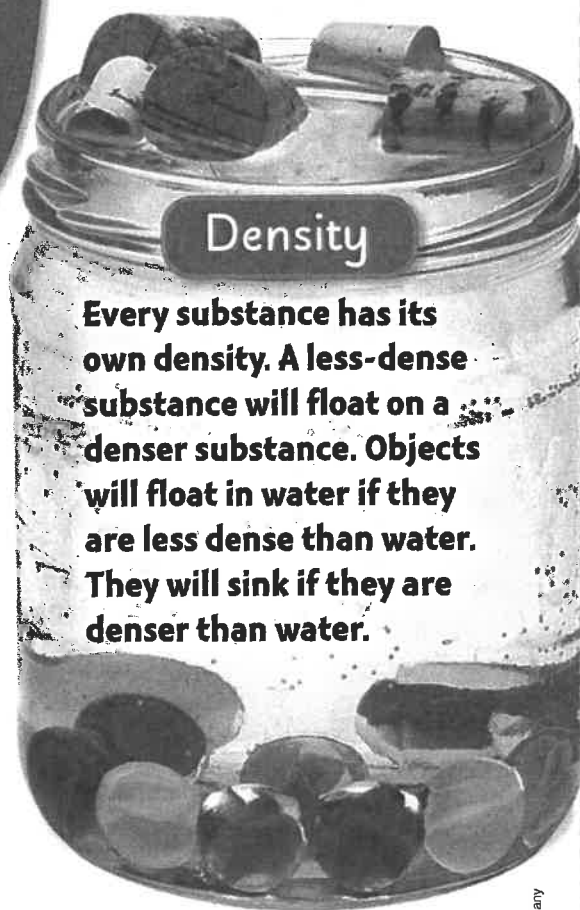
# Separating Mixtures

Suppose you really don't like olives. How are you going to get them off that deluxe pizza your friend ordered? Sometimes you need to separate the components of a mixture.

**Active Reading** As you read this page, put brackets [ ] around the sentence that describes the problem and write *P* next to the sentence. Underline the sentence that describes the solution and write *S* next to it.

**M**ixtures are not always easy to separate. But since mixing is a physical change, each component in a mixture keeps most of its physical properties. Physical properties such as color, size, melting point, boiling point, density, and ability to dissolve can be used to separate mixtures. Separating a mixture can be very simple. Or it can involve several, complex steps when one method is not enough.

► What property was used to separate the items on this tray?



**Every substance has its own density. A less-dense substance will float on a denser substance. Objects will float in water if they are less dense than water. They will sink if they are denser than water.**



# When One Isn't Enough

## sieve/mesh screen

A sieve or mesh screen has holes that matter can pass through. Matter that is smaller than the holes passes through the mesh screen while matter that is larger than the holes stays above the mesh screen.

## magnetic force

A magnet attracts matter that contains iron, separating it from the other parts of the mixture.

## filtration

A filter works like a mesh screen with very tiny openings, or pores. Only the smallest bits of matter—like water particles and dissolved particles of salt—can pass through the pores.

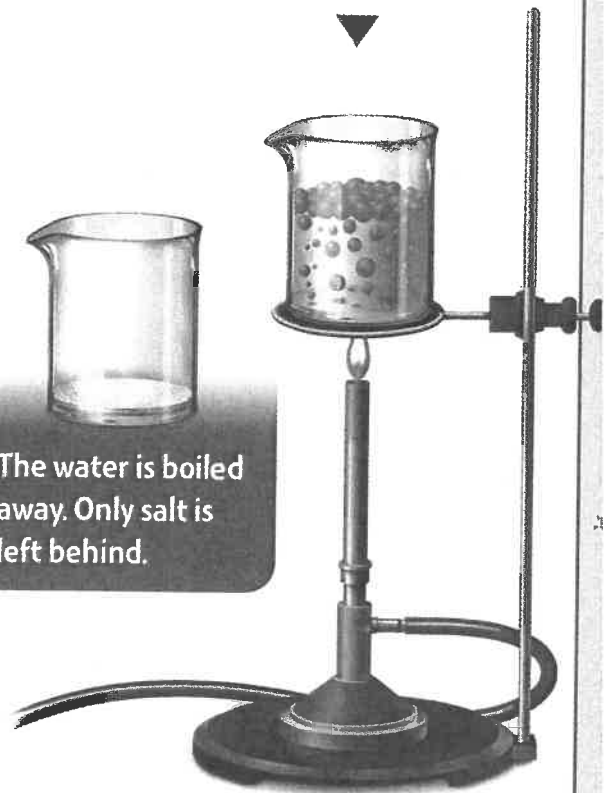
## evaporation/boiling

Boiling is when a liquid rapidly changes to a gas at the boiling point of the liquid. Evaporation also changes a liquid to a gas, but it occurs at temperatures below the boiling point. During these processes, only the liquid particles leave the solution. Dissolved particles stay behind.

A magnet takes away bits of iron.

Water is added. Then the filter removes the soil.

The water is boiled away. Only salt is left behind.



# Proportions and Properties

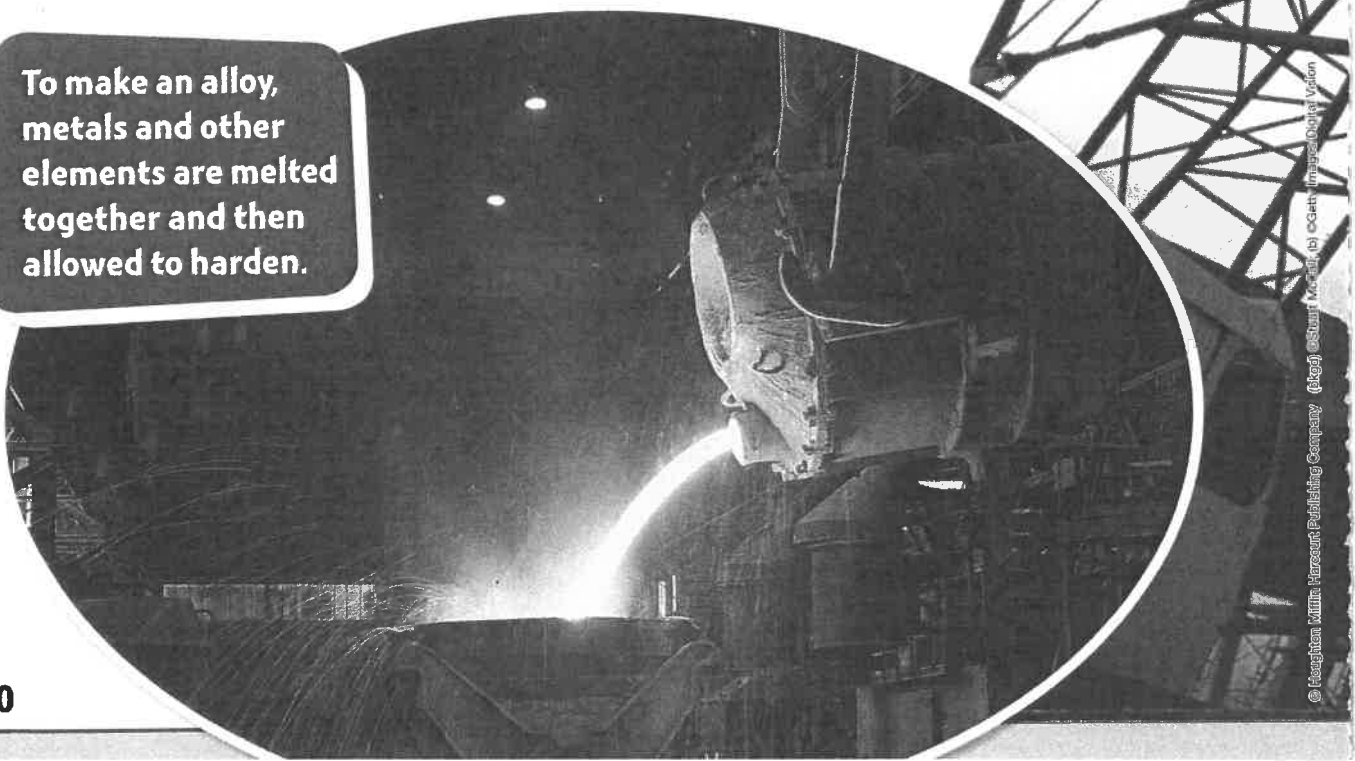
When you make lemonade, it's important to get the amounts of lemon and sugar right. If it's too sweet or too sour, it doesn't taste right. How do proportions affect the properties of a mixture?

**M**ixtures of metals are called *alloys*. The properties of the alloy depend on how much of each metal is in the mixture. Chemists first decide on the properties they need their alloy to have. Then they decide how much of which metals will give them those properties.

Steel is an alloy. It is made from iron and other substances. Different substances

give steel different properties. For example, adding chromium will make steel shiny. Metals such as nickel and titanium can keep it from rusting. Carbon is often added to steel to make it stronger. Other substances help steel used in tools stay sharp or keep from wearing down.

To make an alloy, metals and other elements are melted together and then allowed to harden.



► For each steel object on this page, list at least two properties that the steel must have.

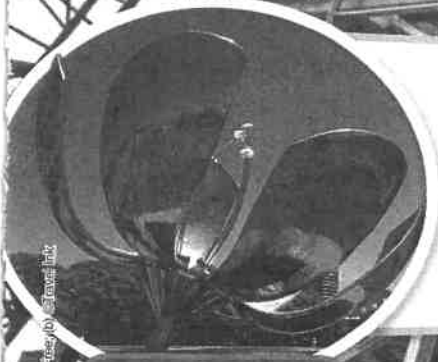


Kettle

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_



Sculpture

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Steel Building Frame

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

# Do the Math!

## Use Graphs

Compare and contrast the metals and other substances in stainless steel and tool steel by making two circle graphs.

Substance	Stainless Steel %	Tool Steel %
Iron	74	94
Chromium	18	0
Nickel	8	1
Carbon	0	1
Other	0	4

# Sum It Up!

When you're done, use the answer key to check and revise your work.

Write **S** if the photo and caption describe a mixture that is a solution.

Write **M** if they describe a mixture that is **NOT** a solution.



\_\_\_\_\_ (1) When you combine ingredients to make a sandwich, each ingredient keeps its identity. You could easily separate them.



\_\_\_\_\_ (2) Soft drinks are made by dissolving a gas and other ingredients in water. The dissolved particles are much too small to be seen.



\_\_\_\_\_ (3) The solid bits of orange pulp do not dissolve in the liquid. Because the pulp particles are large, they will eventually settle out.



\_\_\_\_\_ (4) Particles of several different gases make up air. Air on one side of a room is just like the air on the other side.

## Summarize

Fill in the missing words to tell how to separate mixtures.

To sort the items in your junk drawer, you'd use observable (5) \_\_\_\_\_ such as size, color, shape, and (6) \_\_\_\_\_ attraction. But how would you separate table sugar, sand, and pebbles? Because the pebbles are (7) \_\_\_\_\_ than the grains of sugar and sand, you could remove them using a sieve, or mesh (8) \_\_\_\_\_. You could then add water and shake until the sugar (9) \_\_\_\_\_. If you poured this mixture through a coffee (10) \_\_\_\_\_ into a beaker, the (11) \_\_\_\_\_ would be left on the filter, but the sugar solution would pass through. Adding heat would cause the water to (12) \_\_\_\_\_, leaving solid sugar behind.

Answer Key: 1. M 2. S 3. M 4. S 5. properties 6. magnetic 7. larger 8. screen 9. dissolves 10. filter 11. sand 12. evaporate or boil

Name \_\_\_\_\_

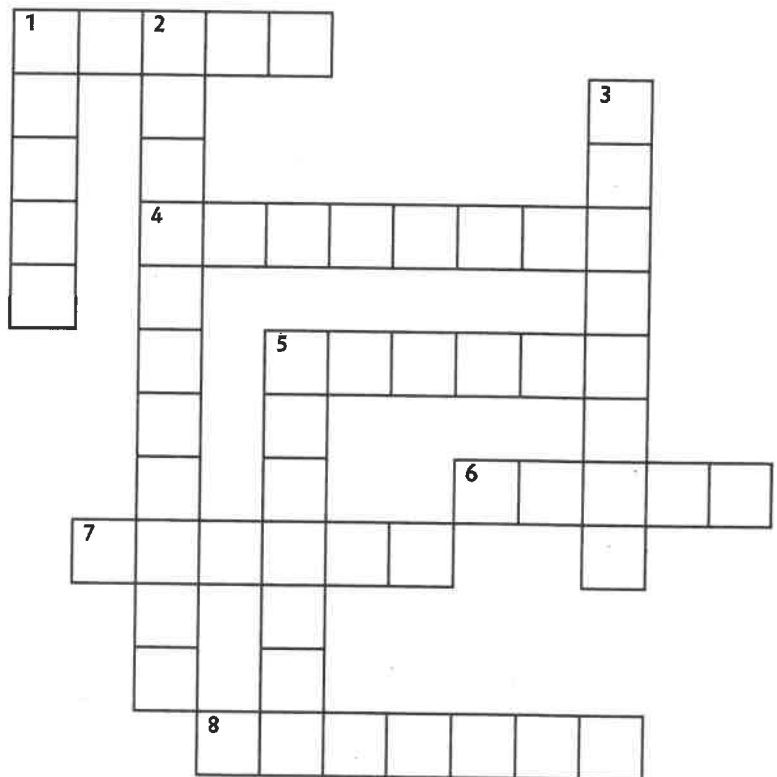
### Word Play

1

Complete the crossword puzzle. Use the words in the box if you need help.

#### Across

1. Another name for a mesh screen
4. Type of change that doesn't involve the formation of a new kind of matter
5. Tool that attracts objects that contain iron
6. What an object that is less dense than water will do when placed in water
7. Object used to separate very small particles from a mixture
8. The amount of matter in a given volume



#### Down

1. A physical property; for example, round, square, rectangular, or flat
2. Process by which a liquid changes slowly to a gas
3. Kind of mixture that has the same composition throughout
5. A combination of two or more substances that keep their individual identities

sieve

shape

evaporation

solution\*

physical

magnet

mixture\*

float

filter

density

\* Key Lesson Vocabulary

# Apply Concepts

2 Circle the substances below that are solutions.



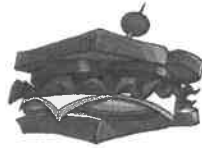
brass trumpet



trail mix



shells



sandwich



drink from a mix

3 Make a list of solid mixtures in your classroom.

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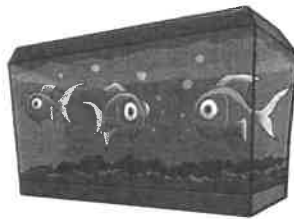
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4 Draw and label a diagram to show how you would separate each mixture.



**5**

Answer these questions in terms of what you know about mixtures.

a. How would changing the proportions of substances in an alloy change its properties?

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b. Why is it possible to use physical properties to separate a mixture?

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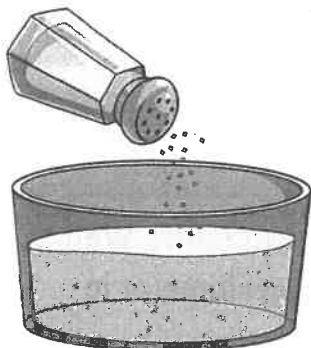
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c. Recycling help us conserve resources. Draw a line connecting each piece of garbage in a mixed bag with the bin it should be thrown in.

milk jug      soup can      envelope      cardboard box  
soda can      water bottle      broken pencil

Garbage      Plastic      Aluminum and Tin      Paper

**6**



Salt seems to disappear when it is poured into water. Use the terms *mixture*, *solution*, and *dissolve* to explain what happens.

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**7** Tell how you would use one or more of these tools to separate the mixtures.



Rice from dried soup mix

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Salt from saltwater

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Nails from gravel

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**8** Tell what would happen if you stirred each of these cups faster.



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Share what you have learned about mixtures with your family. With a family member, identify examples of mixtures at mealtime, or in places in your home.

Essential Question

# What Is the Atomic Theory?

## Engage Your Brain!

As you read the lesson, look for the answer to the following question and record it here.

This building in Brussels, Belgium, is called the Atomium. Why do you think it was given that name?

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## Active Reading

### Lesson Vocabulary

List the terms. As you learn about each one, make notes in the Interactive Glossary.

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### Visual Aids

A diagram adds information to the text that appears on the page with it. Active readers pause their reading to review the diagram and decide how the information in it adds to what is provided in the text on the pages.

More than 2,000 years ago, I stated that all matter is made of tiny, solid balls called atoms. The word atom means "indivisible."

# A Teeny Tiny Theory

From the time of Democritus, scientists have studied matter and proposed theories about it. What do we now think about what makes up matter?

**Active Reading** As you read the next page, draw a line from each part of the atom diagram to the sentences that describe it.

Suppose you could break a silver chain into smaller and smaller pieces. The pieces would become so small that you couldn't see them without a microscope. How small could the pieces get before they were no longer silver? The answer—one silver atom. An **atom** is the smallest unit of an element that maintains the properties of that element.

The **atomic theory** is a scientific explanation of the structure of atoms and how they interact with other atoms. Democritus first suggested that the smallest part of matter is an atom. Over the years, theories that scientists made about atoms have changed as scientists learn more about atoms.

→ Atoms

Elements

Compounds

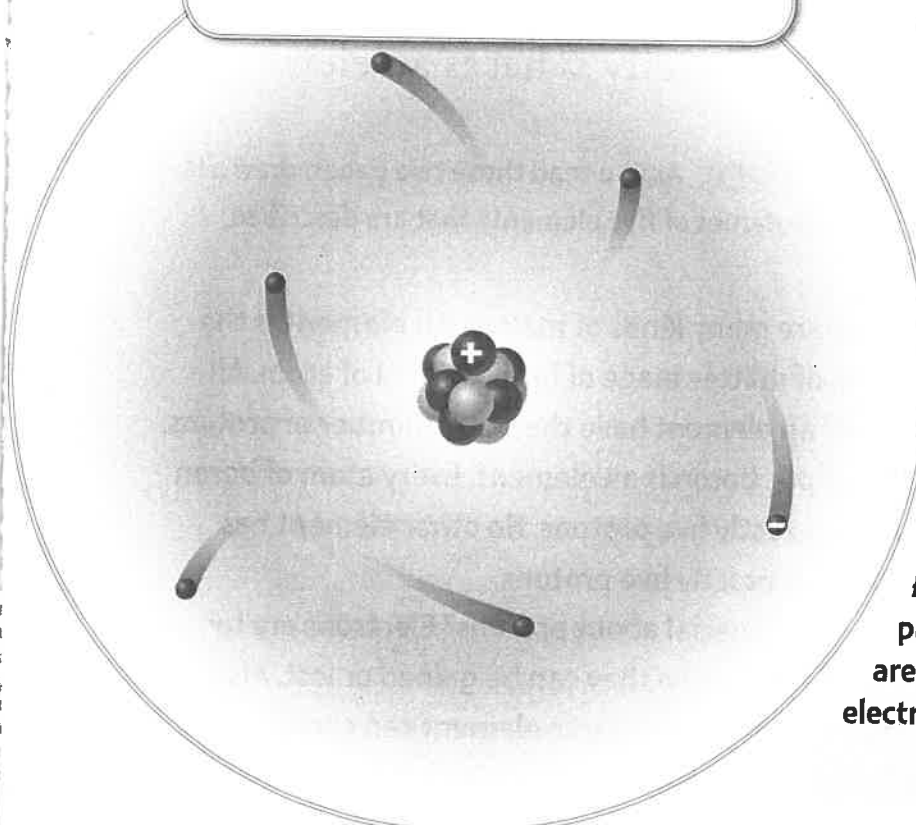
Gold is one type of matter.

Gold brick

Flakes of gold

# Atoms are the building blocks of all matter.

Current atomic theory states that an atom is mostly empty space. At its center, there is a small, dense core called the nucleus. The nucleus is surrounded by electrons.



## Proton

A *proton* is a positively charged particle found in the nucleus of an atom.

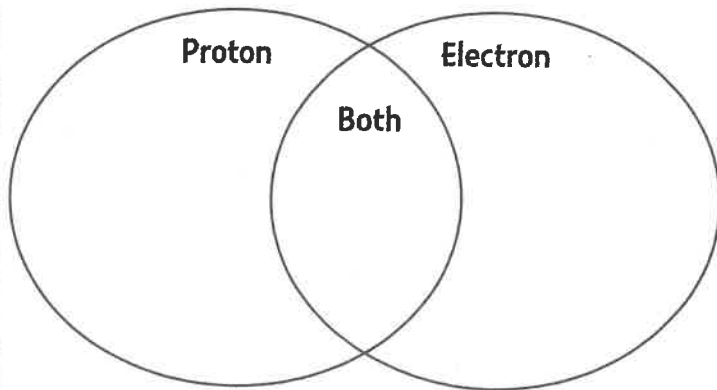
## Neutron

*Neutrons* are also particles found in the nucleus, but a neutron has no charge.

## Electron

*Electrons* are negatively charged particles that speed through an area around the nucleus called the electron cloud.

► Use the Venn diagram to compare and contrast electrons and protons.



Gold atoms

► Draw an arrow pointing to a single gold atom.

Mt

Ds

Rg

Uub

Uut

Uuq

Uup

Uuh

110

111

112

113

114

115

116

In the mid-1800s, I organized all known elements by their properties and increasing mass. Scientists still organize elements based on my work.

# It's Elementary!

Copper, oxygen, and mercury have one thing in common. They are all elements. Exactly what is an element?

**Active Reading** As you read these two pages, draw a large *E* next to the names of five elements that are described.

There are many kinds of matter. An **element** is the type of matter made of just one kind of atom. All atoms of an element have the same number of protons. For example, boron is an element. Every atom of boron contains exactly five protons. No other element has atoms with exactly five protons.

What's so special about protons? Electrons are far from the nucleus, so they can be gained or lost. Also, different atoms of the same element can contain different numbers of neutrons. Protons stay the same.

Atoms

→ Elements

Compounds

## Neon

Protons: 10

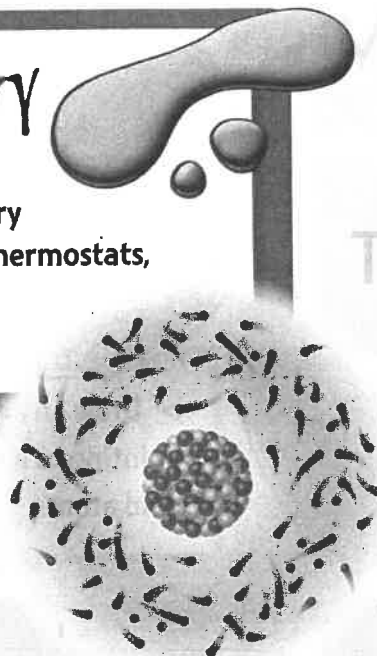
Uses: neon signs, helium-neon lasers, television tubes, refrigerant



## Mercury

Protons: 80

Uses: laboratory instruments, thermostats, dental fillings, pesticides

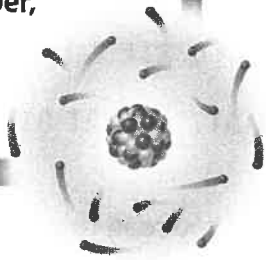


Elements are substances that can't be broken into simpler substances.

## Chlorine

Protons: 17

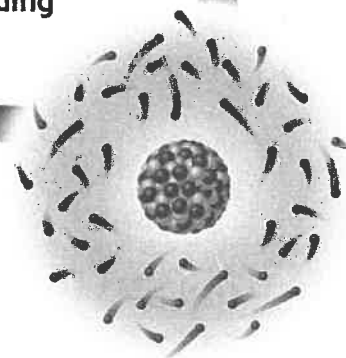
Uses: disinfecting water; making paper, paints, plastics, and dyes



## Silver

Protons: 47

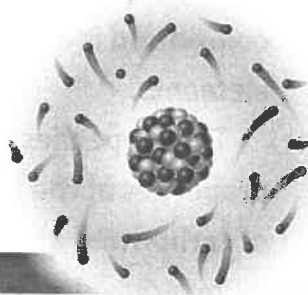
Uses: jewelry, silverware, photography, welding solder, mirrors



## Copper

Protons: 29

Uses: plumbing, coins, electrical wires, making brass and bronze



## Draw and Label a Carbon Atom

Use the information provided to draw and label a carbon atom.

Protons: 6

Neutrons: 6

Electrons: 6

Part of my atomic theory stated that different types of atoms combine to form chemical compounds.

# Putting It All Together

There are more than 100 elements, but you can see that there are many more types of matter than that. What are these other types?

**Active Reading** As you read this page, draw boxes around the names of the two things that are being compared.

**M**any atoms go through chemical change with a different type of atom and form molecules. A **molecule** is made up of two or more atoms joined together chemically. A **compound** is a substance formed by atoms from two or more elements.

The properties of a compound are often different from the properties of the elements that form it. For example, atoms of carbon and oxygen will react, forming the compound carbon dioxide. This compound has its own properties that are different than those of carbon and oxygen.

Atoms

Elements

→ Compounds



Compounds are made of atoms of at least two different elements.

## Firework Colors

### Orange

calcium chloride

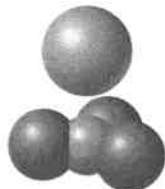


1 calcium

2 chlorine

### Yellow

sodium nitrate



1 sodium

1 nitrogen

3 oxygen

### Red

lithium carbonate



2 lithium

1 carbon

3 oxygen

Some of the colors in fireworks come from compounds. For example, calcium chloride, which contains one calcium atom for every two chlorine atoms, results in an orange color.

Fructose is often called fruit sugar. For every 6 atoms of carbon in the compound, there are 12 hydrogen atoms and 6 oxygen atoms.



## Do the Math!

### Use Fractions

Add the total number of atoms in fructose. In lowest terms, what fraction of fructose consists of:

1. carbon atoms? \_\_\_\_\_

2. hydrogen atoms? \_\_\_\_\_

3. oxygen atoms? \_\_\_\_\_

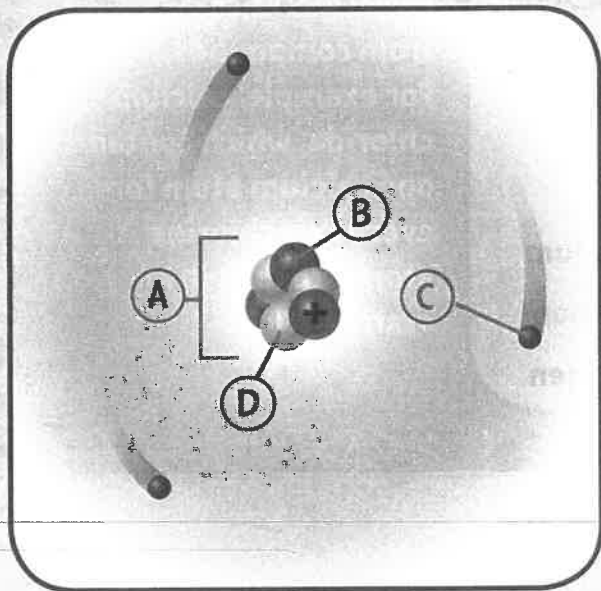




# Sum It Up!

When you're done, use the answer key to check and revise your work.

**1** Label the parts of this atom.



(A) \_\_\_\_\_

(B) \_\_\_\_\_

(C) \_\_\_\_\_

(D) \_\_\_\_\_

**2** Sequence the following from smallest to largest.

\_\_\_\_\_ (A) atom      \_\_\_\_\_ (B) proton      \_\_\_\_\_ (C) molecule      \_\_\_\_\_ (D) nucleus

**3**

**Fill in the blanks.**

An atom is the smallest particle of an (A) \_\_\_\_\_ that has its properties. Our current (B) \_\_\_\_\_ is the result of the ideas of many scientists over many years. Scientists currently theorize that atoms contain a dense core that is called the (C) \_\_\_\_\_. It contains positively charged particles called (D) \_\_\_\_\_ and (E) \_\_\_\_\_, which have no charge. Particles called (F) \_\_\_\_\_ move around the center of the atom. The identity of an element is determined by the number of (G) \_\_\_\_\_ in one atom of the element. When two or more atoms are joined together, (H) \_\_\_\_\_ form.

Name \_\_\_\_\_

## Word Play

1

For each jumbled term, unscramble the letters to form a term from this lesson. Use the clues to help you.

1. tasmo

\_\_\_\_\_o

The smallest particles of an element

2. ueotnrn

\_\_\_\_\_n

The particle in an atom that has no charge

3. retelocn

\_\_\_\_\_n

Moves around the outside of an atom

4. omdocpun

\_\_\_\_\_n

Formed from at least two types of chemically combined atoms

5. onropt

\_\_\_\_\_t

The positively charged part of the nucleus

6. mitoca rohety

\_\_\_\_\_y

Changed through history as scientists learned more about atoms

7. cnluseu

\_\_\_\_\_u

The dense, central part of an atom

8. nemtele

\_\_\_\_\_e

Contains only one kind of atom

**Riddle:** Put the circled letters into the riddle in the order they are circled.

What did the chemistry teacher get for her birthday?  
the element of \_\_\_\_\_



## Apply Concepts

- 2 Draw and label a diagram of a nitrogen atom.  
It should have 7 protons, 7 neutrons, and 7 electrons.

- 3 Use the terms *atom* and *element* to explain what makes silver and gold different.
- 
- 

- 4 Complete the table.

Compound	Atoms	Fraction of each type of atom
methane	5 total: 1 carbon, 4 hydrogen	
propane	11 total: _____	$\frac{3}{11}$ carbon, $\frac{8}{11}$ hydrogen
hydrogen peroxide	4 total: 2 hydrogen, 2 oxygen	
carbon dioxide	3 total: _____	$\frac{1}{3}$ carbon, $\frac{2}{3}$ oxygen



**Take It Home!**

Check the ingredient lists on labels of several household products. Find the names of two different compounds. Use reference books or the Internet to find out what elements are in the compounds.