Paramount Academy 2020-2021 Attendance Form WEEK #28

Daily Work Week of: March 1st – 5th **Due Date:** March 8th – 10th

Student Name: _____

Grade: 5th **Teacher Name:** Weston

Date	Daily Work Completed
3/1	
3/2	
3/3	
3/4	
3/5	

**PARENT SIGNATURE REQUIRED, IF ATTENDANCE WAS LOGGED ONLINE PLEASE WRITE ONLINE IN THE DAILY WORK COMPLETED SECTION.

Parent Name (Print): _____ **Parent Signature:** _____

5th Grade
3rd Quarter
Week # 28 Packet
(Mar. 1 – Mar5)

Monday (Mar. 1)

- Math – Multiplication Chart 12 x 12 (how many can you do in 5 minutes?) + Page 146
- Reading – Ghost Towns of the American West
- Writing – Introduction Lesson 1 The Writing Process (Pages 5-6)
- Social Studies – Westward Transportation (Pages 111-117)
- Science – Lesson 1.1 Weather Trackers Pages 6-7
- Spelling – Ghost Towns of the American West

Tuesday (Mar. 2)

- Math – Multiplication Chart 12 x 12 (how many can you do in 5 minutes?) + Page 147
- Reading – Ghost Towns of the American West
- Writing – Lesson 2 Purposes for Writing (Page 7)
- Social Studies – Economics Week 36 Day 1-5
- Science – Lesson 1.2 The Father of Genetics Pages 8-9
- Spelling – Word Sort

Wednesday (Mar. 3)

- Math – Multiplication Chart 12 x 12 (how many can you do in 5 minutes?) + Page 148
- Reading – Ghost Towns of the American West
- Writing – Lesson 3 Audience (Page 8)
- Social Studies – Chapter 14: A New America, 1898-1918 (Pages 103-110)
- Science – Lesson 1.3 Break it Down Pages 10-11
- Spelling – Greek Word Parts

Thursday (Mar. 4)

- Math – Multiplication Chart 12 x 12 (how many can you do in 5 minutes?) + Page 149
- Reading – Ghost Towns of the American West
- Writing – Lesson 4 Find Main Ideas and Details in Pictures (Pages 9-10)
- Social Studies – Before the Industrial Revolution Pages 4-6
- Science – Lesson 1.4 Taking Heat Pages 12-13
- Spelling – 3 Times Each

Friday (Mar. 5)

- Math – Multiplication Chart 12 x 12 (how many can you do in 5 minutes?) + Page 150
- Reading – Test
- Writing – Lesson 5 Find Main Ideas and Details in Text (Pages 11-13)
- Social Studies – Test
- Science – Lesson 1.5 Flying into History Pages 14-15 + Word Search
- Spelling – Test

Please, write your First and Last name and Grade 5 on the TOP of every page of the packet. Thank You!

W 28

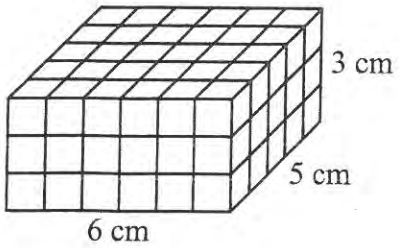
Math

Name _____ Date _____

Volume of Rectangular Prisms

Find the volume.

1.



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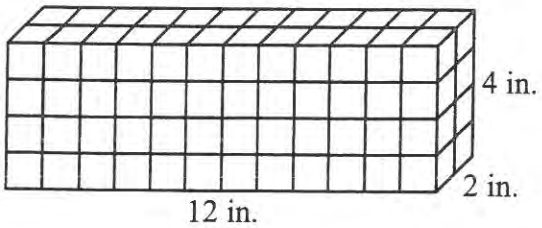

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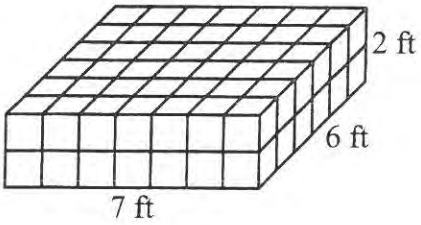

Volume: _____

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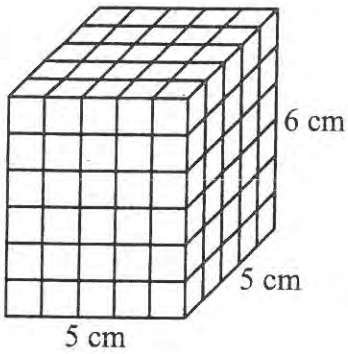

Volume: _____

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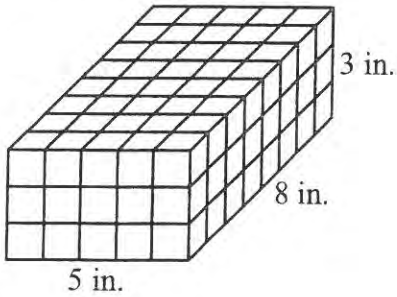

Volume: _____

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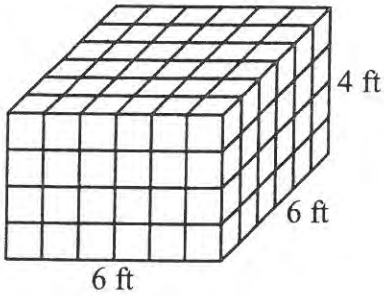

Volume: _____

MIXED APPLICATIONS

7. Aaron keeps his baseball cards in a cardboard box that is 12 inches long, 8 inches wide, and 3 inches high. What is the volume of this box?

_____

8. Amanda's jewelry box is in the shape of a cube that has 6-inch edges. What is the volume of Amanda's jewelry box?

_____

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Name _____ Date _____

Exploring Volume

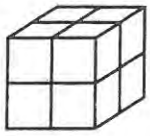
Estimate the volume.

1. What dimensions do you need to know to find the volume of a rectangular prism? _____

2. How do you find the volume using these dimensions? _____

3. Suppose the dimensions of a rectangular prism are given in inches. In what unit do you express the volume? _____

Tell what numbers to multiply to find the volume of each rectangular prism.

4. 

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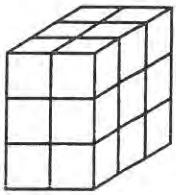
5. 

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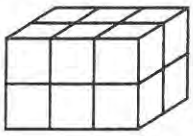
6. 

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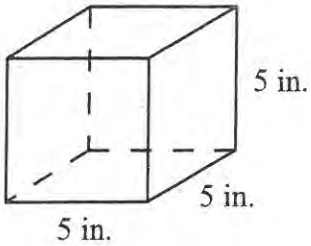
Find the volume.

7. 

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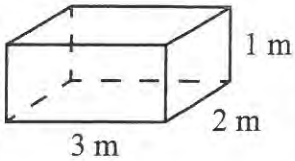
8. 

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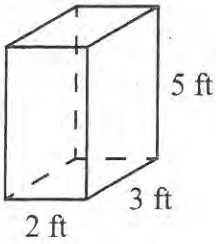
9. 

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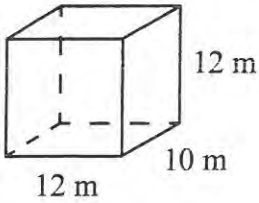
10. 

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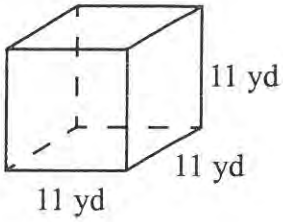
11. 

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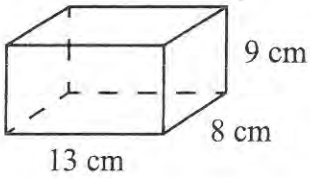
12. 

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LOGICAL REASONING

13. What happens to the volume of a rectangular prism if its height is doubled and its length and width remain the same?

_____

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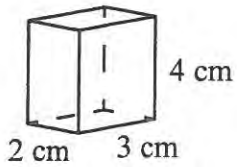
Name _____ Date _____

Volume of Rectangular Prisms

Write a multiplication sentence to find the volume of each prism. Then solve.

1.



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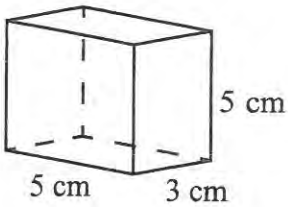

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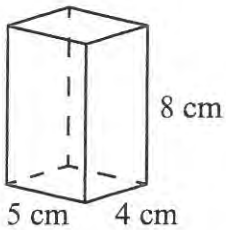

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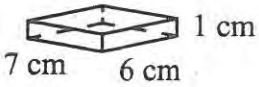

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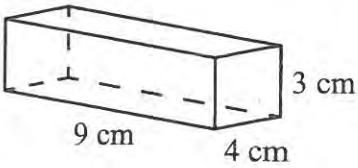

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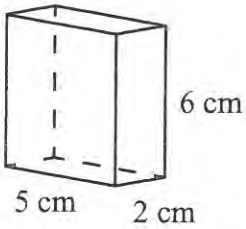

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Complete the table for rectangular prisms.

	Length	Width	Height	Volume
7.	2 cm	4 cm	8 cm	
8.	3 cm	5 cm	2 cm	
9.	8 cm	3 cm	1 cm	
10.	4 cm		2 cm	24 cm^3
11.		4 cm	4 cm	96 cm^3

MATH CONNECTION

The exponent 3 in 6^3 means use 6 as a factor three times.

$6^3 = 6 \times 6 \times 6 = (36) \times 6 = 216.$

Find the value.

12. 2^3 = _____ **13.** 4^3 = _____ **14.** 3^3 = _____ **15.** 5^3 = _____

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Name _____ Date _____

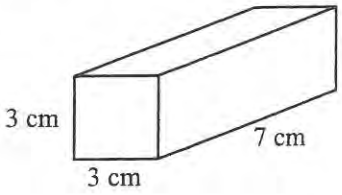
More Volume of Rectangular Prisms

Use cubes to find the number of different rectangular prisms that can be made with the given number of cubes.

1. 6 cubes _____ **2.** 20 cubes _____

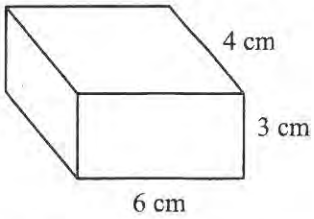
Mark an X by the rectangular prism that you think has the greatest volume. Then use connecting cubes to find the volume (V) of each prism.

3.



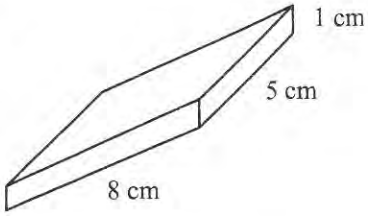
$V =$ _____ cm^3

4.



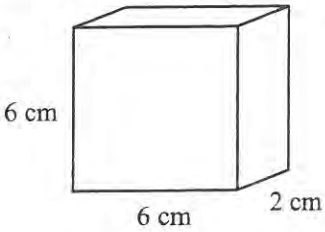
$V =$ _____ cm^3

5.



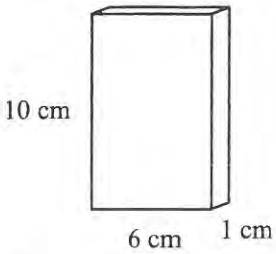
$V =$ _____ cm^3

6.



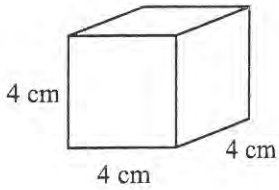
$V =$ _____ cm^3

7.



$V =$ _____ cm^3

8.



$V =$ _____ cm^3

MIXED APPLICATIONS

9. A swimming pool is 70 ft long and 20 ft wide and has 8 feet of water in it. What volume of water is in the pool?

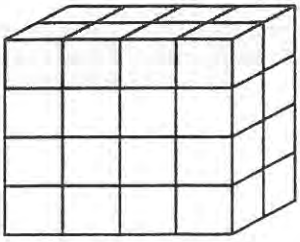
_____

10. Felipe wants to put a 3-in. layer of mulch on an 8 ft by 10 ft garden. How many cubic feet of mulch does he need?

_____

VISUAL THINKING

11. The unshaded layers show the lower part of a rectangular prism. The shaded layer is the middle of the prism. The upper layers are exactly like the lower layers. How many cubes are in the prism?



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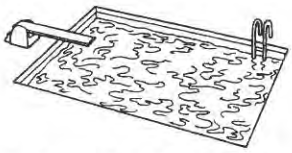
Name _____ Date _____

Applications of Volume

Find each volume.

1. 

75 ft × 25 ft × 8 ft

_____

2.

14 in. × 9 in. × 7 in.

_____

3. 30 cm × 28 cm × 50 cm

_____

4. 30 in. × 6 in. × 15 in.

_____

5. l = 7 in.
w = 8 in.
h = 5 in.

_____

6. l = 20 ft
w = 10 ft
h = 5 ft

_____

7. l = 50 yd
w = 25 yd
h = 10 yd

_____

8. l = 5.6 mm
w = 1.5 mm
h = 3.2 mm

_____

MIXED APPLICATIONS

9. Joe's toolbox is 20 in. long, 12 in. wide, and 10 in. high. What is the volume of his toolbox?

_____

10. The volume of a door is 6,912 cu in. If the door is 96 in. tall and 2 in. thick, how wide is it?

_____

11. The high school track is 400 meters long. When training, Alice usually runs 4 laps. Today she ran $\frac{3}{4}$ of her usual distance. How many meters did she run today?

_____

12. The community swimming pool is 75 ft long. The Chois' swimming pool is $\frac{2}{3}$ that length. How long is the Chois' pool?

_____

PHYSICAL EDUCATION CONNECTION

13. A rescue tube is often used by lifeguards. This flotation device is made of foam cells and is covered with heavy-duty vinyl. One rescue tube measures $3\frac{1}{2}$ in. × $5\frac{1}{2}$ in. × 40 in. What is the volume of the rescue tube?

_____

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W 28

Writing

Introduction

NAME _____

Lesson 1 The Writing Process

Good writers follow a plan when they write. They take certain steps that make up the writing process. Following these five steps leads to better writing.

Step 1: Prewrite

This is the time to discover and plan. Writers might choose a topic, or they might list everything they know about a topic already chosen. They might write down what they need to learn about a topic. Writers might make lists that contain complete sentences or just words. Some writers might begin to put their ideas in order by making a chart or diagram.

Step 2: Draft

Writers put their ideas on paper. This first draft should contain ideas that are written in sentences and organized in paragraphs. Good writers keep their prewriting ideas nearby. There will be mistakes in this draft, and that's okay.

Step 3: Revise

Writers change or fix their first draft. They move ideas around, put them in a different order, or add information. They make sure they used clear words that really show what they mean. This is also the time to take out ideas that are not on topic.

Step 4: Proofread

Writers usually write a neat, new copy. Then, they look again to make sure everything is correct. They look especially for capital letters, end marks, and words that are not spelled correctly.

Step 5: Publish

Finally, writers make a final copy that has no mistakes. They are now ready to share their writing. There are many ways for writers to publish their work.

NAME _____

Lesson 1 The Writing Process

Pam used the writing process to write a paragraph about a fantastic vacation. Her writing steps, below, are out of order. Label each step with a number and the name of the step.

Step ___: _____

The most exiting vacation spot I can think of is the South pole. I think it would be very cool to learn how to make an igloo. Then, of course, I would sleep in it. I would use lots of blankets. Then I would wake up cook pancakes over a little fire right there in the igloo. Just to stay in touch, I would take along my own person satellite and laptop so I could send daily reports to my family by e-mail.

Step ___: _____

The most exciting vacation spot I can think of is the South Pole. I think it would be very cool to learn how to make an igloo. Then, of course, I would sleep in it. I would use lots of blankets. Then, I would wake up and cook pancakes over a little fire right there in the igloo. Just to stay in touch, I would take along my own personal satellite and laptop so I could send daily reports to my family by e-mail.

Step ___: _____

South Pole vacation
igloo
lots of blankets
fire for cooking
satellite

Step ___: _____

The most exiting vacation spot I can think of is the South pole. I think it would be very cool to learn how to make an igloo. Then, of course, I would sleep in it. I would use lots of blankets. I would wake up cook pancakes over a little fire right there in the igloo. Just to stay in touch, I would take along my own person satellite and laptop so I could send daily reports by e-mail.

Step ___: _____

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NAME _____

Lesson 2 Purposes for Writing

When you are in school, many of the things you write are school assignments. You write them because your teacher has asked you to do so. Beyond completing a school assignment, though, there are several basic purposes, or reasons, for writing. Generally, they are:

- to entertain
- to persuade
- to explain
- to inform

Writers use many **forms** of writing, such as friendly letters, reports, news articles, book reviews, and poems. Here are the purposes for writing, along with the forms of writing that writers can use.

Purpose for Writing	Forms of Writing
To entertain	stories, poems, plays, personal accounts or narratives, humorous articles or essays, friendly letters
To persuade	letters to the editor, business letters
To explain	how-to instructions, eyewitness accounts
To inform	reports, news articles, book reviews, friendly or business letters

Writers may combine purposes in one form of writing. For example, a writer may both inform and persuade in an article about the importance of saving the rain forests.

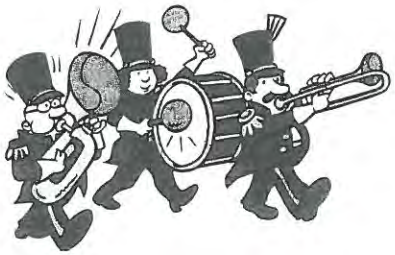
Below is a list of written products. Write what you think the purpose of each item was—to entertain, persuade, explain, or inform.

Written Product	Purpose for Writing
instructions for planting seeds	_____
a letter to the editor about an upcoming election	_____
a retold fairy tale	_____
an article about the school play	_____

NAME _____

Lesson 3 Audience

When a band performs a concert, an audience listens. The band director chooses music that the audience will enjoy. For example, the band would not play very serious music for an audience of children. Likewise, they would not play "Mary Had a Little Lamb" for a group of college students.



After a writer writes, the audience reads. A writer needs to think just like a band director does. Consider these questions:

What will my audience enjoy?
What are they interested in?
What will make them want to keep on reading (or listening)?
What do they already know?
What will they understand?

In addition to thinking about why you are writing, you must think about your audience. Like the band director, you do not want to present something that's too serious for your audience. You also do not want to present something that is too simple.

Here is a paragraph about planting trees. A man who owns a tree nursery wrote it for a group of young children. He forgot to think about his audience. Read the paragraph. Then, ask yourself the five questions above and write how the paragraph should be changed to meet the needs of the audience. Suggest specific changes.

Dig a hole twice the width of the tree's root ball. The depth should be about the same as the root ball. Put in the appropriate fertilizer or soil supplements. Set the tree in the hole. Have someone support the tree while another person backfills the hole. Mulch to within two inches of the trunk. Water thoroughly.

_____

_____

_____

_____

_____

_____

_____

_____

NAME _____

Lesson 4 Find Main Ideas and Details in Pictures

A picture has a **main idea**. The main idea is what the picture is all about. Circle the sentence below that tells the main idea of this picture.

Fishing requires certain equipment.

Many fish are being caught.

Fishing is a popular hobby.

A picture also has **details**. Details are the little parts that make up the whole. For example, one detail in this picture is that the man has a fishing net. Another detail is that the tackle box is open.

Write some more details from the picture.

_____ _____

_____ _____

_____ _____

_____ _____

_____ _____

_____ _____

_____ _____

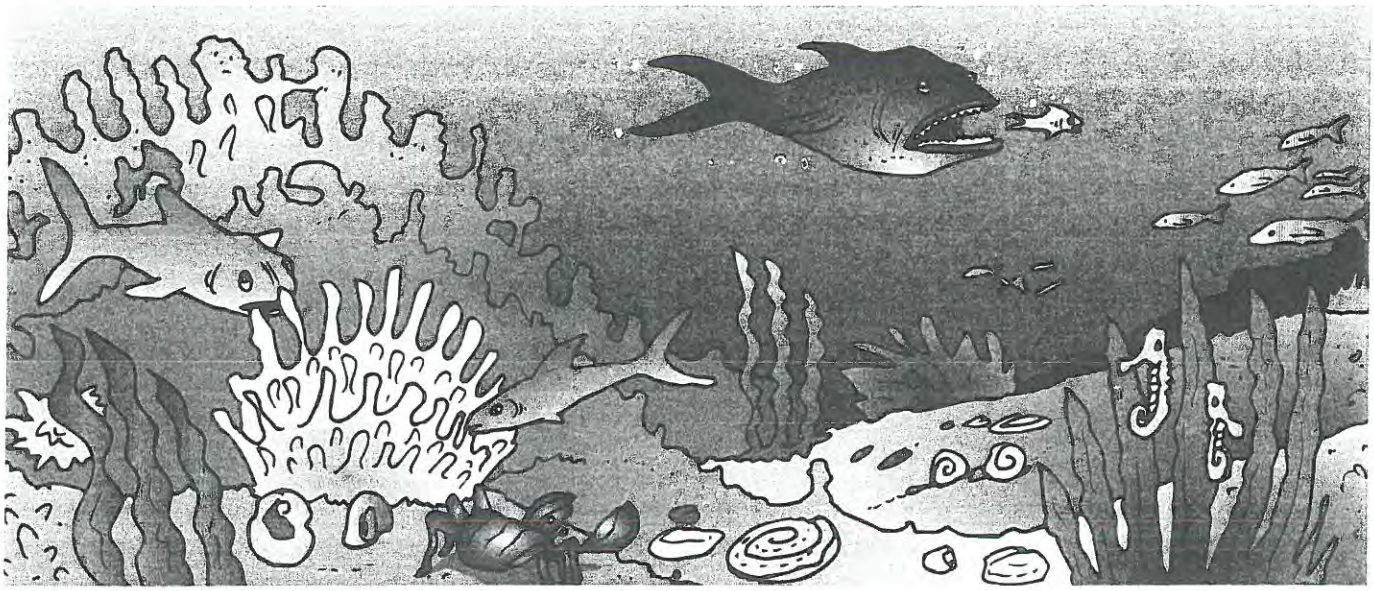
_____ _____

_____ _____

_____ _____

NAME _____

Lesson 4 Find Main Ideas and Details in Pictures



What is this picture all about? Write the main idea here.

_____

Write some of the details in the picture here.

_____ _____

_____ _____

_____ _____

Now that you have looked at the separate parts of the picture, put them together. Write a paragraph about what is happening in the picture. In your paragraph, use the main idea and some of the details you recorded.

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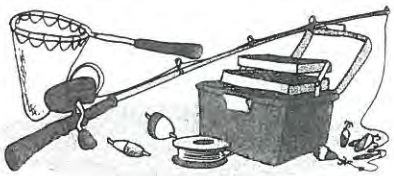
NAME _____

Lesson 5 Find Main Ideas and Details in Text

My dad was always happy when he was fishing. At the lake, he was endlessly patient. I don't know how many times he taught us to cast. There were also all the times he had to wade out and unsnag our hooks. He never complained.



Like a picture, a paragraph has a main idea. The main idea is what the paragraph is all about. In most paragraphs, the main idea is actually stated in the paragraph. That statement is called the **topic sentence**. A topic sentence may be anywhere in a paragraph, but it is usually either the first sentence or the last. In the paragraph above, the topic sentence is the first sentence. Underline it.

In the paragraph below, the writer did not include a topic sentence. Read the paragraph. Then, write a topic sentence below the paragraph.

The local fishermen have been trying to catch him for years. They've been telling stories about him for years, anyway. They have nicknamed him "Puss-in-Boots." They tell of a catfish so big that they fear their boats would tip if they ever did hook him. Their stories place him anywhere from two feet to 12 feet long. Everyone agrees on this, at least: a very large fish lives in Lantern Lake.

_____

_____

You already know that the details in a picture are the little parts that make up the whole. In a paragraph, details tell about, or support, the main idea, which is stated in the topic sentence.

Look back at the paragraph at the top of this page. Remember, the first sentence is the topic sentence. Each sentence that follows is a detail that supports the idea that dad was always happy when he was fishing. List several details from that paragraph here.

_____

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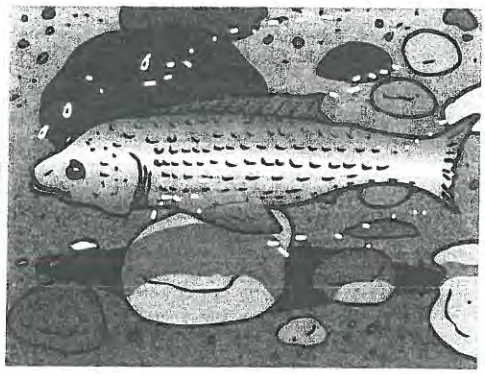
NAME _____

Lesson 5 Find Main Ideas and Details in Text

Read the paragraph below. In it, the writer shares her memories of fishing. Find the topic sentence and underline it. Then, list some details that support the main idea.



My uncle went out in his rowboat almost every morning. When he had guests, he enjoyed the company in his boat. He was also glad to be alone again after they left. My aunt and uncle enjoyed the fresh fish he caught. He never seemed disappointed when he didn't catch anything, though. His pleasure came from fishing, not from catching fish.

Details:

_____

_____

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_____

Now, read this paragraph about water safety. Underline the main idea. Hint: It is stated in one part of a sentence. Then, list some details that support the main idea.

Most people are glad to spend a day at the beach. What some people forget is that water safety takes some extra thought. Boaters must check weather reports ahead of time. They must also make sure their equipment is in good repair. They also must have life preservers for all passengers. Swimmers should always swim with a buddy. Even strong swimmers should never swim directly away from shore. They should also rest for 15 minutes for every hour they are in the water.

Details:

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NAME _____

Lesson 5 Find Main Ideas and Details in Text

What do you know about fishing? Choose one of these sentences as a topic sentence for a paragraph:

I don't know much about fishing.

I know a lot about fishing.

I went fishing once, and the memory of it is a (good/bad) one.

Now, write a paragraph in which you support your main idea with details. Remember to choose just one topic sentence.

_____

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Now, make up a fishing story about "the one that got away." In a paragraph, tell about that fish that you saw but never hooked, or that you almost caught. When you are finished, underline your topic sentence.

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W28

Social Studies

WESTWARD TRANSPORTATION

Getting from one place to another was difficult during our nation's early days. It took four to six months to travel to the West by covered wagon. Once people settled in towns, they walked or rode on horseback to get from place to place. Early settlers carried everything they owned on their backs.

STEAMBOAT TRAVEL

In 1787, **inventor** John Fitch made the first successful trial of a 45-foot **steamboat** on the Delaware River. Fitch later built a larger **vessel** that carried passengers and freight between Philadelphia and New Jersey. By 1796, Fitch had constructed four different steamboats, demonstrating that steam could be used to move boats through water.

After John Fitch's death, inventor Robert Fulton made history by building a steamboat that traveled from New York City to Albany. The 150-mile trip took 32 hours. By 1814, Robert Fulton and Edward Livingston were offering regular steamboat and freight service between Louisiana and Mississippi. Their boats traveled eight miles per hour downstream and three miles per hour upstream.

Beginning in 1852, steamboats traveled up and down the Colorado River, bringing supplies to miners in Colorado, Utah, Nevada, California, and Arizona. In the Pacific Northwest, steamboats were making regular trips from Oregon to Washington. The steamboats were faster than traveling on foot, but they could still only travel about 15 miles per day.

THE STAGECOACH

In 1857, one of the first types of **public transportation** was invented. It was a stagecoach. A stagecoach was a buggy pulled by a team of four horses that carried six to eight people over rough and dusty roads. Passengers sat on hard seats, usually surrounded by baggage and sacks of mail.

Not only was stagecoach travel uncomfortable, it was also dangerous. Accidents were frequent as the horse-drawn coaches traveled over steep mountains and narrow roads. There was also a good chance that the stagecoach would be robbed. Most of the time, stagecoaches were carrying passengers with valuables and mail sacks full of letters, some with money in them.

Westward Expansion © 2009
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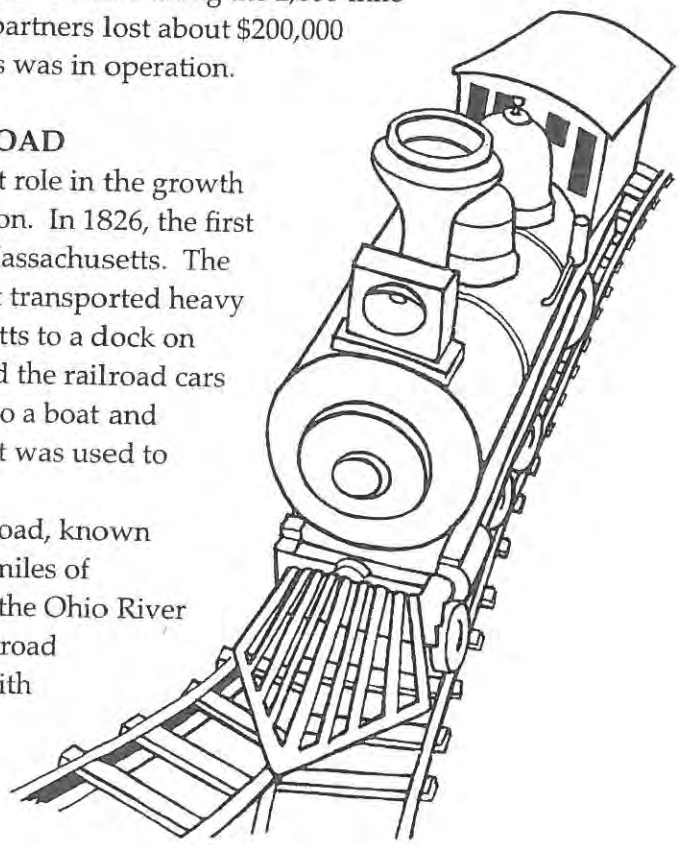
The Pony Express

In 1860, William H. Russell, a businessman in California, put a plan into action to deliver mail from Missouri to California. Russell claimed that his Pony Express would complete the mail route in just 10 days. Operation of the Pony Express required 500 of the best horses and $100,000 in gold coins to buy all of the necessary supplies.

Only men who were under the age of 18, expert riders, and willing to risk death were invited to apply for the job that paid about $25.00 per week. Mounted on their swift horses, the "pony riders" raced with the mail from Missouri to California, a distance of almost 2,000 miles.

Although the Pony Express was successful in delivering the mail in 10 days, it was not a very profitable business. The horses could only travel about 10 miles per hour. Riders needed a fresh horse every 10 to 15 miles along the 2,000-mile journey. William Russell and his business partners lost about $200,000 during the 18 months that the Pony Express was in operation.

The Importance of the Railroad



The railroad played a very important role in the growth of the United States and Westward Expansion. In 1826, the first three miles of railroad tracks were laid in Massachusetts. The **Granite** Railway didn't carry passengers. It transported heavy granite stones from a **quarry** in Massachusetts to a dock on the Neponset River. A team of horses pulled the railroad cars along the track. The granite was loaded onto a boat and taken to Charleston, Massachusetts, where it was used to build the Bunker Hill **Monument**.

In 1827, the Baltimore and Ohio Railroad, known simply as the B & O, made plans to lay 350 miles of railroad track from Baltimore, Maryland, to the Ohio River in Virginia. Three years later, the B & O Railroad made its first scheduled run. Cars loaded with passengers were pulled by horses along 13 miles of track.

By the end of 1833, the South Carolina Railroad began offering passenger service from Charleston to Hamburg, South Carolina, on its steam-powered railroad. The cost for a one-way ticket was eight dollars. The train traveled up to 25 miles an hour, stopping every 90 minutes to reload with wood and water needed to power the steam engine. It took nine hours to make the 136-mile trip.

During the next 30 years, thousands of miles of railroad lines were laid throughout the eastern half of the United States. By 1852, passengers could board a train traveling from New York to Chicago and connect with other trains headed West toward the Ohio and Mississippi rivers. From there, steamboats transported passengers to places farther West.

The Transcontinental Railroad

In 1862, President Abraham Lincoln signed the Pacific Railroad Act. Work began on a railroad that would stretch from one end of the United States to the other. The Central Pacific Railroad laid 690 miles of track from Sacramento, California to Utah. The Union Pacific Railroad laid 1,087 miles of track from Council Bluffs, Iowa to Utah. Thousands of Chinese immigrants entered the United States to work for low paying jobs in dangerous conditions.

On May 10, 1869, in the city of Promontory, Utah, a golden spike was driven into the ground. The spike connected the Union and Central Pacific railroad tracks together. The **Transcontinental** Railroad connected the East and West by rail. A trip that once took six months now only took 15 days.

Other Railroads in the West

By 1883, the Northern Pacific Railway connected the northern section of the United States from St. Paul, Minnesota to Tacoma, Washington. That same year, the Southern Pacific Railway completed its 20-year project. The Southern Pacific stretched West from New Orleans, Louisiana to Sacramento, California, where it joined with the Central Pacific Railroad.

In 1893, the Great Northern Railway was completed. It ran through the Cascade Mountains, north of the Northern Pacific Railway. The Great Northern Railway connected the Pacific Northwest from St. Paul, Minnesota to Seattle, Washington.

Thousands of people headed West on the nation's new railroads. Ranchers used the railroads to transport herds of fattened cattle to the East. Timber and farm products were shipped all over the United States.

Roads and Automobiles

The invention of the automobile made getting from place to place even easier for those who could afford to own a car. Of course, roads that had been made for stagecoaches were not safe for cars. The first concrete roads were only 16 feet wide.

During the 1700s, the first steam-powered automobiles were invented. Like boats and trains, cars with steam engines burned fuel that heated water in a boiler. The steam expanded inside the engine and turned the wheels. Although steam engines were too heavy for cars, they continued to be successfully used in trains.

Electric Cars

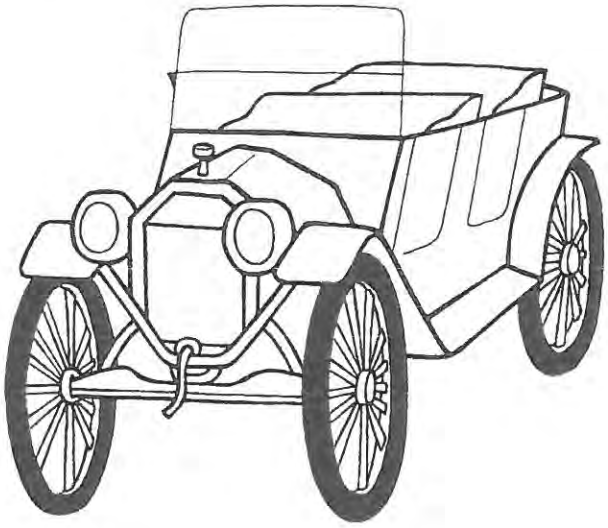
In the 1800s, electric cars were invented in Scotland, Holland, and America. The first electric cars in America used batteries that powered small electric motors. Electric cars traveled up to 14 miles per hour. A fully charged battery could last for 18 miles before needing to stop and recharge. Electric cars were suitable for driving short distances, but by the early 1900s, better roads were built. People needed cars that could travel long distances from city to city.

The Model T

In 1893, the first gasoline-powered automobiles were **manufactured** in the United States. By 1901, R.E. Olds was mass producing the Curved Dash Oldsmobile which sold for $650.00. A few years later, in 1908, Henry Ford began producing the Model T. The Model T was one of the most popular cars ever made.

The first Model T sold for $850.00 and used gas that cost just 20 cents a gallon.

Instead of starting them with a key the way cars are started today, cars like the Model T were started with a hand crank in the front that produced a spark and started the engine. Sometimes the engine would "kick back" before starting. The sudden reverse motion of the crank could break the starter's thumb or wrist.



The Model T

The Model T's tank held 10 gallons of gasoline and traveled at speeds of up to 45 miles per hour. By 1918, half of all American car owners drove a Model T. Henry Ford told customers they could have the Model T in any color they wanted, as long as it was black.

Airplane Flight

For centuries, human beings have tried to fly like birds. People attached wings to their arms and jumped off high cliffs, flapping their arms as fast as they could. As most fell to their deaths, they realized that human arms do not work like birds' wings.

During the 1700s, people floated through the air in hot air balloons and **gliders**. Because these inventions depended upon wind to move, it was difficult to control their direction or speed. Inventors realized that power was needed to help humans fly.

In 1891, American scientist Samuel Langley built a plane that used a steam-powered engine. His model flew for almost a mile before running out of steam. Langley was given $50,000 to build a full size steam-powered plane. He was disappointed when he learned that his plane was too heavy to fly and crashed to the ground. Samuel Langley gave up his dream of trying to fly.

The Wright Brothers

In 1899, brothers Orville and Wilbur Wright began experimenting with unmanned gliders and kites to solve the problem of airplane flight. They watched birds and studied the works of inventors before them.

By 1900, the Wright Brothers had successfully tested their 50 pound glider, equipped with two sets of wings. They soon discovered that the wings did not have enough lifting power. The brothers set out to build a powered aircraft.

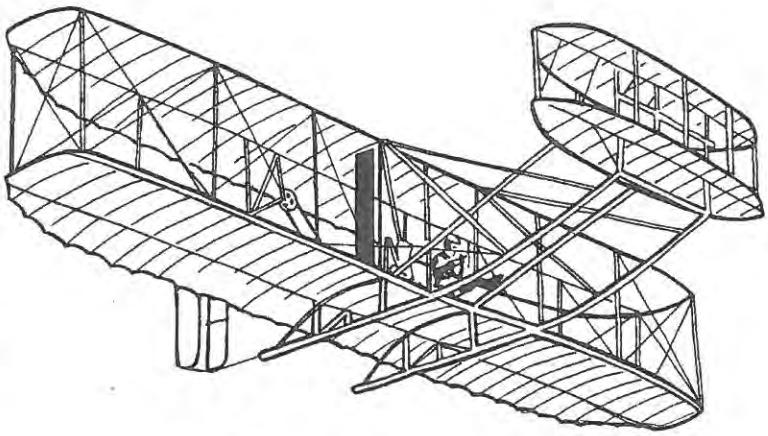
Fast Facts

- In 1835, Samuel F.B. Morse and Alfred Vail invented the Morse Code **telegraph** system that sent messages over a one mile line of wire and then used a machine to print them on a piece of paper.
- The Morse Code communication system used dots, dashes, and spaces. Each letter of the alphabet was represented by dots, dashes, spaces, or a combination of all three.
- In 1841, the first telegraph was built between Maryland and Washington. Twenty years later, in 1861, Western Union built its first transcontinental telegraph line. The East and West were finally connected by telegraph.

The Flyer

On December 17, 1903, Orville Wright completed the first manned airplane flight in history. While his brother Wilbur remained on the ground, Orville flew the 700 pound *Flyer* a distance of 120 feet. He was in the air for just 12 seconds. A year later, the *Flyer II* was flown by Wilbur Wright for more than five minutes.

In 1911, the Wright brothers designed the *Vin Fiz*, named after a grape soda. The *Vin Fiz* made the first successful flight across the United States. The flight took 84 days, stopping 70 times. It crash landed so many times that very few of its original parts were still on the plane when it landed in California.



The Wright Brothers' *Flyer*

Today's Transportation

Today, people get from place to place in a variety of ways. Walking is still very popular and the cheapest way to get around. People ride bicycles, skateboards, and motor scooters for short distances.

Today's boats and trains carry more products than people, but it's still possible to cruise around the world's oceans in a ship or ride the rails from New York to California. Gone are the days of starting a black car with a crank. Today's automobiles start with the turn of a key or the push of a button. They come in all shapes, sizes, and colors. The United States has some of the best roads, highways, and bridges in the world.

Airplane travel has come a long way since the days of Wilbur and Orville Wright. There are more than 50,000 airports in the world ready to fly passengers any place they want to go. Today, a flight across the United States takes about seven hours, with no crash landings.

Fast Facts

- In the 1850s, during the California Gold Rush, airplane trips across the Sierra Nevada Mountains were advertised. The advertisers planned to use steam-powered aircraft that could carry 100 passengers at speeds of 100 miles per hour. More than 200 brave treasure seekers eager to get to California as quickly as possible signed up for the trip. They were angry when they learned that no such steam-powered airplane existed.
- Before building and flying airplanes, the Wright brothers built and sold bicycles.
- The Wright Brothers National Monument is located in North Carolina, not far from where they made their historic first flight.

Name _____

WESTWARD TRANSPORTATION

Directions: Read each question carefully. Darken the circle for the correct answer.

1 **About how long did it take to travel West during our nation's early days?**

A Two years

B 15 days

C Half a year

D 24 hours

2 **Which of the following statements about stagecoach travel is true?**

F Padded seats gave passengers a comfortable ride.

G Stagecoaches were the safest way to travel during California's early days.

H Stagecoaches were pulled by teams of four to six horses.

J The one way trip from Missouri to California took just five days.

3 **After reading about the Pony Express, you get the idea that –**

A it made William H. Russell a very wealthy man

B the horses and supplies needed to operate the Pony Express were free as long as the mail was delivered on time

C a Pony Express rider could use the same horse during the entire 2000-mile journey

D if you were sixteen years old, you could be a Pony Express rider

4 **The Transcontinental Railroad was finished in 1869. Transcontinental means –**

F across the state

G across the continent

H across the city

J across the world

5 **What was the problem with using steam engines in automobiles?**

A Steam engines were too heavy.

B Steam engines used too much gasoline.

C Steam engines used batteries.

D Steam engines had to be started with a crank that could break someone's thumb or wrist.

6 **Which statement about the telegraph system is false?**

F The telegraph system was invented by Samuel Morse and Alfred Vail.

G The first telegraph was built between Maryland and Washington.

H Telegraph messages were sent over a wire and then printed on paper.

J In the Morse Code communication system, each letter of the alphabet was represented by a number.

7 **Before building and flying airplanes, the Wright brothers built –**

A houses

B bicycles

C sawmills

D cars

READING

Answers

1	Ⓐ	Ⓑ	Ⓒ	Ⓓ	5	Ⓐ	Ⓑ	Ⓒ	Ⓓ
2	Ⓕ	Ⓖ	Ⓗ	Ⓙ	6	Ⓕ	Ⓖ	Ⓗ	Ⓙ
3	Ⓐ	Ⓑ	Ⓒ	Ⓓ	7	Ⓐ	Ⓑ	Ⓒ	Ⓓ
4	Ⓕ	Ⓖ	Ⓗ	Ⓙ					

Name: _____ Date: _____

Directions: Read the text, and answer the questions.

Economics

After the Civil War, America developed new industries. Steel mills were built to help construct railroads. Oil companies were created. New inventions made life easier. Washing machines, bicycles, and many tools were made. The telegraph and the telephone helped people keep in touch. In 1896, Henry Ford built his first car.

People moved to the cities. They worked in factories. People from other countries moved to America, too. This made America more diverse!

Henry Ford's first car, the Quadricycle

1. Why did the cities become very busy?
   - **a.** Many more people arrived.
   - **b.** Airplanes brought in people.
   - **c.** People who lived in cities used new inventions.
   - **d.** Cars created traffic problems.

2. Why did people work in factories?
   - **a.** They liked the short workdays.
   - **b.** The environment was safe.
   - **c.** The children had fun.
   - **d.** Lots of factories offered work.

3. Why were people interested in coming to the United States?
   - **a.** They came to enjoy new inventions.
   - **b.** They came to work in the factories.
   - **c.** They came to drive Henry Ford's cars.
   - **d.** They came because ship fares were cheap.

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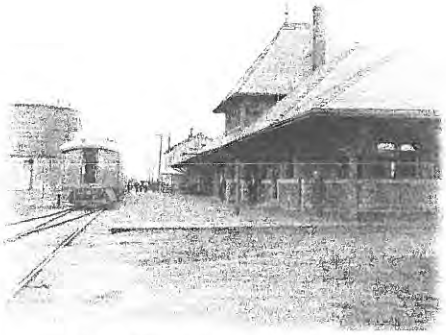
Name:_____ Date:_____

Directions: Read the text, and answer the questions.

By 1860, all the cities in the North and the Midwest were connected by railroad tracks. This helped the economy because crops and animals could be sent throughout these areas. During the Civil War, the North used trains to move its troops. The South had fewer rail lines.

After the Civil War, railroads were improved. By 1869, the first railroad to go from east to west was finished. People took it west to start farms and ranches. Food and cattle were sent by rail, too.



train station in Minnesota

first transcontinental railroad, 1869

1. What was the main reason railroads were built?
   - **a.** to connect the North with the South
   - **b.** to connect the United States with Canada
   - **c.** to connect the North with the Midwest
   - **d.** to help Americans reach Mexico

2. How did railroads improve the economy?
   - **a.** People were able to reach the sea.
   - **b.** They provided safer travel.
   - **c.** Farmers could ship crops to sell.
   - **d.** People took holiday trips west.

3. Why did people use western trails less after the Civil War? Circle all that apply.
   - **a.** The wagons were all broken.
   - **b.** Trains crossed the land faster.
   - **c.** Troops no longer needed supplies.
   - **d.** Trains carried freight more easily.

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Name:_____ Date:_____

Directions: Look at the photo, and read the caption. Answer the questions.

Field hands were former slaves who now worked for bosses instead of for owners.

1. The photo of the field was taken a few decades after the Civil War. What has changed? What has stayed the same?

_____

_____

_____

_____

_____

_____

2. Who do you think owns this land? What makes you think that?

_____

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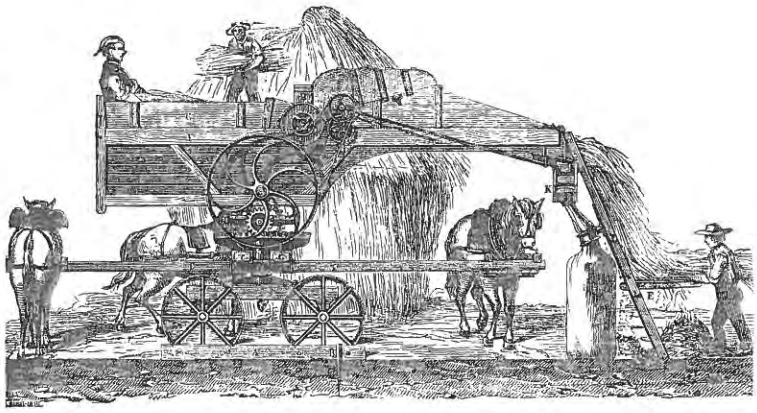
© Shell Education

Name: _____ Date: _____

Directions: Read the text, look at the image, and answer the questions.

For thousands of years, all farm work was done by physical labor. People used small tools, such as shovels and pitchforks. Even before the Civil War, though, that began to change. Americans invented tools and then machines to make farm work easier. Eli Whitney's cotton gin reduced the work of separating seeds from fibers. John Deere designed a steel plow, which was easier to clean than a wooden plow. When tractors and combines were invented, farmers could produce more crops. Machines never got tired, so fewer horses were needed.



threshing machine, late 1800s

1. Which answer is NOT correct?
   - **a.** The machines lightened the work.
   - **b.** The machines never got tired.
   - **c.** The machines replaced horses.
   - **d.** The machines were all easy to clean.

2. Look at the image of an old threshing machine. How did new tools and machines reduce the need for horses?

_____

_____

_____

3. What do you use to make your life easier? Why?

_____

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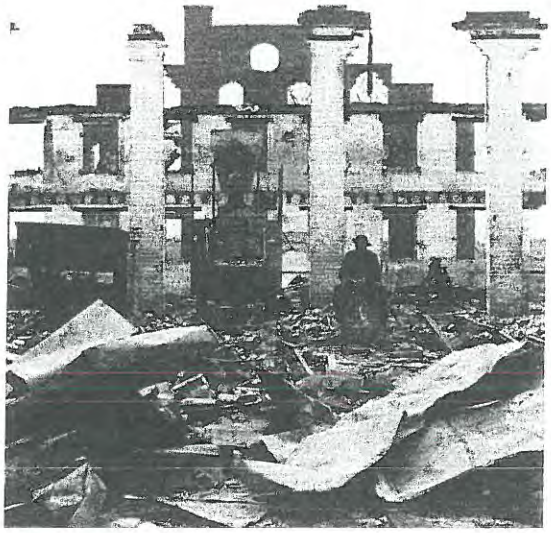
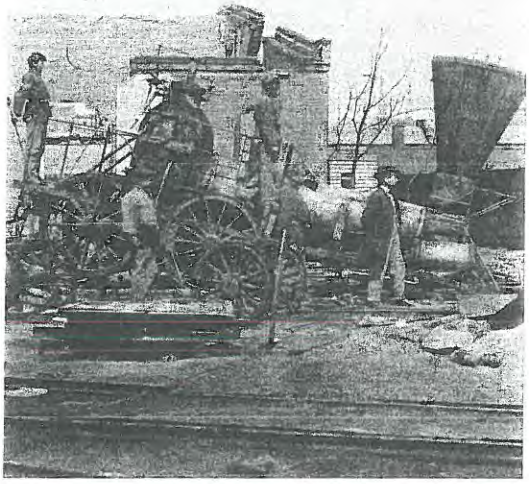
Name: _____ Date: _____

Directions: Look at the images, and answer the question.



ruins in Richmond, Virginia



a Southern railroad after the Civil War

1. Based on the images, what kind of damages were caused by the Civil War? How might this have affected the South's economy?

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Name _____ Date _____

Chapter 14: A New America, 1898–1918

The United States was born in 1776 and "grew up" in the 1800s. By the end of the 1800s, the country had grown from 13 states to 45. It was strong and rich.

Between 1898 and 1918, U.S. citizens began working to make life better for poor people, children, and workers. During these years, the United States fought two wars. These were the first wars the United States had fought outside its own borders.

➤ **How many more states do we have now than at the end of the 1800s?**

_____

War with Spain

Earlier, the United States did not have much to do with the problems or wars of other countries. All that changed in 1898 when the United States went to war with Spain.

Cuba is an island near Florida. Columbus had claimed it for Spain in 1492. It was still a Spanish colony 400 years later. But some of the people of Cuba were fighting for independence from Spain.

United States President William McKinley did not want the country to fight in Cuba. But some U.S. newspapers printed stories about how badly Spain treated its colonists. Many people felt we should help Cuba become free.

In 1898, the President sent the battleship *Maine* to protect U.S. citizens who lived in Cuba. One night the *Maine* blew up in a terrible explosion. More than 250 American sailors were killed. The United States blamed Spain for the explosion, and a war with Spain began. It was called the Spanish-American War.

➤ **Find Cuba on the map on page 104. Why do you think the United States might worry about a war in Cuba?**

_____

_____

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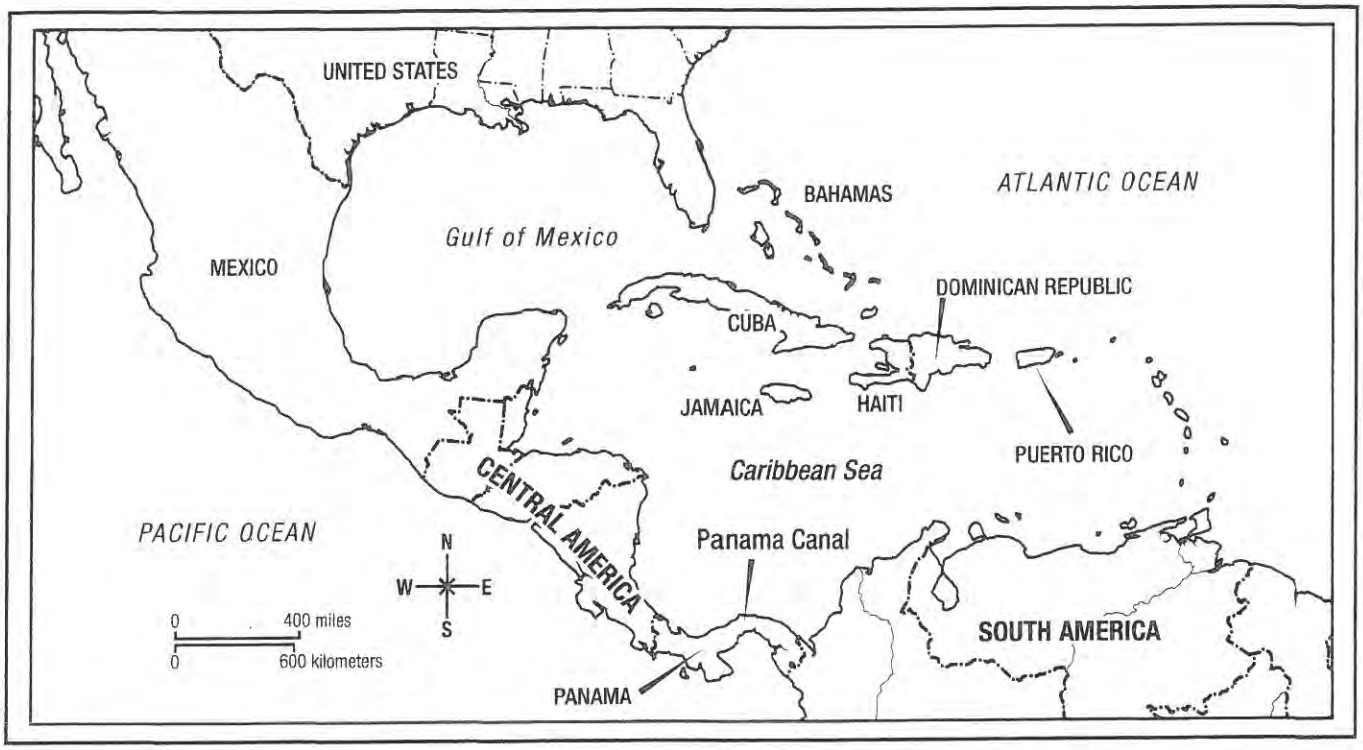
Name _____ Date _____



The United States won the Spanish-American War quickly. As a result of the war, Spain had to give some islands that it ruled to the United States. These included the Philippine Islands and Guam in the Pacific Ocean, and Puerto Rico in the Atlantic Ocean.

One of the men who fought in Cuba was Theodore (Teddy) Roosevelt. He was the leader of a group of **cavalry**, soldiers who rode horses. His group, the Rough Riders, became famous during the Spanish-American War. In 1901, when President McKinley was killed, Vice President Teddy Roosevelt became President of the United States.

Theodore Roosevelt

➤ **Why do you think the American soldiers in Cuba rode horses?**

_____

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Name _____ Date _____

The Progressive Era

Although the United States was a rich country, most of its citizens were not rich. People who worked on farms and in factories made very little money. Some of the machines they used were dangerous. Workers could be badly hurt. And many of the workers were children.

Unions were formed to solve these problems, but they were able to make only some things better. Unions could help only their own members. And many people worked in places that had no unions.

How was it possible that ten-year-old children were made to work in mines and factories? Why did workers have to use machines that might kill them? Why weren't there any laws to protect these people?

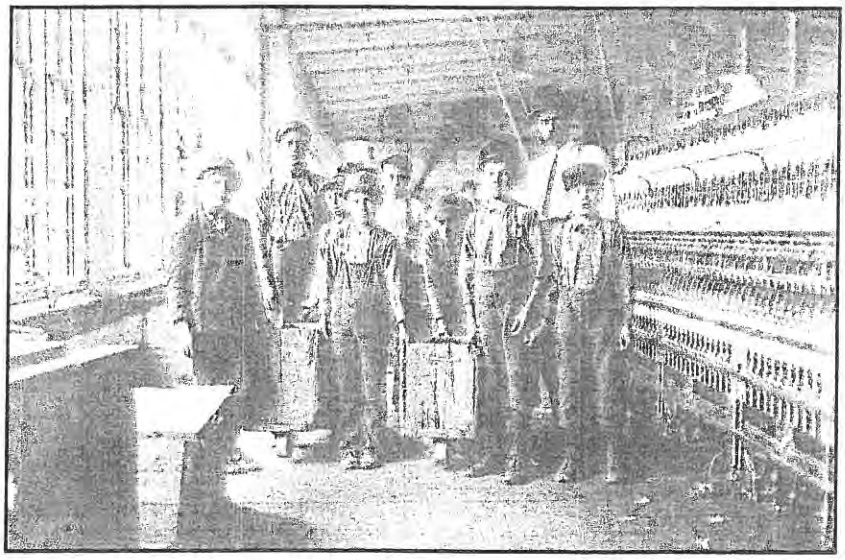
There were many reasons why people were not protected at work. One reason was that people still liked to think of themselves as pioneers. They believed that people should take care of themselves. They thought that if someone did not like a job, that person should find another job. A person who was sick or poor should ask family or friends for help.

But things were not that simple anymore. Most people could not get in a covered wagon and find a better place to live. By 1900, most people in the United States lived in cities. There weren't enough jobs, so people took what they could get. And poor families had to send their children to work.

➤ **Why did people work at unsafe and low-paying jobs?**

_____

_____



Child factory workers.

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Name _____ Date _____

The **Progressives** were a group who believed there should be laws to protect people. The Progressives came from many political groups. It wasn't just children and the poor that they were trying to protect. They believed life could be improved for all people who lived in the United States. They wanted all people—not just the rich and powerful—to take part in running the government. During these years women began to gain more political power. Some states in the West and Midwest gave women the right to vote.

Progressives also wanted to protect people's health. In 1906, Progressive writer Upton Sinclair wrote a book called *The Jungle*. The story was about unhealthful conditions in the meatpacking business. Meat was not being prepared in a healthful way.

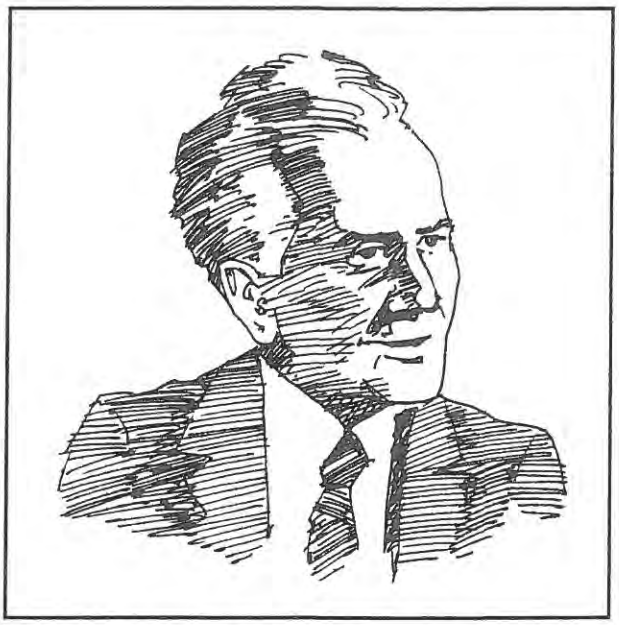
After President Roosevelt read *The Jungle*, he urged Congress to pass laws about how meat and other foods should be prepared. Today, the government checks to make sure food companies prepare foods the right way.

The Progressives got the government to change many other laws. Factories became safer. Children received better protection. So many laws were passed at that time that the years from 1898 to 1918 are now known as the Progressive Era.

➤ **What was the book *The Jungle* about?**

_____

_____



Robert La Follette ran for President of the United States as a Progressive Party candidate.

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Name _____ Date _____

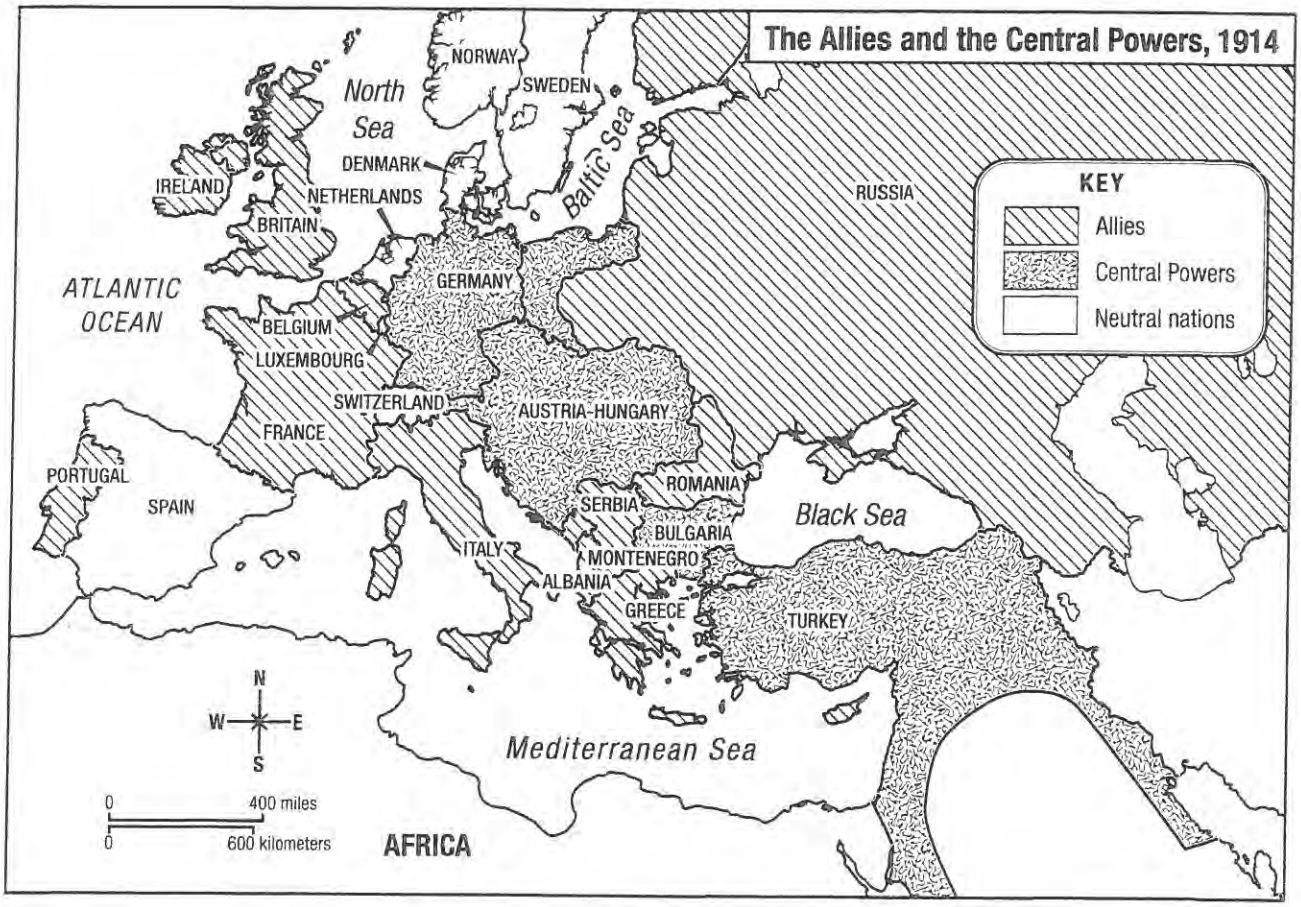
A World War

In the early 1900s, Europe was made up of nations that were jealous and afraid of each other. Groups of nations had agreed to help if any one of them was attacked. For this reason, in the summer of 1914, a war between two countries spread to most of the nations of Europe. On one side were the **Allies**. The most important Allies were Great Britain, France, and Russia. On the other side were the **Central Powers**. These included Austria-Hungary and Germany. The nations that did not enter the war were called **neutral**.

➤ **Look at the map below. On which side were most of the nations of Europe?**

_____

In the summer of 1914, most people who lived in the United States were not interested in the war. Europe was far away. It took six days to get there by ship, and not many people could afford to go.



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Name _____ Date _____

The United States and World War I

The United States was neutral for the first three years of the war. During that time, German submarines were sinking British ships that were not part of the war. In 1915, the Germans sank the ocean liner *Lusitania*. Most of the people on board died. More than one hundred of them were from the United States.

In 1917, the Germans said they would sink any U.S. ship going to Great Britain. President Woodrow Wilson asked Congress to declare war against the Central Powers.

U.S. soldiers reached Europe in June 1917. The Allies were very glad to see the Yanks, as the solidiers from the United States were called. The Allies needed help from the Yanks and more soldiers to help them fight.

Both sides in the war had dug long trenches in the battlefields. The soldiers lived and fought in the trenches. Many men were killed each time one side tried to attack the other side. On one day, 60,000 British soldiers died.

In November 1918, World War I was over. The Allies won.

➤ **Why do you think soldiers lived in trenches during World War I?**

_____

_____

Woodrow Wilson

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Name _____ Date _____

After the War

War can change countries in many ways. Many homes were destroyed during the fighting in France and Germany. The United States changed, too, but in different ways. During World War I, people in the United States had learned about new ways to live.

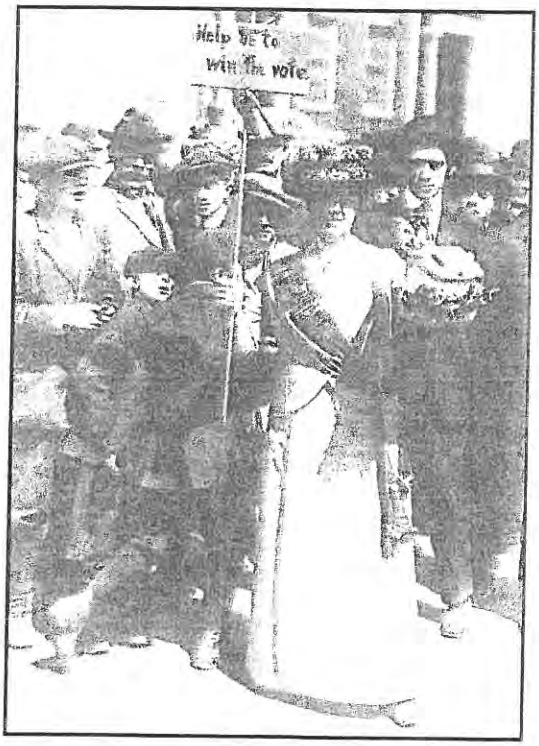
Before the war, many women worked at home. But there were many new jobs during the war, and not enough men to do them. Women went to work in factories making things the soldiers needed.

➤ **What kinds of goods would the army and navy need?**

_____

_____

Women proved that they could do the same jobs as men. They wanted the same rights, too. In many states, they did not have the right to vote. Women worked hard to change this. In 1920, the 19th Amendment gave women the right to vote.



Women want to vote.

Some African Americans fought in the war. Many others moved to the northeast to work in factories there. Life there was a little better for the African Americans, but they still did not have equal rights.

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Name _____ Date _____

Chapter Checkup

➤ **Darken the circle by the answer that best completes each sentence.**

1. The battleship *Maine* was sent to Cuba by President McKinley to
   - Ⓐ fight the Spanish.
   - Ⓑ protect U.S. citizens in Cuba.
   - Ⓒ deliver supplies to the Cubans.
   - Ⓓ explode in the harbor.

2. The Progressives wanted laws to
   - Ⓐ make children work in mines.
   - Ⓑ become President.
   - Ⓒ have people live in cities.
   - Ⓓ protect everyone.

3. Nations that do not enter or take sides in a war are called
   - Ⓐ Progressives.
   - Ⓑ neutral.
   - Ⓒ Allies.
   - Ⓓ brave.

4. The United States entered World War I because
   - Ⓐ the Germans said they would sink U.S. ships.
   - Ⓑ the British were losing the war.
   - Ⓒ Austria-Hungary tried to become neutral.
   - Ⓓ the President tried to change the laws.

5. The United States entered World War I in
   - Ⓐ 1898.
   - Ⓑ 1914.
   - Ⓒ 1917.
   - Ⓓ 1920.

6. In World War I, the United States fought against the
   - Ⓐ Spanish.
   - Ⓑ Cubans.
   - Ⓒ Central Powers.
   - Ⓓ Allies.

THINKING AND WRITING

How did World War I change the lives of women in the United States?

_____

_____

_____

_____

_____

_____

_____

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Before the Industrial Revolution

Welsh spinners and spinning wheel

Unlike political revolutions, the Industrial Revolution did not begin with great civil unrest or the clash of armies. As a result, it is difficult to arrive at a date for its beginning. The Industrial Revolution did not occur overnight, but rather began gradually and grew over several decades. Most historians place its beginnings in England in the mid-1700s, a decade or two before the American Revolution.

Most people lived in the country before the Industrial Revolution. In England, 75 percent of the population lived in rural areas or small villages in 1700. The percentage was even higher in continental Europe. Those cities that existed were few in number and of modest population. Due to the limited development of farming methods, it was necessary for the majority of the people to live in the country in order to produce enough food for the population. Most families farmed and lived on small plots of land that were controlled by large land owners who were often members of the nobility.

The total population of Europe was quite small. For example, in 1700, England's total population was about five million, compared to about 50 million today. The people of preindustrial Europe lived very isolated lives. Roads were poor and dangerous, so people rarely traveled beyond their home villages. News of events in the outside world arrived slowly and sporadically. As a result, the small villages that dotted the countryside were the centers of life for the majority of Europeans. Few people ever left the area of their birth.

While the vast majority of the population worked in the fields, farming did not provide year-round employment. The peasant farmers were quite busy during times of planting and harvesting, but at other times they were free to do other work. During these times, thousands of families worked in their homes for clothing merchants. The merchants provided the families with wool or cotton, and for a fixed price, the families spun yarn on their spinning wheels and produced cloth on their hand-operated looms. This practice between the merchants and rural families is known as "cottage industry" because all of the work was done in a family's cottage home.

Loom for weaving

Weaving cloth was difficult and tedious, but provided a valuable income for many families. It was convenient work, since it was performed from within the home and at the pace desired by the worker. Children worked along with their parents, often becoming skilled at spinning yarn at a young age.

The system also had advantages for the merchants. The merchants paid very little for the cloth produced by the rural families and could then sell it at a handsome profit. However, the merchants were troubled by the inconsistent levels of production by the families and had no way to supervise their work. Often the cloth would not be delivered on time, especially when there was field work to divert the families from their spinning and weaving. Thus, the merchants desired another system that would allow greater supervision, more consistent delivery, and increased production. When the opportunity to produce their goods through new methods came, the merchants were quick to seize it.

Name: _____ Date: _____

Activity: Advantage/Disadvantage

Directions: Fill in the graphic organizer with advantages and disadvantages of the cottage industry system that you have learned from the reading selection.

Advantages for Workers:

Advantages for Merchants:

Cottage Industry

Disadvantages for Workers:

Disadvantages for Merchants:

Name: _____ Date: _____

Recalling Key Details

Directions: Answer the following questions using what you have learned from the reading selection.

Matching:

____ 1. Country where the Industrial Revolution began
____ 2. The center of life for most Europeans
____ 3. What spinning wheels were used to produce
____ 4. Cloth was woven on this
____ 5. Work done in the home by rural families for a merchant

A. loom
B. cottage industry
C. England
D. yarn
E. village

Multiple Choice:

6. Before the Industrial Revolution, most people in Europe worked to produce _____.
   A. steel B. rubber C. ships D. food

7. Rural people rarely traveled farther than their local village for all these reasons except which one?
   A. The roads were unsafe.
   B. The village had everything they could want.
   C. News of outside events was rare.
   D. They were busy planting, harvesting, or working at a craft or trade.

8. All but which one of these was produced by families engaged in cottage industry?
   A. wool yarn B. cotton cloth C. rayon yarn D. wool cloth

Structured Response:

9. Why did rural families participate in cottage industry? _____

_____

_____

_____

10. What problems did the merchants face with cottage industry? _____

_____

_____

_____

Name: _____

Week 28
Social Studies
Test

1. The Transcontinental Railroad was finished in 1869. Transcontinental means -

   A. across the state
   B. across the continent
   C. across the city
   D. across the world

2. Before building and flying airplanes, the Wright brothers built -

   A. houses
   B. bicycles
   C. sawmills
   D. cars

3. Why were people interested in coming to the United States?

   A. They came to enjoy new inventions.
   B. They came to work in the factories.
   C. They came to drive Henry Ford's cars.
   D. They came because ship fares were cheap.

4. Which answer is NOT correct?

   A. The machines lightened the work.
   B. The machines never got tired.
   C. The machines replaced horses.
   D. The machines were all easy to clean.

5. The battleship Maine was sent to Cuba by President McKinley to

   A. fight the Spanish.
   B. Protect U.S. citizens in Cuba.
   C. Deliver supplies to the Cubans.
   D. Explode in the harbor.

6. The United States entered World War I in

   A. 1898
   B. 1914
   C. 1917
   D. 1920

7. In World War I, the United States fought against the

   A. Spanish.
   B. Cubans.
   C. Central Powers.
   D. Allies.

8. Extra Credit Prior to the Industrial Revolution, what did most people do for a living?

   _____

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5th Science

Lesson 1.1 Weather Trackers

barometric pressure: also called *atmospheric pressure*; the weight of air pressing down on a particular part of Earth's surface

data: facts that can be used for calculating or reasoning

proof: evidence that shows something to be true or correct

conclusions: decisions reached by using careful thought and reasoning

analyze: study or find out how different pieces of information relate to one another

Graphic organizers let you see how different pieces of information compare or relate to each other. Pie charts, flow charts, bar graphs, and line graphs are just a few of the most common types of graphic organizers.

What kinds of patterns do meteorologists look for to predict the weather?

For three weeks, the students in Mr. Klein's science class observed the weather. Each day, they recorded the highest temperature, **barometric pressure**, and wind speed. They also noted what the sky looked like and the amount of rain that fell. Mr. Klein stressed how important it was to collect good **data**.

"If you take sloppy notes," he explained, "or, even worse, just try to remember what you saw, your research won't be reliable. **Proof** is the key to science. Your records will be used to support your **conclusions**. A good scientist never says 'just trust me, I know.' He or she backs up every claim with evidence."

The class had been divided into several groups. Each group tracked one aspect of the weather. Today, they were copying all their research into one big chart. Then, the class would **analyze** the information and draw conclusions.

The first group went to the board and filled in each day's temperature on the chart. Another group added descriptions of the sky—cloudy, partly cloudy, or clear. One by one, the groups completed the weather chart.

The final group was in charge of barometric pressure. Each day, they had read a barometer placed inside the classroom. Its needle pointed to a number between 28 and 31.

"A barometer measures atmospheric pressure," Mr. Klein had explained. "The air around you is filled with molecules made of nitrogen, oxygen, and other elements. If you step outside and look up into the sky, every inch of that space contains molecules. All those molecules added together create a lot of weight pressing down on your body.

"Molecules aren't spread evenly through the atmosphere, though. Sometimes, the air above you weighs more than it does at other times. The amount of pressure weighing down on Earth's surface—and us—changes. The barometer takes a measurement of that pressure. Our hypothesis will be that barometric pressure gets lower when it's going to rain."

Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7
74° 30.5	78° 30.8	75° 30.2	70° 29.4	70° 28.9	68° 28.5	65° 28.3
5 mph 0"	4 mph 0"	6 mph 0"	8 mph 0"	11 mph 0"	15 mph .5"	22 mph 1"
Clear	Clear	Clear	P. Cloudy	P. Cloudy	Cloudy	Cloudy
Day 8	**Day 9**	**Day 10**	**Day 11**	**Day 12**	**Day 13**	**Day 14**
66° 28.6	72° 30.1	74° 30.4	80° 30.0	76° 29.3	72° 28.7	74° 29.5
10 mph .25"	8 mph 0"	8 mph 0"	4 mph 0"	9 mph 0"	8 mph .25"	15 mph 0"
Cloudy	P. Cloudy	Clear	Clear	Cloudy	Cloudy	P. Cloudy
Day 15	**Day 16**	**Day 17**	**Day 18**	**Day 19**	**Day 20**	**Day 21**
77° 31.0	81° 30.4	72° 29.5	72° 29.3	69° 28.9	67° 29.5	70° 29.8
18 mph 0"	6 mph 0"	10 mph 0"	12 mph 0"	14 mph .5"	12 mph 0"	17 mph 0"
Clear	Clear	P. Cloudy	Cloudy	Cloudy	Cloudy	P. Cloudy

NAME _____

Use the chart on page 6 to answer the following questions.

1. Which day was coldest? _____
2. Which day was warmest? _____
3. Which day was the windiest? _____
4. Which days were the least windy? _____
5. What was the total amount of rainfall during this three-week period? _____

Write **true** or **false** next to each statement below.

6. _____ The windiest days always occurred when it was raining.
7. _____ The barometric pressure seldom changed.
8. _____ The lowest temperatures usually came on cloudy days.
9. _____ The barometric pressure was at its highest on clear days.

Write your answers on the lines below.

10. Can this chart be used to predict the weather for the next month? Why or why not?

_____

_____

11. Did the information gathered by the students prove or disprove their hypothesis? Explain your answer.

_____

_____

What's Next?

For one week, watch the weather report on the evening news each day. What information does the meteorologist include in his or her report? Do you see similar patterns in how the weather changes in your area compared to what the students in this selection observed?

Lesson 1.2 The Father of Genetics

characteristics: the qualities that make something different from others; traits

offspring: the young of an organism

pollinated: fertilized; transferred grains of pollen from the male to the female parts of plants

variables: parts of an experiment that can change and cause a change in the results

traits: the qualities that make something different from others; characteristics

crossbreeding: breeding two different types of plants with one another

genes: the parts of a plant or animal that determine what traits will be passed on to the offspring

Mendel had hoped to become a high school teacher. He took the exam several times and failed it, so he continued his work as a monk and did experiments in his spare time.

Mendel experimented with about 30,000 pea plants in order to discover the laws of heredity, or how traits are passed along.

How did the study of pea plants lead to the discovery of how traits are passed from one generation to the next?

Gregor Mendel was an Austrian monk who was very interested in plants. He spent much of his time in the monastery's garden. Mendel was curious about the **characteristics** of different plants and their **offspring**, so in 1857, he decided to breed peas. He chose to study seven characteristics of the pea plants, such as the length of the stem and the color of the ripe seeds. First, he made sure that the plants he was studying were purebred. This meant that they always had offspring with the same characteristics. If a plant had wrinkled seeds, its offspring would have wrinkled seeds, too.

He also used a greenhouse because he didn't want his plants to be **pollinated** by insects. This would have introduced too many **variables**. For the purposes of the experiment, Mendel had to control the pollination himself.

The first results didn't surprise Mendel. It made sense that a young plant would have the same **traits**, or characteristics, as its parents. Next, Mendel tried **crossbreeding** pea plants that had different traits. For example, he bred a plant that had a long stem with one that had a short stem. What kind of plants do you think he got? Ones that had a medium-length stem? Mendel was surprised to see that all the offspring had long stems. It seemed as though the shortness characteristic had disappeared. When he tried breeding these new plants with one another, he found that some of their offspring were tall and some were short. What was going on?

Mendel kept experimenting and discovered that pairs of **genes** determine each characteristic—one gene from each parent. Some traits are stronger than others. He called these *dominant traits* and called the weaker ones *recessive traits*. Mendel used a capital letter as a symbol for a dominant trait, and a lowercase letter as a symbol for a recessive trait. Two dominant genes (TT) or one recessive and one dominant gene (Tt) would result in offspring having the dominant trait. Only when the offspring received two recessive genes (tt) would it have the recessive trait.

Mendel was right, but it took almost 40 years for others to believe him. He tried to share the results of his work, but no one took him seriously. He was only an amateur scientist, not a professional. Today, Mendel is known as the "father of genetics."

Paternal \ Maternal	T	t
T	TT	Tt
t	Tt	tt

NAME _____

Circle the letter of the best answer to each question below.

1. Which of the following is a human trait?

   a. eye color

   b. height

   c. hair texture

   d. All of the above

2. A hypothesis is a statement that is assumed to be true so that it can be tested. Which of the following might have been one of Mendel's hypotheses?

   a. Two purebred plants will have offspring that have the same traits as they do.

   b. Plants with long stems produce more peas.

   c. Pea plants with short stems cannot have offspring.

   d. Why are some traits stronger than others?

Write your answers on the lines below.

3. In a certain type of plant, the gene for red flowers is dominant and the gene for yellow flowers is recessive. If a purebred plant with red flowers was crossed with a purebred plant with yellow flowers, what color flowers would the offspring have?

   _____

4. If **F** is the dominant red flower gene and **f** is the recessive yellow flower gene, what color is each of the flowers listed below?

   FF: _____ ff: _____ Ff: _____

5. Why do you think Mendel needed to be in charge of the pollination of his pea plants?

   _____

6. Why didn't other scientists take Mendel's work seriously?

   _____

7. What would have happened if other scientists had tried performing Mendel's experiments themselves?

   _____

Break It Down

process: series of events that lead to a certain result

erosion: the movement of rock and soil by natural means, such as wind and rain

mechanical weathering: the breaking apart of rock into smaller pieces by physical forces

chemical weathering: the breaking apart of rock into smaller pieces by chemical forces

The Mississippi River carries an average of 230 million tons of eroded material into the Gulf of Mexico each year.

The roots of plants and trees help hold soil in place. They also offer the soil some protection from wind. As human beings have used more land for agriculture and building, they have cut down trees. This causes the land to erode more quickly than it might have otherwise.

What processes cause changes in Earth's surface to take place?

The surface of Earth is constantly changing. This might surprise you. After all, hills, valleys, and rivers don't appear to change much at all from day to day or even year to year. That's because most changes to Earth's surface happen slowly. They are part of a **process** called **erosion**. Erosion is the natural movement of rocks and soil over time. Agents of erosion—the forces that move the material—are water, wind, and ice.

Wind can't move an enormous boulder, though. Water can't wash away an entire mountain. Before the forces of nature can move anything, weathering must take place. Weathering is a process in which rock is broken down into smaller pieces. Weathering and erosion are both natural processes, or series of events that lead to the changing of the landscape.

When physical forces act on rock, **mechanical weathering** is taking place. Water is a common cause of mechanical weathering. Water can cause rocks to break apart, through rain or ocean waves. Water also seeps into tiny holes in rocks. When it freezes, it expands and puts pressure on the rock, which causes it to crack and break apart.

Glaciers—huge masses of ice, snow, and rock—move very slowly. As they do, they grind and scrape away at layers of rock. Even trees and animals can be sources of weathering. An animal that uses its claws to burrow underground can break rocks into smaller pieces. The roots of trees can do the same thing over time.

Chemical weathering causes a change to the minerals that are found in rocks. It breaks down the bonds that hold rocks together. For example, rain absorbs carbon dioxide as it falls through the air. It forms an acid that eats away at certain types of rocks.

Once material has been weathered, it is carried away, often by water. The water can be in the form of rain that beats against a cliff or ocean waves that pound on a coastline. It can be a stream whose movement pulls pebbles and silt from its banks and carries them along. Wind can also pick up soil, tiny bits of rock, and sand and transport them from one place to another.

The changes brought about by weathering and erosion are usually slow. A big storm, like a hurricane can speed them along. Otherwise, you must be patient and observant to see the landscape change.

NAME _____

Circle the letter of the best answer to each question below.

1. Which of the following is an agent of erosion?
   a. thunder
   b. ocean waves
   c. glaciers
   d. Both b and c

2. What is the result of the processes of weathering and erosion?
   a. changes to the landscape
   b. the formation of larger mountains
   c. more flooding during times of heavy rains
   d. overflowing rivers and streams

Write your answers on the lines below.

3. Explain how weathering and erosion are different from one another.

_____

_____

4. How is the freezing and thawing of water a part of the weathering process?

_____

_____

5. What is one effect that human beings have had on erosion?

_____

6. How would a storm like a hurricane or a tornado speed up the process of erosion?

_____

7. How is a glacier a source of both weathering and erosion?

_____

What's Next?

Arizona's Grand Canyon, which is more than 5,000 feet deep, was formed by erosion. See if you can find out what forces created this spectacular beauty. How long did it take?

Lesson 1.4 Taking Heat

thermal energy: the amount of heat energy stored inside a substance

scales: ways of taking measurements using a series or sequence of equal units

properties: special qualities of a substance or substances

absolute zero: 0 K, or the temperature at which no heat energy is present; it exists only in theory and has never been reached; it is equal to -459.67°F

The coldest temperature ever found in nature is 1 K, or about -457°F. It was measured in the Boomerang Nebula, about 5,000 light-years from Earth.

To change a temperature from Celsius to Fahrenheit, multiply the Celsius temperature by 1.8 (°C x 1.8) and then add 32.

To change a temperature from Fahrenheit to Celsius, subtract 32 from the Fahrenheit temperature (°F - 32) and then multiply the result by 5/9 (or multiply the result by 5 and then divide by 9).

What does a thermometer really measure?

A rock on the ground doesn't seem like a very energetic thing. If you could see its atoms and molecules, though, you'd know differently. All those tiny particles are bouncing around, giving the rock plenty of energy. Pick up a rock that's been warmed by the sun, and you'll feel some of this energy.

Heat causes atoms and molecules to move more quickly. The heat you feel coming from the rock is actually energy causing the atoms and molecules in your hand to pick up speed. Heat is energy moving from one place to another.

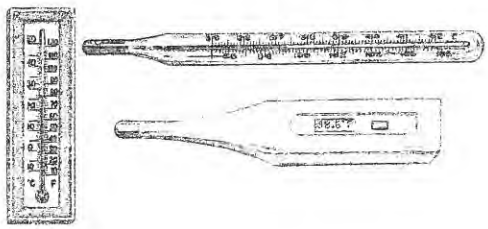
Everything contains atoms and molecules in motion, so everything has energy. How hot or cold something is—the amount of energy it has—depends on how quickly or slowly its particles move. This means that when you measure temperature, you are really measuring moving molecules. You're measuring how much energy something has.

Thermometers are the scientific tools used to measure temperature. They can use mercury, electricity, or electromagnetic waves to see how much **thermal energy** something has. Several different **scales** have been developed for thermometers.

You are probably most familiar with temperatures given in the Fahrenheit scale. The German physicist Daniel Fahrenheit invented this method in 1724. No one knows for sure what he based his scale on. One guess is that he set 0°F as the lowest temperature he recorded during winter, and 100°F as the temperature of his body. On the Fahrenheit scale, water freezes at 32°F and boils at 212°F. Today, the United States is the only country that still regularly uses Fahrenheit temperatures.

The rest of the world—and most scientists—use the Celsius scale, named after Swedish astronomer Anders Celsius. The Celsius scale is based on **properties** of water. On Earth, water is the only substance that exists naturally in three states of matter—solid, liquid, and gas. The Celsius scale is based on this characteristic of water. Water freezes at 0°C and boils at 100°C.

Another temperature scale that some scientists use is the Kelvin scale. Each kelvin is equal to one degree Celsius, but the Kelvin scale starts at a much lower temperature—**absolute zero**. At absolute zero, atoms and molecules stop moving completely because they have no thermal energy. This is only an idea, though. Atoms and molecules never really stop moving.



NAME _____

Circle the letter of the best answer to each question below.

1. All matter has _____ because everything contains atoms and molecules in motion.
   a. energy
   b. frequency
   c. kelvins
   d. properties

2. Heat is
   a. not found in cold things.
   b. another word for atoms and molecules.
   c. a way to measure temperature.
   d. energy on the move.

3. What does a thermometer measure?
   a. water
   b. thermal energy
   c. temperature
   d. Both b and c

Write your answers on the lines below.

4. Why are 0° and 100° important in the Celsius scale?

   _____

5. How is the Kelvin scale different from the Celsius scale? How are they similar?

   _____

   _____

6. What is absolute zero?

   _____

7. If it's 58°F outside, what is the temperature in degrees Celsius? Use a calculator if you need help.

   _____

Lesson 1.5 Flying into History

engineers: people who design and build things

practical: useful; not just experimental

mechanisms: the parts that allow a machine to work

rudder: a flat, movable piece of wood or metal used for steering a ship or airplane

propeller: blades attached to a central point that spins; used to propel boats or airplanes

To this day, almost all airplanes are still steered using the design invented by the Wright Brothers.

For several years, most people doubted that the Wright Brothers' flight really happened. Only a few witnesses were at the beach that day. A few months later, the brothers tried to fly again in Ohio. This time, with plenty of reporters watching, the Wright Brothers' machine could barely get off the ground.

"Genius is one percent inspiration and ninety-nine percent perspiration."—Thomas Edison, inventor

What does it take to become a famous inventor?

In the late 1800s, Wilbur and Orville Wright owned a bicycle shop in Dayton, Ohio. The men even designed their own brand of bicycle. With the money they made, the brothers began working on something they loved even more than bicycles—flying machines.

The Wright Brothers had been closely following the work of other inventors and **engineers**. They had read about Otto Lilienthal's successful—and dangerous—glider flights in Germany. They were excited by Samuel Langley's flying, steam-powered models. They had heard reports about Octave Chanute's glider experiments over the sand dunes of Lake Michigan. All of this had happened in a single year—1896. A real race was on to invent the perfect flying machine. The Wright Brothers wanted to join in.

The brothers soon realized that getting human beings into the air wasn't the problem. Machines could already do that. They could even fly around for a while. The problem was that they were impossible to control. This point was made tragically clear when Lilienthal was killed in a glider crash that same year. The Wright Brothers knew that the key to inventing a **practical** flying machine was finding a good way to steer it.

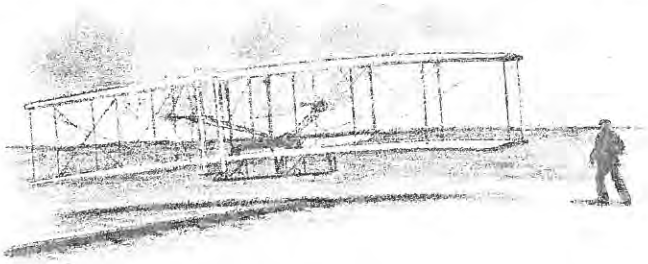
For the next five years, the men designed and tested hundreds of different wing shapes and steering **mechanisms**. They tested their gliders in the steady winds blowing across the flat beaches at Kitty Hawk, North Carolina.

In 1901, the brothers thought they had a glider that would work perfectly. They tested it dozens of times, only to discover that it still wasn't right. Disappointed, they headed back to Ohio to keep trying.

Finally, they had a breakthrough. By adding a **rudder** to the glider's tail, it could be steered using both the wings and the tail. When they tested this new glider design in 1902, it steered safely over the sand dunes.

The next year they focused on designing an engine for their glider. By the time they headed back to Kitty Hawk, their flying machine had an engine and a **propeller**.

For weeks they tried unsuccessfully to get their plane into the air. The propeller kept breaking, and they had engine troubles. Finally, on December 17, 1903, the Wright Brothers made history. Their machine flew straight into the wind for hundreds of feet. Human beings have been flying ever since.



NAME _____

Circle the letter of the best answer to each question below.

1. The Wright Brothers' mechanical skills were _____
   a. learned in the army.
   b. first used for constructing bicycles.
   c. not good enough to build a working airplane.
   d. used to build steam engines.

2. What key problem did the Wright Brothers concentrate on solving?
   a. controlling the flying machine when it was in the air
   b. getting the flying machine off the ground with a person inside
   c. finding a good fuel for the flying machine's engine
   d. finding the best place to test their flying machines

Write your answers on the lines below.

3. Why was Kitty Hawk a good place to test flying machines?

   _____

4. Do you think the Wright Brothers invented every mechanism in their flying machine? Why or why not?

   _____

   _____

   _____

5. Were the Wright Brothers good scientists? Give at least two reasons that support your answer.

   _____

   _____

Unifying Concepts and Processes

How do you think the invention of automobiles was similar to the invention of airplanes? How was it different?

_____

_____

Week 28 5th Grade Word Search

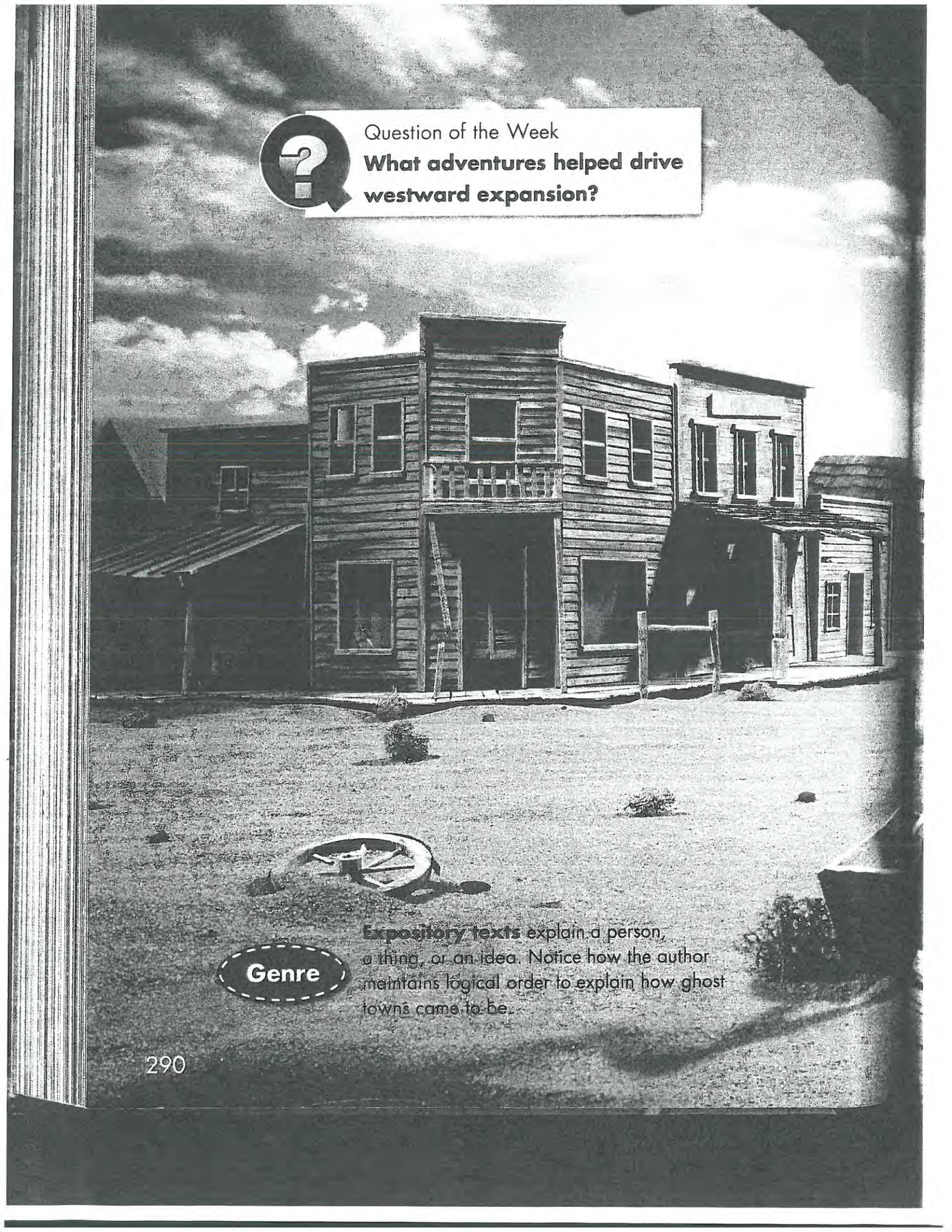
S E L B A I R A V C V J F C S C H Z V T
P E G E N E S Q I R I I P K I T Z X O A
R N N O I S O R E S M Y W L D H I Y Q U
O E T K Z L T P R E S S U R E A P A K T
C R E W B e Z S E L A C S S J F T A R S
E G K A M E Z Y L A N A R M G T L A R T
S Y U O C H A R A C T E R I S T I C S G
S A R I Z K J E J G Z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

absolute	offspring	analyze	organizers	barometric	pollinated
characteristics	practical	chemical	pressure	conclusions	process
crossbreeding	proof	data	propeller	energy	properties
engineers	rudder	erosion	scales	genes	thermal
graphic	traits	mechanical	variables	mechanisms	weathering
zero					

Week 28

5th Reading

3rd Quarter



Question of the Week

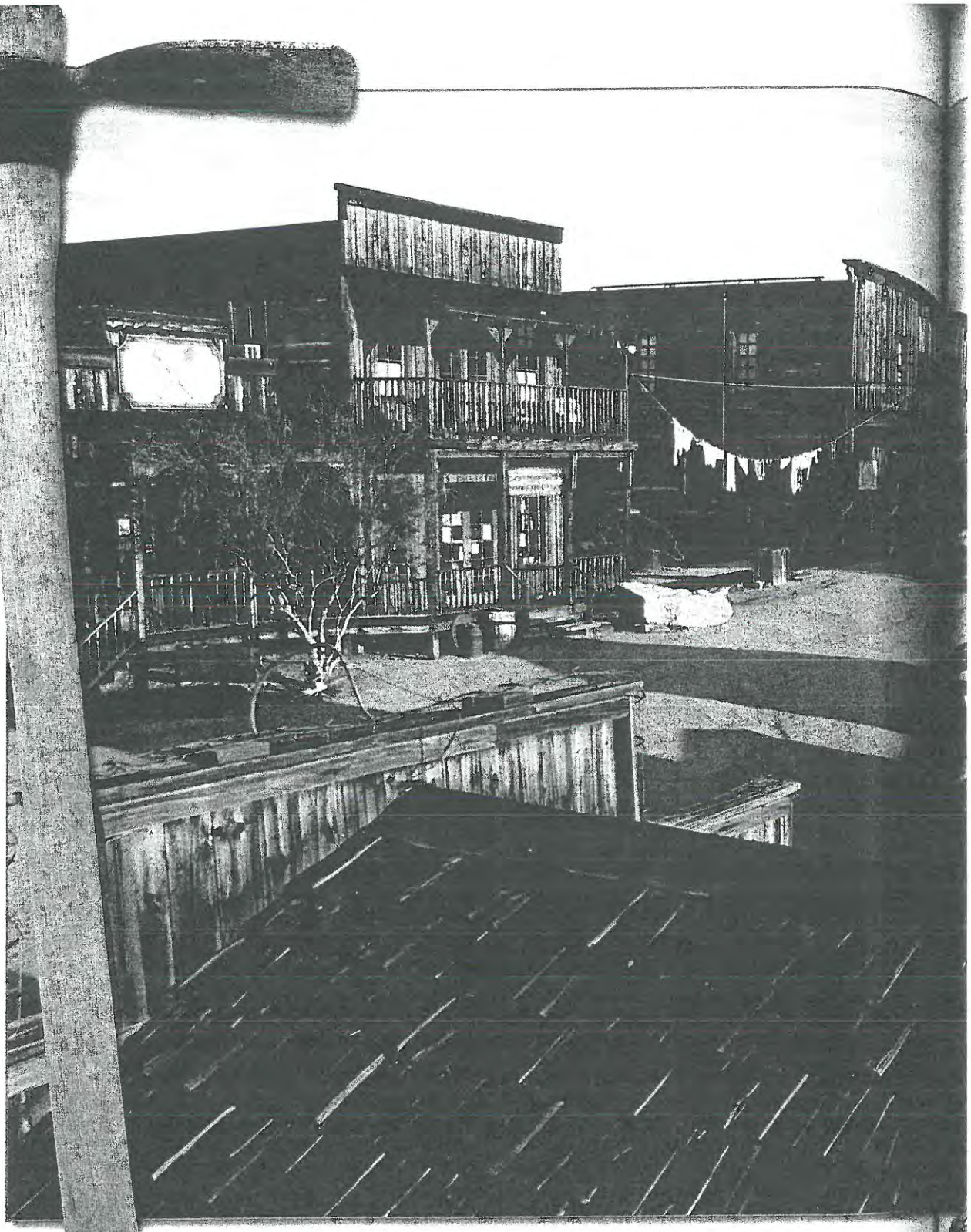
What adventures helped drive westward expansion?

Genre

Expository texts explain a person, a thing, or an idea. Notice how the author maintains logical order to explain how ghost towns came to be.

GHOST TOWNS OF THE AMERICAN WEST

BY RAYMOND BIAL



While its neighbor, Phoenix, flourished, Goldfield, a turn-of-the-century ghost town in Arizona, did so only briefly, and then declined as a mining town. However, the collection of buildings has since been given new life—as a ghost town.

An air of mystery swirls around the ghost towns of the American West. What sad and joyous events happened within the tumbledown walls and on the wind-blown streets? Why did people settle in these lonesome places? Why did they pull up stakes and move away? What went wrong in these towns? Virtually every ghost town has untold stories of people who longed for a chance at a better life. Relics of the past, the towns now stand as evidence of high adventure, hopes of striking it rich, and the sudden loss of fortune—or life.

Although ghost towns can be found throughout the world, in the United States they are most often thought of as the mining camps, cowboy towns, and other settlements of the sprawling western frontier.

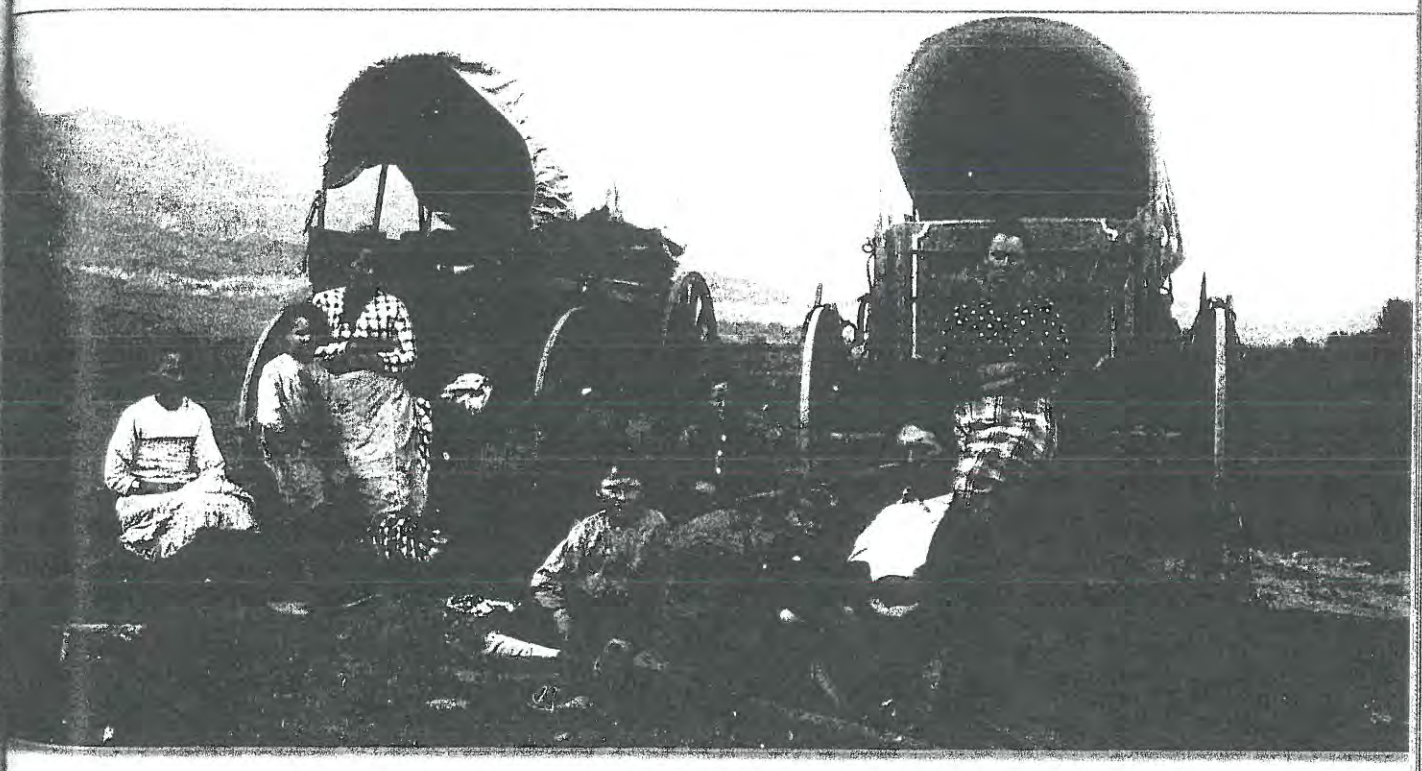
Most ghost towns were originally mining camps where men sought gold, silver, copper, and other precious minerals.

Most were once mining camps where adventurous men came to seek their fortunes. These communities boomed as miners sought gold, silver, copper, or other precious minerals but died out when all of the ore was panned from streams or blasted from rocky tunnels. In cowboy towns, cattle were driven to other towns, and then shipped to markets in the East. Many lumber camps in deep forests and farming communities on the broad prairies also enjoyed brief prosperity before they were abandoned. Along with the miners, cowboys, and farmers, merchants and bankers, as well as doctors and schoolteachers, also went west. They laid out streets and put up buildings in hopes of growth and prosperity. As one newspaper editor declared, most folks wished "to get rich if we can."

In 1848, James W. Marshall discovered gold at Sutter's Mill when he shut down the water on the millrace and glanced into the ditch. "I reached my hand down and picked it up; it made my heart thump for I felt certain it was gold," he recalled. Soon the word was out. "Gold! Gold! Gold from the American River!" shouted Sam Brannon, waving a bottle of gold dust as he strode through the San Francisco streets. Seeking pay dirt, "forty-niners"

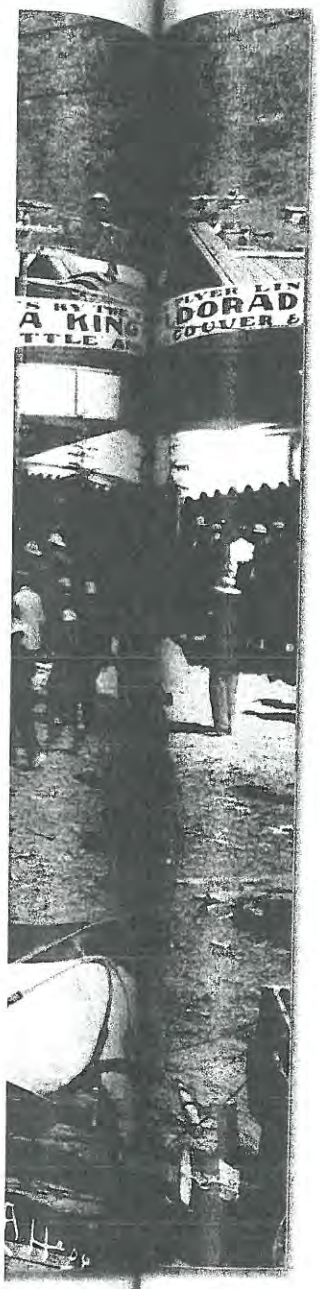
(as the prospectors came to be known) streamed into California in the first of the great American gold rushes. Yet, over time, people came to refer to the sawmill as "Sutter's Folly" as the land of John Sutter was overrun with prospectors. Everywhere, men claimed "squatter's rights," in which they settled on land without paying for it.

Towns sprang up overnight. Charles B. Gillespie, a miner who worked near Coloma, California, described the typical main streets of these towns as "alive with crowds." To him, the miners were ragged, dirty men who were otherwise good-natured. They were a mix of Americans and immigrants—Germans, French, and other Europeans,



After several hard hours of travel, these trail-weary settlers paused in the foothills of the Rocky Mountains. Unhitching their wagon, they watered their livestock, ate a noonday meal, and briefly rested.

Loading all of their possessions in Conestoga wagons with billowing canvas tops, settlers seeking independence moved westward to homestead farms, staked a mining claim, or set up storekeeping in a new town.



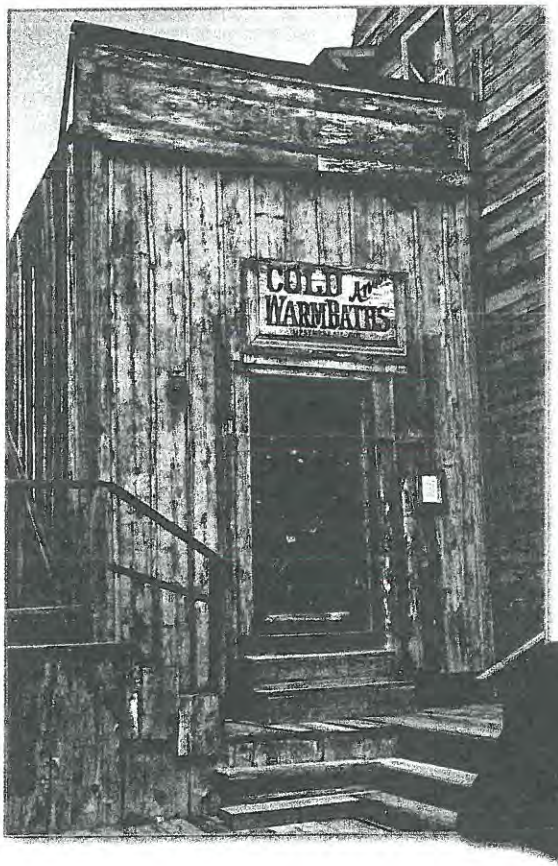
and gold seekers from China and Chile, along with British convicts from Australia. Mark Twain declared, "It was a driving, vigorous, restless population in those days . . . two hundred thousand *young* men—not simpering, dainty, kid-gloved weaklings, but stalwart, muscular, dauntless young braves, brimful of push and energy."

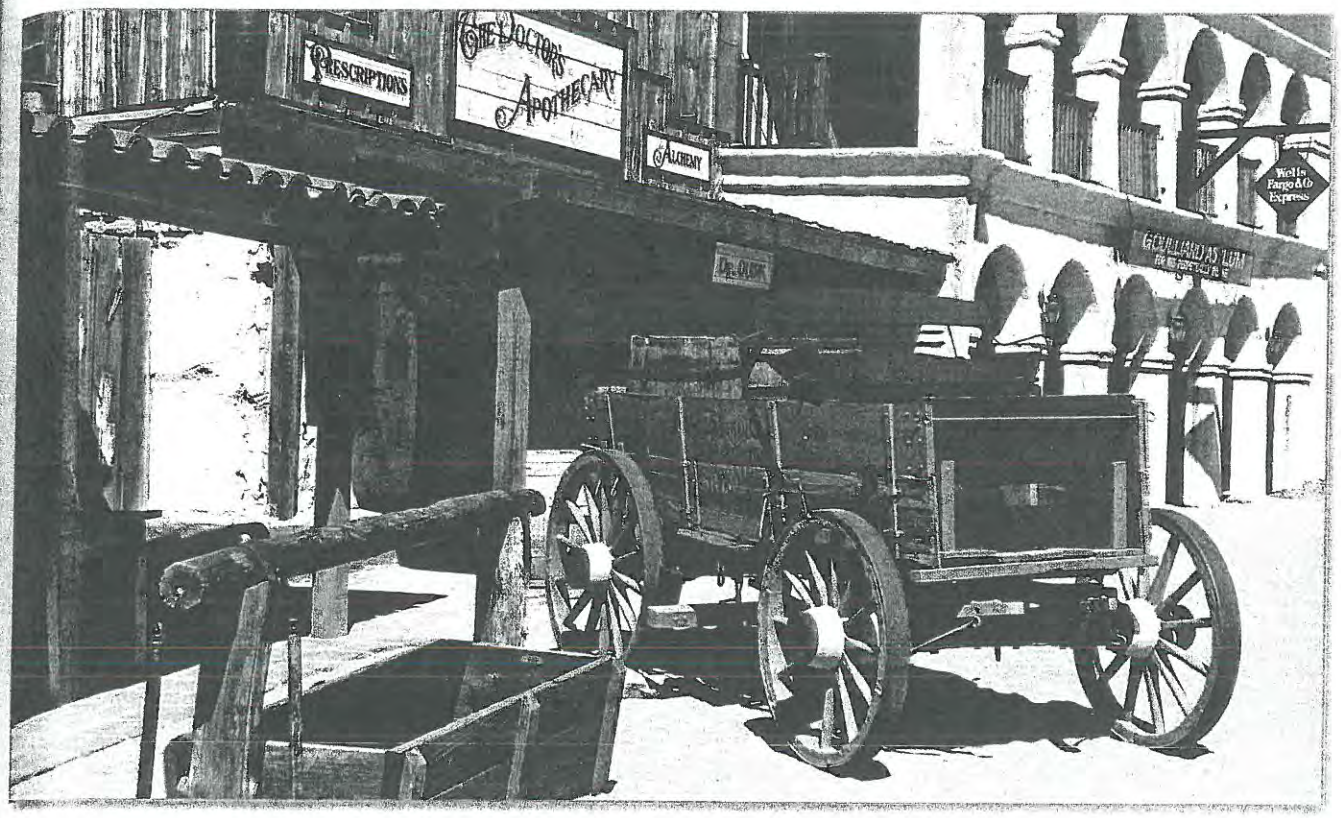
In 1851, when a Scottish artist named J. D. Borthwick arrived to try his luck as a prospector, he wrote that the main street of Hangtown, later renamed Pacerville, "was in many places knee-deep in mud, and was plentifully strewn with old boots, hats, and shirts, old sardine-boxes, empty tins of preserved oysters, empty bottles, worn-out pots and kettles, old ham-bones, broken picks and shovels, and other rubbish." Borthwick described the town as "one long straggling street of clapboard houses and log cabins, built in a hollow at the side of a creek, and surrounded by high and steep hills." Along the creek, he said, "there was continual noise and clatter, as mud, dirt, stones, and water were thrown about in all directions, and the men, dressed in ragged clothes and big boots, wielding picks and shovels . . . were all working as if for their lives."

In the typical western town, the buildings were often skirted with a sidewalk of wooden planks, along with hitching posts and water troughs for horses. There might be a bank made of solid brick to assure depositors that their hard cash or gold dust was safe from robbers. There might also be a mercantile store, an early version of the department store, as well as a general store. The town certainly had to have a

blacksmith shop and livery stable, as well as corrals for horses and cattle. Some towns had a telegraph office and their very own newspaper. The town might be lucky enough to be on a stagecoach route, a Pony Express station, or, better yet, a railroad stop.

"The Americans have a perfect passion for railroads," wrote Michel Chevalier, a French economist, in the 1830s. If the railroad bypassed the village, it quickly became a ghost town. Helen Hunt Jackson described Garland City, Colorado, where she lived: "Twelve days ago there was not a house here. Today, there are one hundred and five, and in a week there will be two hundred." However, the town lasted only a few months, at least at that site. When the railroad passed thirty miles to the west, folks moved the entire town—walls and windows, as well as sidewalks, furnishings, and goods—to the railroad tracks. Railroads laid down thousands of miles of gleaming tracks across the grasslands, with a transcontinental link completed in 1869.



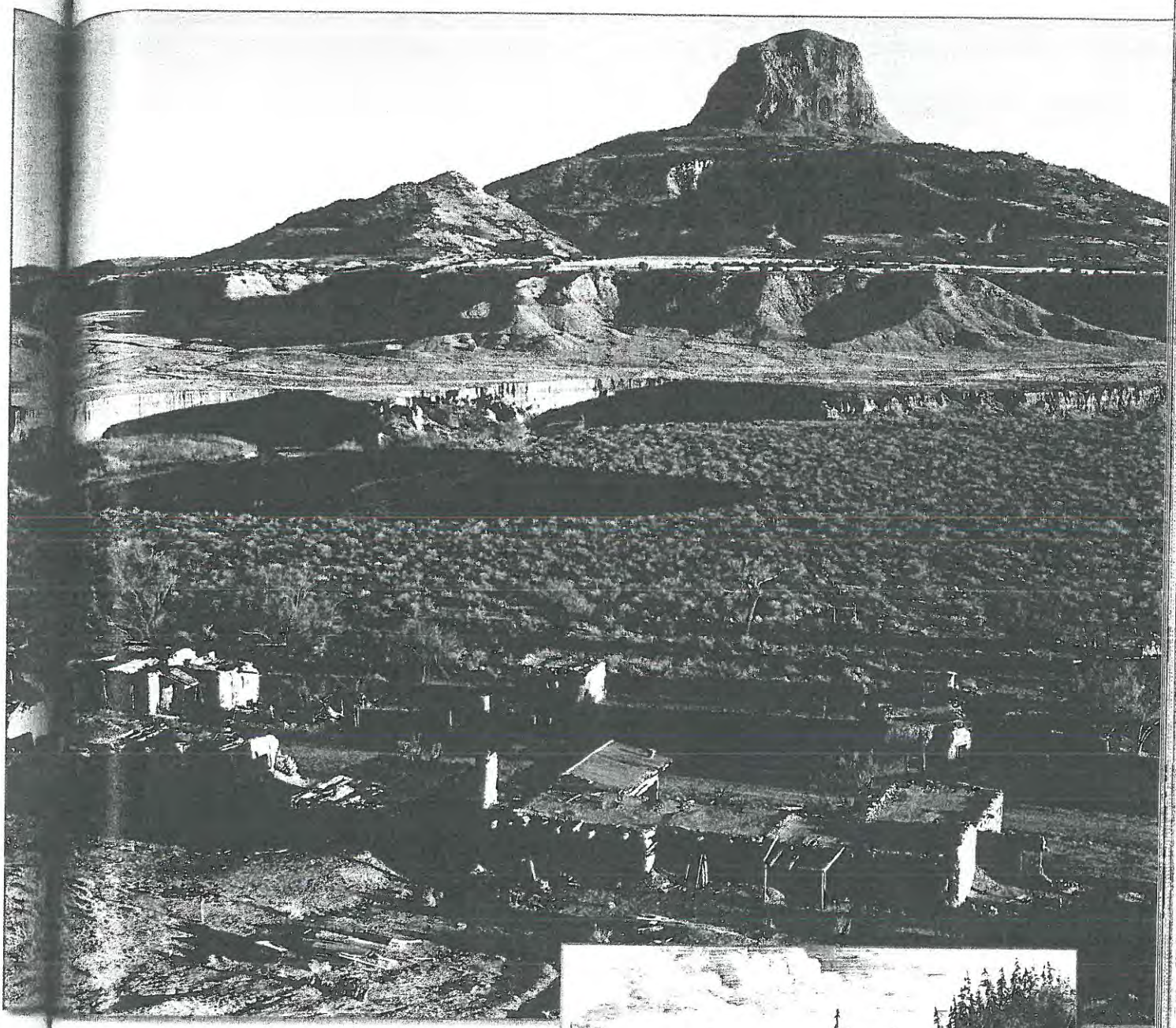


None of these towns would have prospered, even briefly, and the frontier would never have become settled, without women and children. Storekeepers and farmers occasionally brought their wives and children with them, but men still outnumbered women nine to one. Most towns actively sought women. In 1860, a letter to the editor of the *Rocky Mountain News* from the new settlement of Breckenridge, Colorado, read: "A few very respectable looking women have ventured over to see us. Send us a few more." Another Colorado writer asked, "We have one lady living in Breckenridge and one on Gold Run; we would be glad to welcome many arrivals of the 'gentler' portion of the gold-seeking humanity, and can offer a pleasant country, good

locations, and peaceable neighbors . . . except for an occasional lawsuit."

The waves of western migration reached a peak between 1860 and 1880. Over time, some towns grew into large cities, such as Denver and Phoenix, while many others were abandoned and forgotten in the desert sands or mountain snows. Most went bust because of economic failure—all the gold or silver was mined or the cattle were driven to another market town. A few people got rich, but others suffered heartbreak, hunger, and plain bad luck, and then abandoned the town. Perched on mountain cliffs, tucked into a wooded valley, or baking in the desert sun, these ghost towns are so remote that they are almost impossible to find. People often have to travel to them by four-wheel-drive vehicles and then hike several miles up rocky slopes or over cactus-studded deserts. Finding the ghost towns may be as difficult as the search for gold that led to the founding of the towns.

John Steele described Washington, California, in the 1840s, just six months after it had been founded: "With a large number of vacant cabins it contained several empty buildings and quite a large hotel, closed and silent." Once ringing with the voices of cheerful people, the towns have now fallen silent. They have become little more than empty shells of their former selves. There may be a handful of old false-front buildings, weathered to a haunting gray, with open doorways and broken windows. But little else remains; few people even remember the place. Even the memories, along with the hopes and dreams of the inhabitants, have blown away, like so much dust in the wind.



ABOVE: Cabezon, New Mexico, ghost town. In ghost town cemeteries, names of the dead were sometimes scrawled on rough boards.

RIGHT: Here, a group of men have set up a mining camp at a place known as Gregory's Diggings during the early days of the gold rush in Colorado.

Objectives

• Provide evidence from text to support understanding. • Read independently for a sustained period of time and paraphrase the reading.

Envision It! Retell

STORY SORT

Think Critically

1. The people who moved out West in the nineteenth century had very good reasons for doing so. What were some of those reasons? Do you think those reasons still relate to our world today? Why or why not? **Text to World**

2. Authors of nonfiction often do more than report the facts. They may also state their feelings about those facts. Find parts of this selection that reveal the author's feelings about ghost towns. Why do you think the author includes those feelings? **Think Like an Author**

3. Make a generalization about ghost towns. Use details and your own background knowledge to support it. **Generalize**

4. What questions do you have about ghost towns that were not answered by the selection? How might you go about finding the answers? **Questioning**

5. **Look Back and Write** Reread pages 297–298. What business buildings would you find on the streets of a town when it was thriving, before it became a ghost town? Sketch and label a typical ghost town's business area. Provide evidence to support your answer.

TEST PRACTICE Extended Response

"Ghost Towns"

Think Critically

1.

2.

4.

Generalize

- To **generalize** means to make a broad statement or rule that applies to several examples. Clue words such as *all, many,* and *most* can signal generalizations.
- If generalizations are supported by the text, they are *valid generalizations.* If they are not supported by the text or by logic, they are *faulty generalizations.*

Directions Read the following passage. Then complete the diagram below by writing a valid generalization and two ideas that support your generalization.

President Thomas Jefferson led an effort to make the Louisiana Purchase in 1803. The United States bought an 828,000-square-mile stretch of land west of the Mississippi River from France for a mere three cents per acre. The Louisiana Purchase is widely considered to be the greatest land bargain in American history.

Jefferson asked Lewis and Clark to explore the territory. For more than two years they investigated the land along the Missouri River seeking a route to the Pacific Ocean. They were greeted as heroes when they returned to St. Louis in 1806. President Jefferson was pleased, as he had doubled the size of the United States. You might say that he got the deal of the century!

Generalization

1.

Support from Text

2.

Support from Text

3.

Support from Text

The Louisiana Purchase doubled the size of the United States.

4. In box #1, what word suggests the statement is a generalization?

_____

5. Would you say this generalization is valid or faulty? Why?

_____

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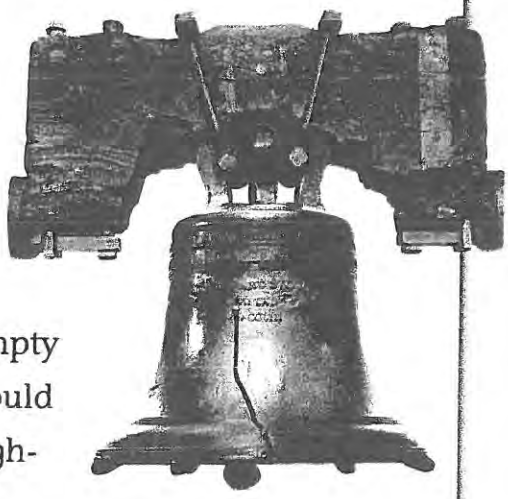
Home Activity Your child made and supported a generalization about a nonfiction text. Choose a familiar generalization from everyday life, and discuss with your child whether or not it is valid.

The Sky's the Limit

Independence has always been an important value to people who live in the United States. It has been a cornerstone of American life ever since the Founding Fathers scrawled their signatures at the bottom of the Declaration of Independence.

Independence refers to people's freedoms, of course. But it also refers to their headlong way of pursuing prosperity. From all over the world, people have flocked to America in search of freedom. But many also have hoped to become rich. The building of America has been based on economic success and muscle as much as it has been based on armies and government.



This will to "make a better life" was behind the wagon trains that ventured into the West during the nineteenth century. It drove the settling of boom towns—towns that were overrun by miners. These towns grew quickly, died quickly, and soon became nothing but vacant buildings and empty streets. Every miner believed that he or she could strike it rich. The spread of railroads, then highways, recalled this theme. Every freight train chugged a message: "The sky's the limit!"

Your Turn!

Need a Review?
For additional help with prefixes, see *Words!*

Ready to Try It?
Read *Ghost Towns of the American West* on pp. 290–301.

Vocabulary

Directions Draw a line to connect each word on the left with its definition on the right.

1. scrawled	not occupied
2. independence	to spread over
3. vacant	written or drawn poorly or carelessly
4. overrun	of or about the management of the income, supplies, and expenses of a household, government, etc.
5. economic	freedom from the control, influence, support, or help of others

Check the Words You Know

___economic
___independence
___overrun
___scrawled
___vacant

Directions Choose the word from the box that best completes the sentences below. Write the word on the line.

6. You can find evidence of the Old West in the run-down, _____ old buildings that stand like ghosts in Colorado. **7.** At one time these booming towns were _____ with prospectors. **8.** The prospectors had come in search of gold and _____ freedom. **9.** _____ on old walls and doors are the names and dates of particularly wealthy gold rushers. **10.** Unfortunately, their financial success and _____, or freedom, was short-lived, as the gold boom busted within a few years.

Write an Advertisement

On a separate sheet of paper, write an advertisement for a new theme park celebrating the Old West. Your advertisement should describe some appealing exhibits and activities, as well as noting details that reflect ways of life in the Old West. Try to use as many vocabulary words as possible.

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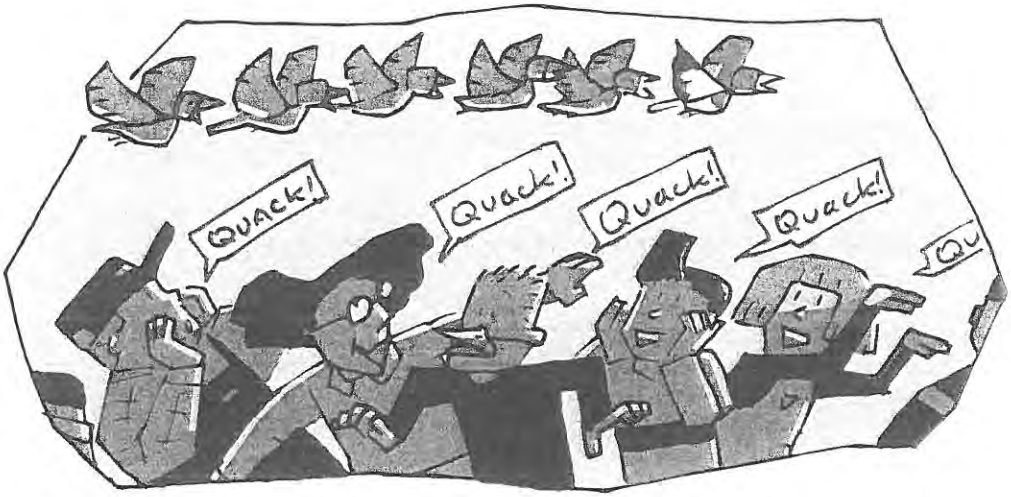
Home Activity Your child identified and used vocabulary words from the story *Ghost Towns of the American West.* Together, make up a story about a relative who lived in the Old West.



When ducks **migrate** south each fall, many of them pass over Stuttgard, Arkansas, so the people there hold a duck-calling contest. As the ducks fly by, the people quack away!

_____ **1.** In this paragraph, the word **migrate** means

A. locate **C.** travel
B. mumble **D.** honk

Have you ever seen a moonbow? It's like a rainbow, but it's made by the moon. Moonbows **occur** when the moon's light shines through the mist from a waterfall.

_____ **2.** In this paragraph, the word **occur** means

A. rain **C.** happen
B. flow **D.** disappear

In the middle of Enterprise, Alabama, stands a **monument**. It is shaped like an insect called the boll weevil. This insect once ate all the cotton plants in Enterprise, so people decided to grow peanuts. They earned more money with peanuts. That's why they honored the boll weevil.

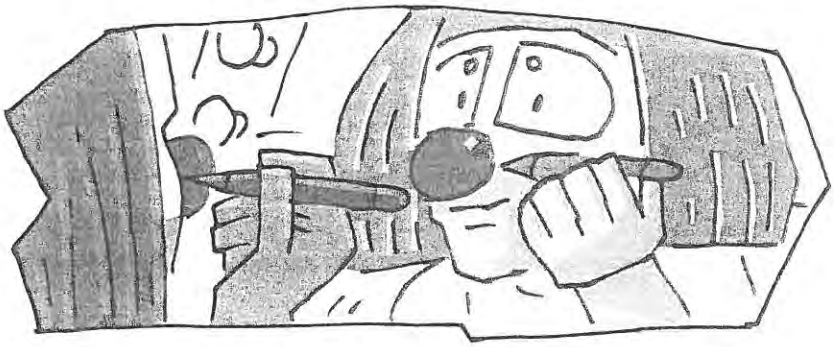
_____ **3.** In this paragraph, the word **monument** means

A. statue **C.** tree
B. farm **D.** plant

Every June **mobs** of people gather at Jensen Beach in Florida to watch for sea turtles. Hundreds of people snap pictures of the turtles as they lay their eggs.

_____ **4.** In this paragraph, the word **mobs** means

A. crowds **C.** swimmers
B. visitors **D.** couples



Clowns spend much time painting their faces. They don't want people to copy their design. Pictures of the clowns' faces are put in a file as a **permanent** record.

_____ **5.** In this paragraph, the word **permanent** means

A. playing **C.** lasting
B. pretty **D.** broken

A **typical** American saying is *O.K.* There are many stories about how this saying got started. One story is that some writers in Boston were having fun. They used *O.K.* to stand for "oll korrect," a misspelling of "all correct."

_____ **6.** In this paragraph, the word **typical** means

A. common **C.** wild
B. west **D.** odd

Shirley Temple won an Oscar award for her **performance** in the movie *Bright Eyes.* She was in this movie when she was only six years old.

_____ **7.** In this paragraph, the word **performance** means

A. youth **C.** acting
B. sewing **D.** dinner

The town of Young America, Minnesota, **sponsors** a bed-racing contest each year. People line up all sorts of beds on wheels. Then they roll them down the main street toward the finish line.

_____ **8.** In this paragraph, the word **sponsors** means

A. owns **C.** sells
B. wins **D.** holds

VOCABULARY

TEST

Directions

Find the word or words with the same meaning as the underlined word. Circle the letter next to the answer.

1 To celebrate their independence, some countries have holidays.

A leaders' birthdays
B harvests
C freedom from control
D religious beliefs

2 He scrawled a note.

F wrote carelessly
G composed
H opened quickly
J received

3 His economic theory was not useful.

A unique and untested
B relating to income, goods, and services
C complicated
D relating to science and technology

4 Her art project had overrun the kitchen table.

F decorated
G destroyed
H spread over
J abandoned

5 The hotel has no vacant rooms.

A average
B cheap
C extraordinary
D unoccupied

X _____

Parent Signature

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Name _____

COMPREHENSION

Chocolate from Trees

Did you know that three out of four Americans like chocolate? In some countries in Europe, nine out of ten people are chocolate lovers. Chocolate doesn't start out wrapped in paper or foil. It grows on trees!

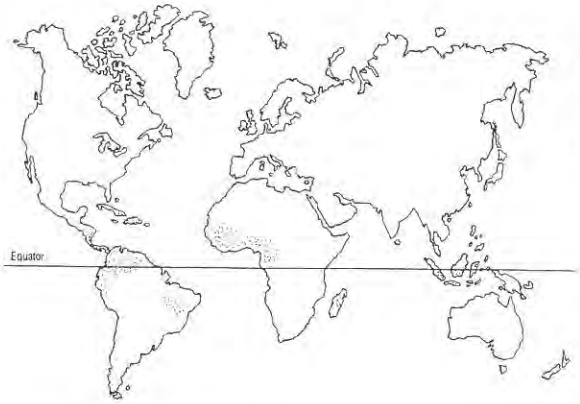
The heavenly taste of chocolate comes from a plant called the cacao (kuh KOW) tree. Natives of the New World were the first to taste cacao's chocolate flavor hundreds of years ago. Europeans learned this tasty secret when they first came to America. Now chocolate belongs to the world.

The cacao tree grows well in places that are warm and rainy all year. Tiny, waxy, pink or white flowers sprout from the tree branches or trunk. These later turn into green or red seed pods. In time, the pods grow as long as twelve inches. Workers harvest the pods by hacking them off the tree. Then they use a hammer to break each pod open. Inside the pod's sticky pulp are twenty to fifty seeds called cocoa beans. The beans have to be cleaned and dried before they are bagged and shipped afar—to make chocolate.

Some cacao farmers tend thousands of trees and produce shiploads of cocoa beans while others run small farms with help from family members. Some farmers even grow their trees in rain forests among other trees. The trees grow long, full pods just fine that way.

Cacao farmers must tend their trees carefully. Cacao trees produce useful numbers of pods only after they reach the age of four or five years. Diseases and insects can attack the trees and pods. Funguses such as witches' broom and frosty pod can badly harm the pods and the cocoa beans. A virus called swollen shoot can kill the tree. Insects, such as mealybugs and borers, can damage pods and leaves.

So enjoy your chocolate! Lots of care and hard work went into it.



Key: cacao-growing areas

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Directions

Choose the item that best answers each question about the selection you just read. Circle the letter next to the answer.

13 Study the map. Which statement best describes where cacao trees grow?

A in Africa
B in northern lands
C near the equator
D on islands

14 Who first used chocolate as food?

F the Chinese
G Natives of the New World
H Europeans
J people living in Africa

15 Which generalization can you make after reading the first paragraph?

A Chocolate is not popular in Europe.
B Most people do not like chocolate.
C Many people around the world like chocolate.
D Nine-tenths of the world's people like chocolate.

16 Which generalization about the world's cacao farms is true?

F There is a wide variety of cacao farms.
G All cacao farms start on completely cleared land.
H All cacao farms are family affairs.
J All cacao farms are huge plantations.

17 Which generalization can you make about paragraphs 3, 4, and 5?

A Cacao trees grow in all climates.
B Funguses and insects are good for cacao trees.
C Cacao trees are easy to take care of.
D Cacao farming is hard work.

18 Which is *not* a threat to the cacao tree?

F seed pods
G witches' broom
H swollen shoot
J mealybugs

19 Which generalization about farming cacao is true?

A You have to deal with a variety of harmful diseases and insects.
B You have to grow the trees for ten years before you have a crop.
C You have to wrap the dried cocoa beans in paper or foil.
D You have to grow the trees in bright sunlight.

20 The journey from cacao bean to the chocolate you eat

F is quick and easy.
G is a ten-year journey.
H needs contributions from many people.
J is by way of Europe.

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Week 28

5th Spelling

3rd Quarter

Ghost Towns of the American West

Spelling Words - Week of _____

(Greek Word Parts)

telephone
graphic
thermometer
photographer
centimeter
paragraph
telescope
diameter
photocopy
speedometer
telegraph
millimeter
autograph
television
barometer
telecommute
pedometer
phonograph
kilometer
telephoto

Challenge Words

telecommunication
autobiography
calligraphy
odometer
photosynthesis

Word Sort

Name: _____ Story: Ghost Towns of the American West

Greek Word Parts

Many words are formed with Greek word parts:

tele meaning "distance"
graph meaning "write"
meter meaning "measure"
centi meaning "hundred"
milli meaning "thousand"
kilo meaning "thousand"
auto meaning "self"
ped meaning "foot"
baro meaning "weight" or "pressure"
thermo meaning "heat"
scope meaning "to see"
phon meaning "sound"
photo meaning "light"

Sort the list words by their Greek word parts:

tele

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____

graph

7. _____
8. _____
9. _____
10. _____

meter

11. _____
12. _____
13. _____
14. _____
15. _____
16. _____
17. _____
18. _____

photo

19. _____
20. _____
21. _____

Greek Word Parts

Spelling Words				
telephone	graphic	thermometer	photographer	centimeter
paragraph	telescope	diameter	photocopy	speedometer
telegraph	millimeter	autograph	television	barometer
telecommute	pedometer	phonograph	kilometer	telephoto

Classifying Write the list word that best fits each group.

1. circle, radius, circumference, _____
2. microscope, binoculars, _____
3. letters, words, sentences, _____
4. tape cassette, compact disc, mp3 player, _____
5. air pressure, weather, instrument, _____
6. instrument, measure, speed, _____
7. communicate, wire, electric, _____
8. call, dial, talk, _____
9. camera, pictures, person, _____
10. mile, furlong, fathom, _____

Definitions Write the list word that has the same meaning.

11. one hundredth of a meter — 11. _____
12. a person's own signature — 12. _____
13. a photographic copy of written or printed work — 13. _____
14. instrument for measuring temperature — 14. _____
15. electronic device that shows images on a screen — 15. _____
16. instrument for measuring distance walked — 16. _____
17. one thousandth of a meter — 17. _____
18. to work at a location remote from one's place of employment, making use of a computer — 18. _____
19. a lens that makes distant objects appear magnified — 19. _____
20. a picture, design, or visual display — 20. _____

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Home Activity Your child wrote related words that are spelled similarly but pronounced differently. Say list words and have your child say and spell the list word that is related.

Spelling Words – 3 Times Each **Name:** _____

3 3 3 3 3 3 3 3 3 3 3 3 3 3 3

Name: _____

Story: Ghost Towns

TEST

X _____

Parent Signature

1) _____

2) _____

3) _____

4) _____

5) _____

6) _____

7) _____

8) _____

9) _____

10) _____

11) _____

12) _____

13) _____

14) _____

15) _____

16) _____

17) _____

18) _____

19) _____

20) _____

Challenge Word:

21) _____

PE Cover Sheet

4-8

Week 28

Monday-Friday we will be doing 20 jumping jacks,20 mountain climbers, and 20 burpees.

Please make sure to put your name on your paper, and drink lots of water.

Stretches for PE Monday,Tuesday, Wednesday, Thursday and Friday				
Monday	20 Jumping Jacks	20 Mountain Climbers	20 Burpees	Parent/Gardian/Teacher Signature:
Tuesday	20 Jumping Jacks	20 Mountain Climbers	20 Burpees	Parent/Gardian/Teacher Signature:
Wednesday	20 Jumping Jacks	20 Mountain Climbers	20 Burpees	Parent/Gardian/Teacher Signature:
Thursday	20 Jumping Jacks	20 Mountain Climbers	20 Burpees	Parent/Gardian/Teacher Signature:
Friday	20 Jumping Jacks	20 Mountain Climbers	20 Burpees	Parent/Gardian/Teacher Signature:
Name:		Week 28 4-8		