



# Compton USD Learning Packet #6

Fourth Grade

Name \_\_\_\_\_



# 4th Grade Learning Packet

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### Week 7

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2	Read "Your World Up Close" and answer the questions that follow.	
	Complete Share & Show and On Your Own (pg. 255 & 256)	
	Social Studies: Read "The Transcontinental Railroad", "Starting the Railroad", and "Railroad Workers" and answer the questions.	
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5	Determine a Main Idea from Informational Text - Topic: Dog Heroes	
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	Social Studies: Read pages 105 and 106 ( continuation of "How did different people coming to California affect our state?") and answer the questions.	

#### Recommended Online Usage

<input type="checkbox"/> I-Ready Reading - 45 minutes per week	<input type="checkbox"/> I-Ready Math - 45 minutes per week
<input type="checkbox"/> Imagine Learning for English Learners - 90 minutes per week	<input type="checkbox"/> Dreambox - 90 minutes per week



Name \_\_\_\_\_

When a vowel is followed by the letter *r*, the letters act as a team to form a special vowel sound. This letter team is always in the same syllable and is called an *r*-controlled vowel syllable.

*ter* as in *enter*      *or* as in *organ*      *lar* as in *dollar*

**A. Read each sentence. Circle the word that has an *r*-controlled vowel syllable. The first one has been done for you.**

1. Dad gave the barber a tip because he wanted to thank him.
2. The little red pepper tasted extra spicy when I added it to the meal.
3. He could not drive the truck until they replaced the motor.
4. Solar heat can be collected and used in place of fossil fuels.

Some word pairs are often misspelled because they sound very similar to other words and may have similar spelling patterns. Although the two words may sound alike, they have different meanings and spellings.

**B. Draw a line to match the frequently misspelled words with their correct meanings. Use a dictionary to help you. The first one has been done for you.**

- |           |               |
|-----------|---------------|
| 1. loose  | a. a result   |
| 2. lose   | b. lesson     |
| 3. affect | c. to change  |
| 4. effect | d. not tight  |
| 5. moral  | e. confidence |
| 6. morale | f. to not win |
-

Name \_\_\_\_\_

cling	humid	magnify	mingle
microscope	dissolves	typical	gritty

**A. Read each clue below. Then find the vocabulary word on the right that matches the clue. Draw a line from the clue to the word.**

- |                                       |               |
|---------------------------------------|---------------|
| 1. moist                              | a. mingle     |
| 2. enlarge                            | b. gritty     |
| 3. to stick closely                   | c. dissolves  |
| 4. sandy                              | d. typical    |
| 5. solid to liquid                    | e. humid      |
| 6. device for looking at small things | f. magnify    |
| 7. mix                                | g. cling      |
| 8. usual                              | h. microscope |

**B. Choose two vocabulary words from the box above. Use each word in a sentence of your own.**

9. \_\_\_\_\_  
 \_\_\_\_\_

10. \_\_\_\_\_  
 \_\_\_\_\_

Name \_\_\_\_\_

**Problem Solving • Find Equivalent Fractions**

**Essential Question** How can you use the strategy *make a table* to solve problems using equivalent fractions?



**Number and Operations—  
Fractions—4.NF.1**

**MATHEMATICAL PRACTICES**  
MP.1, MP.3, MP.4

**Unlock the Problem** *Real World*

Anaya is planting a flower garden. The garden will have no more than 12 equal sections.  $\frac{3}{4}$  of the garden will have daisies. What other fractions could represent the part of the garden that will have daisies?



**Read the Problem**

**What do I need to find?**

\_\_\_\_\_ that could represent the part of the garden that will have daisies

**What information do I need to use?**

\_\_\_\_\_ of the garden will have daisies. The garden will not have more than \_\_\_\_\_ equal sections.

**How will I use the information?**

I can make a \_\_\_\_\_ to find \_\_\_\_\_ fractions to solve the problem.

**Solve the Problem**

I can make a table and draw models to find equivalent fractions.

$\frac{3}{4}$	_____	_____

1. What other fractions could represent the part of the garden that will have daisies? Explain. \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_



**Mathematical Practices**

Compare the models of the equivalent fractions. How does the number of parts relate to the size of the parts? Explain.

## Try Another Problem

Two friends are knitting scarves. Each scarf has 3 rectangles, and  $\frac{2}{3}$  of the rectangles have stripes. If the friends are making 10 scarves, how many rectangles do they need? How many rectangles will have stripes?



### Read the Problem

**What do I need to find?**

**What information do I need to use?**

**How will I use the information?**

### Solve the Problem

2. Does your answer make sense? Explain how you know.

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**Math  
Talk**

**Mathematical Practices**

What strategy did you use and why?



**H-SS 4.4.1** Understand the story and lasting influence of the Pony Express, Overland Mail Service, Western Union, and the building of the transcontinental railroad, including the contributions of Chinese workers to its construction.

# How did the movement of people and ideas change in California?

**SET THE SCENE** Can you picture life without a television, a radio, or the Internet? In the 1800s, none of these things were around. Californians did not even have a regular mail service. How did people learn about news or stay in touch with each other?

## Preview the Lesson Vocabulary

**communication** (*n.*) the way that people send and receive information

**technology** (*n.*) the use of scientific knowledge to solve problems

**telegraph** (*n.*) a machine that sends signals along wires using electricity

**engineer** (*n.*) a person who designs structures such as roads, bridges, and machines

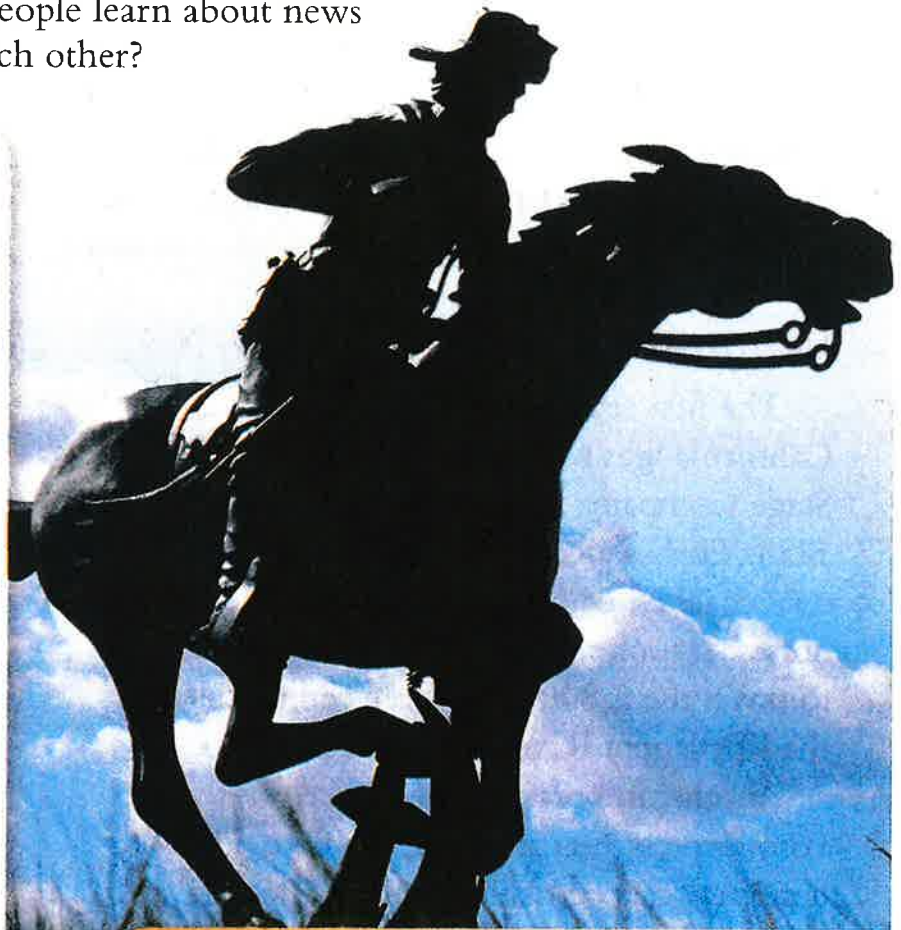
**investor** (*n.*) a person who gives money to a company with the hope of making money later

**Vocabulary Activity** The root word *graph* in *telegraph* comes from the Greek word that means “write.” Think of other words with the root *graph*.

## People

John Butterfield  
Samuel Morse  
Theodore Judah  
Leland Stanford

Charles Crocker  
Collis Huntington  
Mark Hopkins



## Reading: Sequence

Writers present information in a *sequence*, or certain order. Sometimes they use dates and time-order words such as *first*, *then*, and *after* to show the sequence of events. As you read, circle dates that help you keep track of the important events in California.

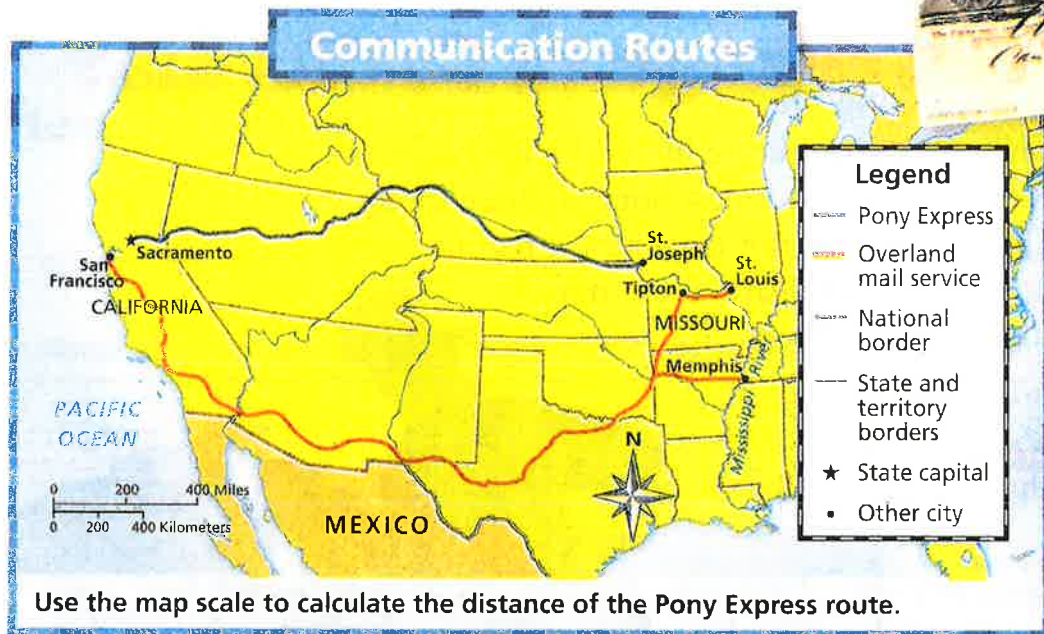


1860

1861 Telegraph service reaches California and puts an end to the Pony Express.



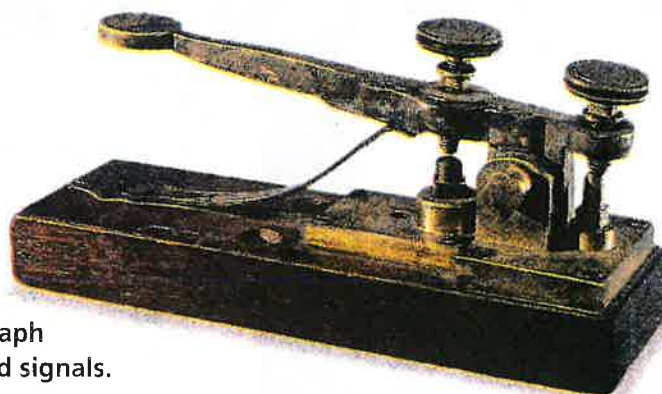
This letter was sent from San Francisco to New York City in 1861 using the Pony Express.



## Communication Improves

A new technology called the telegraph replaced the Pony Express, which lasted only eighteen months. A **telegraph** is a machine that sends signals along wires using electricity. Samuel Morse developed a practical telegraph in the 1830s. It was not used in California until the 1860s. The Western Union Telegraph Company built the first transcontinental telegraph line. Something that is *transcontinental* crosses a continent, such as North America. The line started carrying messages between San Francisco and the East Coast in October 1861.

3. Why do you think the telegraph replaced the Pony Express?



Samuel Morse used a telegraph sounder like this one to send signals.



## Unit 5 Week 4

SOURCE TITLE:

LEXILE:

CCSS Shared Read Genre • Expository

# Your World Up Close

**Essential Question**  
What can you discover when you look closely at something?  
Read about a tool that allows us to see everyday objects up close.

Compare those **gritty** grains of sugar with the magnified sugar crystal.

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**1.Claim 1, Target 9: Central Ideas, Standard: RI.4.2**

Choose **two** sentences that should be included in a summary of the passage.

- Ⓐ A powerful tool that can magnify an object many times its actual size is an electron microscope.
- Ⓑ An electron microscope can take a picture of a sugar crystal.
- Ⓒ The photographs of snowflakes show that they are unique.
- Ⓓ Magnified images have helped scientists see the causes of diseases.

**2. Claim 1, Target 8: Key Details, Standard: RI.4.1**

Which sentence from the passage **best** supports the conclusion that scientists use electron micrographs to see how objects change over time.

- Ⓐ Your sweat would look magnified on a humid day.
- Ⓑ We can look at a piece of fruit and see how it decays.
- Ⓒ The more an image is magnified, the more detail you will see in the photograph.
- Ⓓ The light microscopes you use in school are weak and do not show much detail.



Does the picture on the left show a diamond or a glass prism? Look closer. Take a step back. You are *too* close. It is a picture of a sugar crystal. This extreme close-up was taken by an electron microscope, a tool that can **magnify** an item to thousands of times its actual size.

Pictures taken with a high-tech electron microscope are called **photomicrographs**. The sugar crystal on the left may look huge, but the word *micro* means small. We are seeing a small part of the sugar crystal up close.

Photomicrography dates back to 1840 when a scientist named Alfred Donne first photographed images through a microscope. Around 1852, a German pharmacist made the first version of a camera that took photomicrographs. In 1882, Wilson "Snowflake" Bentley of Vermont became the first person to use a camera with a **built-in microscope** to take pictures of snowflakes. His photographs showed that there is no such thing as a **typical** snowflake. Each is unique. Nowadays, we have electron micrographs.



The photographs of "Snowflake" Bentley showed that snowflakes are shaped like hexagons.

**3. Claim 1, Target 11: Reasoning and Evidence, Standard: RI.4.8**

The following question has **two** parts. First, answer part A. Then, answer part B.

What inference can be made about the author's purpose in giving a history of photomicrography in paragraph 4 of the passage?

**Part A**

- (A) The author shows that there is no typical snowflake.
- (B) The author suggests that the development of electron micrographs was difficult.
- (C) The author suggests that photomicrography is not a new event.
- (D) The author's purpose is to persuade the reader to use an electron micrograph.

**Part B**

Which detail from the passage **best** supports your answer in part A?

- (A) Photomicrography dates back to 1840 when a scientist named Alfred Donne first photographed images through a microscope.
- (B) Nowadays, we have electron micrographs.
- (C) Snowflakes are shaped like hexagons.
- (D) Scientists are now using a camera with a built-in microscope.



The light microscopes you use in school are weak and do not show much detail. An electron microscope is a much more powerful tool, and it allows scientists to see things we can't see with our own eyes such as skin cells or dust mites.

The picture below is a close-up of human skin and shows the detail an electron microscope can capture. The more an image is magnified, the more detail you will see in the photograph. The most magnification that a photomicrograph can capture is about 2 million times the original image size.

Magnified images have helped scientists to see what causes diseases. Over the years, scientists have learned how these diseases behave. Looking through microscopes, we have even learned what is inside a cell or how a snowflake dissolves into a drop of water.



This is a human fingerprint, magnified by an electron microscope.

**4. Claim 1, Target 10: Word Meaning, Standard: L.4.4b**

Read the sentence.

Pictures taken with a high-tech electron microscope are called photomicrographs.

The word photomicrographs is made up of three Greek roots. What does the root micro mean in the word?

- (A) huge
- (B) light
- (C) image
- (D) small

**5. Claim 1, Target 12: Analysis within/across Texts, Standard: RI.4.1**

How does the author's use of magnified or close-up photographs of objects add to the building of information in the passage?

- (A) It reinforces the main point of the passage that electron microscopes allow us to see things we cannot normally see in great detail.
- (B) It illustrates the different types of microscopes.
- (C) It shows what will be discussed in that section of the text.
- (D) It identifies the main point of the section.



**6. Claim 1, Target 13 Text Structures and Features, Standard: RI.4.7**

Read the caption in the first page of this expository text.

Compare these gritty grains of sugar with the magnified sugar crystal.

How does this caption add information to the passage?

- (A) to show a colored picture of sugar crystal
- (B) to show how an object looks when magnified
- (C) to provide a comparison with the photographs of the snowflakes
- (D) to show that an object can be presented differently



When the mold on a strawberry is looked at under an electron microscope, it resembles grapes.



Scientists use electron micrographs to see how objects change over time. For example, we can look at a piece of fruit to see how it decays. First the fruit looks fresh. After a few days it begins to soften. Then specks of mold appear and cling to it. Days pass and eventually the fruit is covered in mold. We can see these changes under the microscope far earlier than we can see them with just our eyes.

Suppose you **mingle** outside on a **humid** day with friends. What would the sweat on your skin look like magnified? The possibilities are endless if you examine your world up close.



**Make Connections**

How do electron microscopes help scientists? **ESSENTIAL QUESTION**

What objects in your classroom would you like to see under a microscope? **TEXT TO SELF**



**7. Claim 1, Target 14:** Language Usage, **Standard:** L.4.5

Read the sentence.

The extreme close-up picture of a sugar crystal was taken by an electron microscope, a tool that can magnify an item to thousands of times its actual size.

How does the word magnify affect the reader's understanding of the meaning of the passage?

- Ⓐ The reader understands that electron microscopes are charged.
- Ⓑ The reader understands that electron microscopes can take pictures of sugar crystals.
- Ⓒ The reader understands that electron microscopes are powerful in making objects look large.
- Ⓓ The reader understands that electron microscopes are important.

**8. Claim 2, Target 9:** Edit Clarify (conventions), **Standard:** L.4.2

Choose the sentence that contains a spelling error.

- Ⓐ Magnified images have helped scientists to see what causes diseases.
- Ⓑ Scientists have learned how these diseases behave.
- Ⓒ Looking through microscopes, we have learned what is inside a cell.
- Ⓓ We have also learned how a snowflake dissolves into a drop of water.





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# Share and Show



## Unlock the Problem

- ✓ Use the Problem Solving Mathboard.
- ✓ Underline important facts.
- ✓ Choose a strategy you know.

1. Keisha is helping plan a race route for a 10-kilometer charity run. The committee wants to set up the following things along the course.

**Viewing areas:** At the end of each half of the course

**Water stations:** At the end of each fifth of the course

**Distance markers:** At the end of each tenth of the course

Which locations have more than one thing located there?

First, make a table to organize the information.

	Number of Locations	First Location	All the Locations
<b>Viewing Areas</b>	2	$\frac{1}{2}$	$\frac{1}{2}$
<b>Water Stations</b>	5	$\frac{1}{5}$	$\frac{1}{5}$
<b>Distance Markers</b>	10	$\frac{1}{10}$	$\frac{1}{10}$

**Next,** identify a relationship. Use a common denominator, and find equivalent fractions.

**Finally,** identify the locations at which more than one thing will be set up. Circle the locations.

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2. **THINK SMARTER** What if distance markers will also be placed at the end of every fourth of the course? Will any of those markers be set up at the same location as another distance marker, a water station,

or a viewing area? Explain. \_\_\_\_\_

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3. Fifty-six students signed up to volunteer for the race. There were 4 equal groups of students, and each group had a different task.

How many students were in each group? \_\_\_\_\_



**On Your Own**

4. **THINK SMARTER** A baker cut a pie in half. He cut each half into 3 equal pieces and each piece into 2 equal slices. He sold 6 slices. What fraction of the pie did the baker sell?



5. **GO DEEPER** Andy cut a tuna sandwich and a chicken sandwich into a total of 15 same-size pieces. He cut the tuna sandwich into 9 more pieces than the chicken sandwich. Andy ate 8 pieces of the tuna sandwich. What fraction of the tuna sandwich did he eat?

**WRITE** ▶ *Math*  
**Show Your Work**

6. **MATHEMATICAL PRACTICE 6** Luke threw balls into these buckets at a carnival. The number on the bucket gives the number of points for each throw. What is the least number of throws needed to score exactly 100 points? **Explain.**



7. **THINK SMARTER** Victoria arranges flowers in vases at her restaurant. In each arrangement,  $\frac{2}{3}$  of the flowers are yellow. What other fractions can represent the part of the flowers that are yellow? Shade the models to show your work.



$\frac{2}{3}$

$\frac{\quad}{12}$

$\frac{\quad}{\quad}$



1865 The building of the transcontinental railroad begins from Omaha.

## The Transcontinental Railroad

The telegraph made communication with California faster and easier, but traveling here still took a long time. That would soon change thanks to a young engineer named Theodore Judah. An **engineer** is a person who designs structures such as roads, bridges, and machines. Judah was building railroad lines around Sacramento in the 1850s, but he had a bigger dream. He thought that the United States should have a transcontinental railroad system—or one that stretched across the country. There was already railroad service throughout the East, but there was no railroad from the middle of the country to the West Coast.

## Starting the Railroad

To build his railroad, Judah needed **investors**, or people who give money to a company with the hope of making money later. He found four men to invest in his plan. Leland Stanford, Charles Crocker, Collis Huntington, and Mark Hopkins became known as the Big Four. They formed the Central Pacific Railroad Company. Work on the railroad started on January 8, 1863. Workers laid track eastward from Sacramento. In 1865 the Union Pacific Railroad Company began to lay track westward from Omaha, Nebraska.

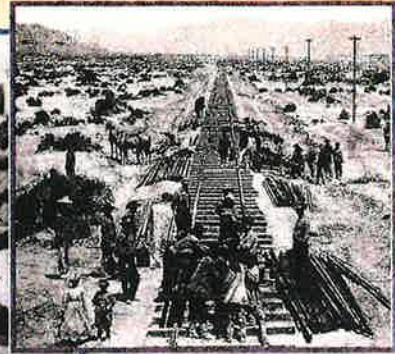
4. Why do you think people called Theodore Judah's railroad the "transcontinental" railroad?



5. How did the Big Four impact transportation in the United States?



1869 The transcontinental railroad is completed.



Thousands of workers came to California to work on the transcontinental railroad.

## Railroad Workers

Many laborers were needed to build the transcontinental railroad. At first, the Central Pacific Railroad Company did not have enough workers. So in 1865, the company began hiring immigrants from China who were willing to come to California to work.

About 10,000 Chinese workers came to California to help build the Central Pacific Railroad. They built tracks across the Sierra Nevada. They did this by digging tunnels and using explosives to blast through mountainsides. The Chinese worked long hours underground. It was dangerous work, and many of them died. Meanwhile, other workers, including many Irish immigrants, were laying Union Pacific tracks west across the Great Plains.

Finally, on May 10, 1869, the two tracks met in Promontory, Utah. A golden railroad spike connected the last piece of track. At last, the railroad line was finished. Unfortunately, Theodore Judah died in 1863, and he never saw the completion of his dream.

6. Underline details in the text that describe why railroad work was dangerous in the Sierra Nevada.

*Mark lines and details*

## Summary

New technologies allowed news, people, and goods to travel more easily between California and the rest of the country. Describe how transportation and communication technologies strengthened California's link with the rest of the country.

Name \_\_\_\_\_

Read the passage. Use the summarize strategy to make sure you understand the text.

### At Your Fingertips

15       What makes you different? Is it your eyes? Is it your hair? Is it your  
16 name? There is one thing that truly sets you apart: your fingerprints.  
17       You might not think they are important to your identity. But they have  
18 replaced other uncertain methods of finding someone. Look closely.  
19       You can see that fingerprinting is a reliable way of identifying people.  
20       As we age, our looks change. Our hair and height may change.  
21       Even our face may change shape. There is one thing that stays the  
22 same. What is it? It is our fingerprints. Unless they are injured, your  
23 fingertips will be the same for your entire life, not just part of it. You  
24 will have the same prints as an adult that you did as a child.  
25       Can two people have the same prints? No two people are known  
26 to have the same fingerprints. Look at your fingertips quickly. It  
27 might not prove much. But take a detailed look. There are swirls  
28 and ridges. There are shapes specific to you. The shapes are not the  
29 same for anyone else. Your prints are unique. This is why they are  
30 so helpful. They help to identify people. It took many years for us to  
31 know the importance of fingerprints, though.



Name \_\_\_\_\_

In 1858, Sir William Herschel of England had people sign papers with handprints. He then used fingerprints. He noticed something. No prints were the same. All of them were different. It seemed no two prints were identical. He saw that prints might be used to identify people.

In 1892, scientist Sir Francis Galton wrote a book about prints. He proved something important. He found that fingerprints do not alter. Our prints remain the same during our life. Can two people have the same prints? He had an answer. The odds of two people having the same prints are 1 in 64 billion!

In 1901, the London police began using prints to find criminals. They found this was the best way. Fingerprints helped them know which person to arrest. In 1903, the New York State Prison system began using fingerprints, too.

Fingerprints can be used for more than solving crimes. Fingerprint scans can also act as a “key.” Scans can unlock a door or open files on a computer. Since prints are unique, scans are sure to keep certain things safe.

The importance of fingerprints is a great discovery. Whether used to sign papers, find criminals, or unlock doors, prints can help to identify people. When we want to know who a person is, we can ask their name. We can look at their face. But there is only one way to be sure. Look closely at the swirls and ridges on their fingertips.



Stockbyte/Getty Images

**Every fingerprint has a unique set of swirls and ridges.**

Name \_\_\_\_\_

**A. Reread the passage and answer the questions.**

**1. Reread the fourth paragraph. What did Sir William Herschel discover in 1858?**

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

**2. Reread the fifth paragraph. What did Sir Francis Galton discover next in 1892?**

\_\_\_\_\_

\_\_\_\_\_

**3. Authors use sequence to present information in time order. How do you know that the author used sequence as a text structure?**

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

**B. Work with a partner. Read the passage aloud. Pay attention to rate. Stop after one minute. Fill out the chart.**

	Words Read	–	Number of Errors	=	Words Correct Score
First Read		–		=	
Second Read		–		=	







# Mid-Chapter Checkpoint

## Vocabulary

Choose the best term from the box.

- \_\_\_\_\_ name the same amount. (p. 237)
- A \_\_\_\_\_ is a common multiple of two or more denominators. (p. 249)

### Vocabulary

common denominator  
equivalent fractions  
factor

## Concepts and Skills

Write two equivalent fractions. (4.NF.1)

3.  $\frac{2}{5} = \underline{\quad} = \underline{\quad}$

4.  $\frac{1}{3} = \underline{\quad} = \underline{\quad}$

5.  $\frac{3}{4} = \underline{\quad} = \underline{\quad}$

Tell whether the fractions are equivalent. Write = or  $\neq$ . (4.NF.1)

6.  $\frac{2}{3} \bigcirc \frac{4}{12}$

7.  $\frac{5}{6} \bigcirc \frac{10}{12}$

8.  $\frac{1}{4} \bigcirc \frac{4}{8}$

Write the fraction in simplest form. (4.NF.1)

9.  $\frac{6}{8}$

10.  $\frac{25}{100}$

11.  $\frac{8}{10}$

Write the pair of fractions as a pair of fractions with a common denominator. (4.NF.1)

12.  $\frac{3}{10}$  and  $\frac{2}{5}$

13.  $\frac{1}{3}$  and  $\frac{3}{4}$

14. Sam needs  $\frac{5}{6}$  cup mashed bananas and  $\frac{3}{4}$  cup mashed strawberries for a recipe. He wants to find whether he needs more bananas or more strawberries. How can he write  $\frac{5}{6}$  and  $\frac{3}{4}$  as a pair of fractions with a common denominator? (4.NF.1)
- 

15. Karen will divide her garden into equal parts. She will plant corn in  $\frac{8}{12}$  of the garden. What is the fewest number of parts she can divide her garden into? (4.NF.1)
- 

16. Olivia is making scarves. Each scarf will have 5 rectangles, and  $\frac{2}{5}$  of the rectangles will be purple. How many purple rectangles does she need for 3 scarves? (4.NF.1)
- 

17. Paul needs to buy  $\frac{5}{8}$  pound of peanuts. The scale at the store measures parts of a pound in sixteenths. What measure is equivalent to  $\frac{5}{8}$  pound? (4.NF.1)
-

# Artifacts: Train Schedule

**Learn More** You have already learned that documents and photographs can be primary sources. They were written or taken at the time an event happened. Schedules are artifacts, which can also be primary sources. Have you ever looked at a train schedule, or timetable, so that you know when the next train arrives or departs?

In the 1800s, people also used train schedules. The schedule below lists the arrivals and departures for the Central Pacific Railroad between Sacramento and Newcastle. This route was one of the first sections of the transcontinental railroad that was put into operation. Use the train schedule to answer the questions below.

## CENTRAL PACIFIC RAILROAD.

### NO. 1, TIME CARD NO. 1.

To take effect Monday June 6th, 1864, at 5 A. M.

TRAINS EASTWARD.			STATIONS.	TRAINS WESTWARD.		
Frt and Pass No 3	Frt and Pass No 2	Pass & Mail No 1.		Frt and Pass No 1	Pass & Mail No 2.	Frt and Pass No 3.
5 P M leave	1 P M leave	6.15 A M, L	..... Sacramento.....	8.45 A M arr	12 M arr.....	6.40 P M ar.
5.50 } mt frt	2.15 .....	3.55 .....	18 Junction.....	18 3.....	11.20 .....	5.55 } mt. Ft
5.55 } .....	2.38 .....	7.05 .....	22 Rocklin. ....	4 7.40 .....	11.07.....	5.37.....
6.09.....	2.55.....	7.15 meet F	25 Pino.....	3 7.15 mt pass	10.56 .....	5.25.....
6.22.....	3.30 P M arr	7.30 A M arr	31 Newcastle.....	6 8.45 A M, L	10.30 A M, L	6 P M, L.....

Trains No. 2 and 3 east, and 1 and 3 west, daily, except Sunday.

Trains No. 1 east and 2 west, daily.

**LELAND STANFORD, President.**

1. On the timetable, circle the date service began. Draw a star next to the name of one of the Big Four. *Identify*
2. If you left on Train No. 1 from Sacramento going east, what time would you arrive in Rocklin station? *Interpret*



Name \_\_\_\_\_

- For most adjectives with two or more syllables, add *more* to compare two nouns.
- Add *most* to compare more than two nouns.

**Write *more* or *most* to correctly complete each sentence.**

1. This book is \_\_\_\_\_ exciting than the last one I read.
2. I am \_\_\_\_\_ nervous about the race than you are.
3. Which city is the \_\_\_\_\_ crowded of all?
4. I am \_\_\_\_\_ talented in art than in music.
5. That is the \_\_\_\_\_ ridiculous thing I have ever seen.
6. This is the \_\_\_\_\_ interesting magazine available for nature lovers.
7. I am \_\_\_\_\_ flexible after stretching than before.
8. Of all of us, she is the \_\_\_\_\_ eager to see the dolphins.
9. Soccer is \_\_\_\_\_ popular than basketball in Brazil.
10. The ice cream was the \_\_\_\_\_ popular dessert at the party.

Name \_\_\_\_\_

- For most adjectives with two or more syllables, add *more* to compare two nouns. Add *most* to compare more than two nouns.
- Use *-er* or *-est* with many common two-syllable adjectives, but not all. If you are unsure whether to use *-er/-est* or *more/most*, look in a dictionary.
- When you add *more* or *most*, do not use the *-er* or *-est* form of the adjective.

**Rewrite each sentence. Use the correct form of the adjective.**

1. The roller coaster is the most thrillingest ride in the entire theme park!

\_\_\_\_\_

2. I think this pattern is more ugly than the last one we saw.

\_\_\_\_\_

3. She was the carefulest volunteer at the shelter.

\_\_\_\_\_

4. This is the most hungry I've been all day.

\_\_\_\_\_

5. You are more considerater than I am.

\_\_\_\_\_

6. That was the most amazingest sight I've ever seen!

\_\_\_\_\_

Name \_\_\_\_\_

- Use a comma before the coordinating conjunction when you combine two simple sentences to form a compound sentence.
- **Appositives** and **appositive phrases** rename nouns or give more information about them. They can be used to combine two sentences that explain or refer to the same thing.
- **Commas** are used to set off many **appositives** from the rest of the sentence.
- **Adjectives, adverbs, and correlative conjunctions** may also be used to combine sentences.

**Combine each pair of sentences. Write the new sentence on the lines.**

1. I want to go to the movies. I don't want to go ice skating.

---

2. The dog ran around the backyard. It was a playful pup.

---

3. I am late for school. I am almost ready to leave.

---

4. He finished his homework. He was quick.

---

5. Wolves stay away from humans. Wolves are shy creatures.

---

Name \_\_\_\_\_

- For most long adjectives, use *more* or *most* to compare people, places, or things.
- If you are unsure whether to use *-er/-est* or *more/most*, look in a dictionary.
- Use a comma before the coordinating conjunction when you combine two simple sentences to form a compound sentence.
- **Appositives, adjectives, adverbs, and correlative conjunctions** may be used to combine sentences.

**Rewrite the sentences below, correcting mistakes in adjectives and combining sentences.**

1. I think you are more thirstier than I am.

---

2. The cat is black. The dog is white.

---

3. She is the creativest person I know.

---

4. My coat is very warm. It is red.

---

5. He is a talenteder singer than I am.

---

6. She was the interestingest person at the party.

---



Name \_\_\_\_\_

# Compare Fractions Using Benchmarks

**Essential Question** How can you use benchmarks to compare fractions?



Number and Operations—  
Fractions—4.NF.2

**MATHEMATICAL PRACTICES**  
MP.1, MP.3, MP.4

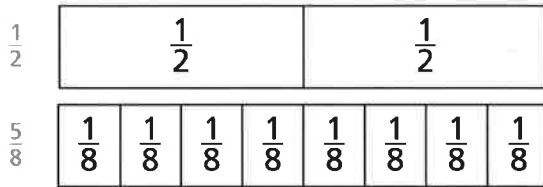
## Unlock the Problem Real World

David made a popcorn snack. He mixed  $\frac{5}{8}$  gallon of popcorn with  $\frac{1}{2}$  gallon of dried apple rings. Did he use more dried apple rings or more popcorn?

**Activity** Compare  $\frac{5}{8}$  and  $\frac{1}{2}$ .

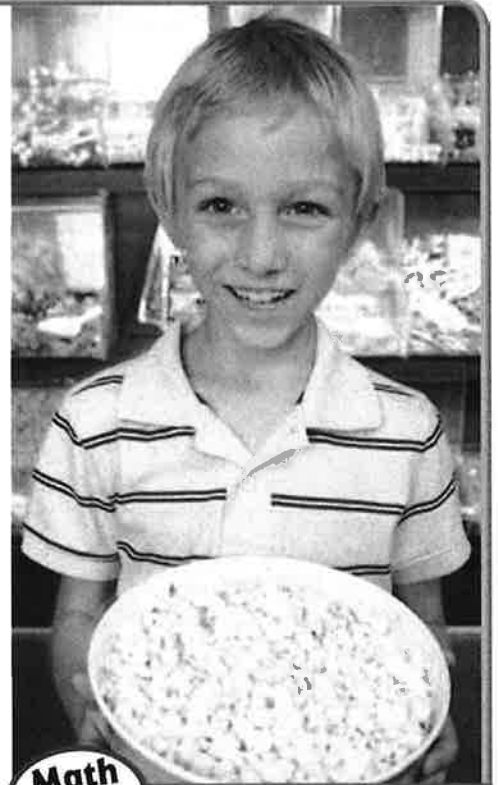
**Materials** ■ fraction strips

Use fraction strips to compare  $\frac{5}{8}$  and  $\frac{1}{2}$ . Record on the model below.



$\frac{5}{8}$  ○  $\frac{1}{2}$

So, David used more \_\_\_\_\_.



**Math Talk**

**Mathematical Practices**

Explain how the number of eighth-size parts in  $\frac{5}{8}$  is related to the number of eighth-size parts you need to make  $\frac{1}{2}$ .

- Write five fractions equivalent to  $\frac{1}{2}$ . What is the relationship between the numerator and the denominator of fractions equivalent to  $\frac{1}{2}$ ?

---



---

- How many eighths are equivalent to  $\frac{1}{2}$ ?

---

- How can you compare  $\frac{5}{8}$  and  $\frac{1}{2}$  without using a model?

---



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**Benchmarks** A **benchmark** is a known size or amount that helps you understand a different size or amount. You can use  $\frac{1}{2}$  as a benchmark to help you compare fractions.

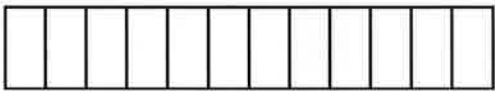
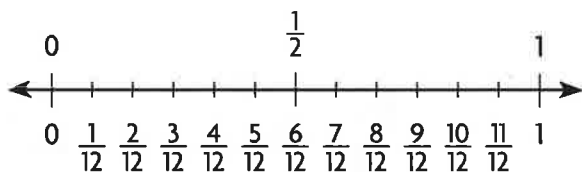
**Example** Use benchmarks to compare fractions.

A family hiked the same mountain trail. Evie and her father hiked  $\frac{5}{12}$  of the trail before they stopped for lunch. Jill and her mother hiked  $\frac{9}{10}$  of the trail before they stopped for lunch. Who hiked farther before lunch?



Compare  $\frac{5}{12}$  and  $\frac{9}{10}$  to the benchmark  $\frac{1}{2}$ .

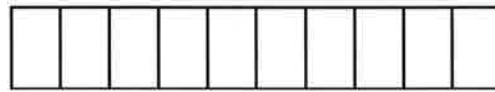
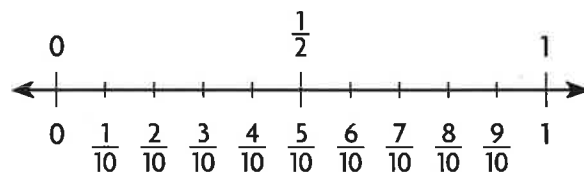
**STEP 1** Compare  $\frac{5}{12}$  to  $\frac{1}{2}$ .



Think: Shade  $\frac{5}{12}$ .



**STEP 2** Compare  $\frac{9}{10}$  to  $\frac{1}{2}$ .



Think: Shade  $\frac{9}{10}$ .



Since  $\frac{5}{12}$  is \_\_\_\_\_ than  $\frac{1}{2}$  and  $\frac{9}{10}$  is \_\_\_\_\_ than  $\frac{1}{2}$ , you know that  $\frac{5}{12} \bigcirc \frac{9}{10}$ .

So, \_\_\_\_\_ hiked farther before lunch.

4. Explain how you can tell  $\frac{5}{12}$  is less than  $\frac{1}{2}$  without using a model.

---



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5. Explain how you can tell  $\frac{7}{10}$  is greater than  $\frac{1}{2}$  without using a model.

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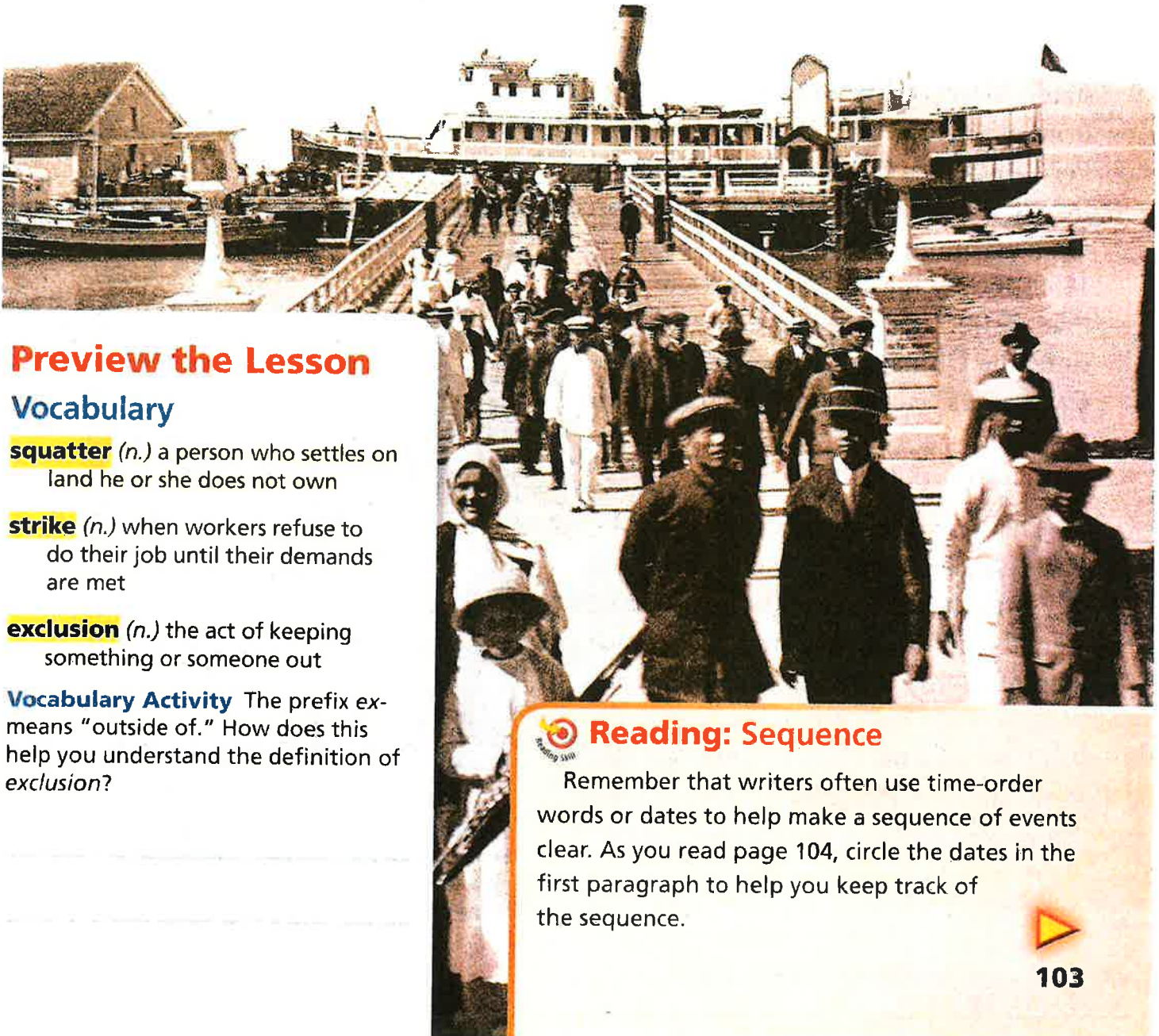


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**H-SS 4.4.3** Discuss immigration and migration to California between 1850 and 1900, including the diverse composition of those who came; the countries of origin and their relative locations; and conflicts and accords among the diverse groups (e.g., the 1882 Chinese Exclusion Act).

## How did different people coming to California affect our state?

**SET THE SCENE** Look around your neighborhood or your classroom. Do you see people from different backgrounds? During and after the Gold Rush, many people from all over the world came to California. How did their diversity help build our state?



### Preview the Lesson

#### Vocabulary

**squatter** (*n.*) a person who settles on land he or she does not own

**strike** (*n.*) when workers refuse to do their job until their demands are met

**exclusion** (*n.*) the act of keeping something or someone out

**Vocabulary Activity** The prefix *ex-* means “outside of.” How does this help you understand the definition of *exclusion*?



#### Reading: Sequence

Remember that writers often use time-order words or dates to help make a sequence of events clear. As you read page 104, circle the dates in the first paragraph to help you keep track of the sequence.







## Immigration from 1850 to 1890s

As you have learned, the Gold Rush caused a huge increase in California's population. In the 1840s, there were about 15,000 people living here in addition to the California Indians. By 1850 about 77,600 more people had arrived. In 1860 the population had reached 380,000.

People came to California from all over. In 1848 some migrated from U.S. territories or states. Many others were immigrants, or people from other countries. South Americans from Peru and Chile lived alongside Europeans from Italy, Ireland, Germany, and Russia. Chinese immigration increased after 1850, and by the 1870s, there were more than 49,000 Chinese living here. At that time, the Chinese and the Irish were California's two largest immigrant groups.

## Immigrants Face Challenges

The lives of immigrants were hard. For example, it was not easy for them to buy land. In the late 1800s, many Chinese were forced off their farms and into "Chinatowns" in cities. Likewise, many Mexicans whose families had lived in California for generations lost their land to squatters. A **squatter** is a person who settles on land he or she does not own.

1. 📌 Sequence Use dates to describe the immigration of different groups to California.

✎

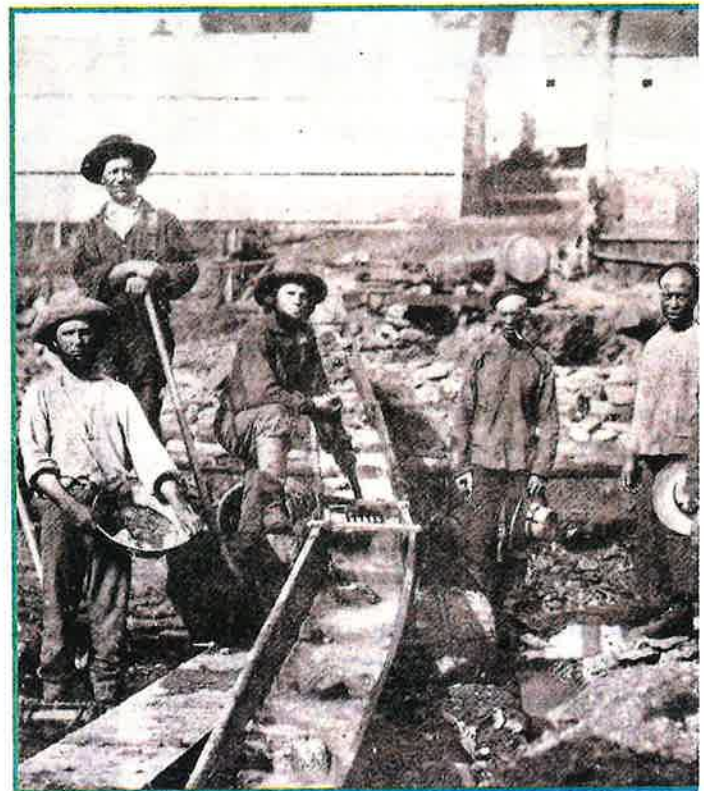
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Some immigrants came to California in the mid- to late 1800s to escape hardships in their home countries.



# Assignment

## Determine a Main Idea from Informational Text

**Topic: Dog Heroes**

### Your Assignment:

*Read the passage. Then answer the question.*

#### No Medals Needed

**By Alex Jones**

Heroes are not always human. Some of the most amazing stories of sacrifice and rescue have a dog as the main character. When many people would choose to leave a terrifying and potentially life-threatening situation, dogs often choose to go back in or stick around no matter what.

On one of the worst days in American history, September 11, 2001 (commonly known as 9/11), dogs were part of the survival and rescue of people. Michael Hingson worked high up in one of the twin towers of the World Trade Center. He had a great job and provided a nice life for his family. He relied on his guide dog, Roselle, for assistance because he is blind. On that day, Roselle helped Michael safely walk down more than 1,400 steps to exit the tower before its collapse. Another dog named Salty did that same thing for his owner, Omar Rivera. The dogs did not run off. They stayed to help their owners.

In addition to the stories about Roselle and Salty, there is another legend about a dog named Daisy. She is said to have been released by her handler to then lead hundreds of people out of the World Trade Center. Daisy went in over and over again and ultimately saved more than 1,000 people. As the story goes, she was eventually carried off by a firefighter because of her badly burned paw pads.

Most people say that the story about Daisy is just a tale- a legend about a hero that people desperately wanted to exist. Just like Roselle and Salty, though, there are many other REAL Daisy dogs in the world! Odin is a Golden Retriever who lives in Northern California. During the wildfires of October 2017, Odin refused to leave his babies. Those 8 babies are actually rescued goats that are bottle-fed because they no longer have their mother. Odin is a goat-herding dog, and it is his job to take care of these goats. So, when the people evacuated, Odin refused to leave. He stayed with the goats.

When his owners finally got to safety, they grieved for the dog that they had left behind. They didn't think Odin would survive. However, when the family finally made it back to their property to check out the damage, there was Odin with his 8 babies. **And**, two deer who had joined them to benefit from Odin's loving protection!

Odin's paw pads were burned, his whiskers were melted, and his fur was a light orange instead of its usual beautiful beige color. But, Odin is going to make a full recovery, and his babies survived one of the worst wildfires in California's history.

The Hallmark television channel is airing an awards show for hero dogs. The Humane Hero Dog Awards, sponsored by Lois Pope LIFE Foundation, is being held for the 4<sup>th</sup> time this year. The creators of the award say that it celebrates ordinary dogs who do extraordinary things. There are eight categories for the award including military service, search and rescue, and therapy.

Not all finalists will win, but that is probably not important to these amazing heroes. Dogs probably don't think about getting an award when they are doing what they consider ordinary work. It is only considered extraordinary and heroic behavior by the people who watch them in action.

## ***Read the paragraph:***

*Not all finalists will win, but that is probably not important to these amazing heroes. Dogs probably don't think about getting an award when they are doing what they consider ordinary work. It is only considered extraordinary and heroic behavior by the people who watch them in action.*

***What is the author’s main idea in the paragraph? Explain using key details from the text to support your answer.***

## **Stem Starters:**

*You may want to consider starting your response using one of these stems. You do not have to do so, but they are here to help you if you need them.*

The author’s main idea is...

In this section, the main idea is...

## **Your Response:**

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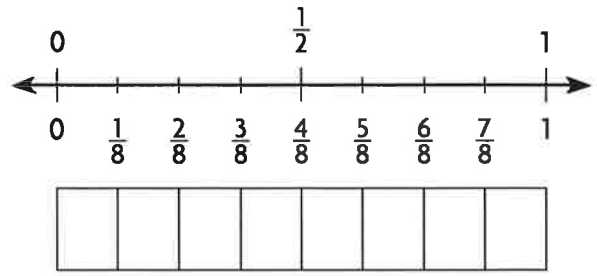
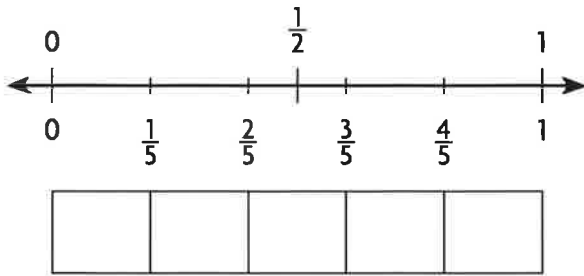




# Share and Show



1. Compare  $\frac{2}{5}$  and  $\frac{1}{8}$ . Write  $<$  or  $>$ .



$\frac{2}{5} \bigcirc \frac{1}{8}$

Compare. Write  $<$  or  $>$ .

✓ 2.  $\frac{1}{2} \bigcirc \frac{4}{6}$

3.  $\frac{3}{10} \bigcirc \frac{1}{2}$

✓ 4.  $\frac{11}{12} \bigcirc \frac{4}{8}$

5.  $\frac{5}{8} \bigcirc \frac{2}{5}$

## On Your Own

Compare. Write  $<$  or  $>$ .

6.  $\frac{8}{10} \bigcirc \frac{3}{8}$

7.  $\frac{1}{3} \bigcirc \frac{7}{12}$

8.  $\frac{2}{6} \bigcirc \frac{7}{8}$

9.  $\frac{4}{8} \bigcirc \frac{2}{10}$

10.  $\frac{3}{4} \bigcirc \frac{1}{2}$

11.  $\frac{6}{6} \bigcirc \frac{1}{3}$

12.  $\frac{4}{5} \bigcirc \frac{1}{6}$

13.  $\frac{5}{8} \bigcirc \frac{9}{10}$



### Mathematical Practices

Explain how you know  $\frac{1}{3} < \frac{1}{2}$ .

**MATHEMATICAL PRACTICE 2** Reason Quantitatively **Algebra** Find a numerator that makes the statement true.

14.  $\frac{2}{4} < \frac{\quad}{6}$

15.  $\frac{8}{10} > \frac{\quad}{8}$

16.  $\frac{10}{12} > \frac{\quad}{4}$

17.  $\frac{2}{5} < \frac{\quad}{10}$

18. When two fractions are between 0 and  $\frac{1}{2}$ , how do you know which fraction is greater? Explain.

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# Problem Solving • Applications



19. **THINK SMARTER** Saundra ran  $\frac{7}{12}$  of a mile. Lamar ran  $\frac{3}{4}$  of a mile. Who ran farther? Explain.




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**WRITE** ▶ *Math* • Show Your Work • • • • •

20. **What's the Question?** Selena ran farther than Manny.

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21. **GO DEEPER** Chloe made a small pan of ziti and a small pan of lasagna. She cut the ziti into 8 equal parts and the lasagna into 9 equal parts. Her family ate  $\frac{2}{3}$  of the lasagna. If her family ate more lasagna than ziti, what fraction of the ziti could have been eaten?

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22. **THINK SMARTER** James, Ella, and Ryan biked around Eagle Lake. James biked  $\frac{2}{10}$  of the distance in an hour. Ella biked  $\frac{4}{8}$  of the distance in an hour. Ryan biked  $\frac{2}{5}$  of the distance in an hour. Compare the distances biked by each person by matching the statements to the correct symbol. Each symbol may be used more than once or not at all.

$\frac{2}{10}$  ●  $\frac{4}{8}$  ●      ● =

$\frac{4}{8}$  ●  $\frac{2}{5}$  ●      ● <

$\frac{2}{10}$  ●  $\frac{2}{5}$  ●      ● >

**FOR MORE PRACTICE:**  
Standards Practice Book



Thousands of Chinese immigrants came to California to find work.

Immigrants often had problems finding jobs. They had to take jobs that did not pay well. Many times they received unfair treatment at work. In 1867 nearly 2,000 Chinese railroad workers went on **strike**, which means they refused to do their jobs until their demands were met. They wanted the same treatment as the other workers, such as equal pay and work hours. But the Chinese railroad strike failed.

Many immigrant workers faced unfair laws. In 1850 the Foreign Miners Tax made immigrants pay twenty dollars a month to work in mines. Many of them could not pay the tax and had to stop mining. In 1882 the Chinese Exclusion Act discriminated against Chinese workers and stopped them from coming to the United States. **Exclusion** is the act of keeping something or someone out. This exclusion law lasted until 1943.

## 2. How did some Chinese railroad workers stand up for their rights in 1867?

### Summary

Between 1850 and 1890, immigrants from all over the world came to California. Many of them faced great hardships and discrimination. Describe what life was like for immigrants in California in the mid- to late 1800s.



# Documents: Chinese Exclusion Act

## Learn More

A document called an act is an official law that has been passed by a government. The Chinese Exclusion Act of 1882 stopped Chinese worker immigration to the United States. This was the first major act in U.S. history to limit the immigration of free people. It also excluded Chinese immigrants from becoming U.S. citizens. Read the introduction to the act below. Then answer the questions.



1. Circle the words in the document's introduction that mean "something comes to an end."
2. Why do you think Congress passed this act? Do you think this act was fair?

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*"Be it enacted [made into law] by the Senate and House of Representatives of the United States of America in Congress assembled, That from and after the expiration [end] of ninety days next after the passage of this act, and until the expiration of ten years next after the passage of this act, the coming of Chinese laborers [workers] to the United States be, and the same is hereby, suspended [stopped]; and during such suspension it shall not be lawful for any Chinese laborer to come, or, having so come after the expiration of said ninety days, to remain within the United States."*

# 4th Grade Learning Packet

## Answer Key Week 7

Day	Lesson		
1	r-Controlled Vowel Syllables/ Frequently Misspelled Words		
	<table border="1"><tr><td data-bbox="276 546 901 777">A. 1. barber 1. peper 2. motor 3. solar</td><td data-bbox="901 546 1526 777">B. 1. d 2. f 3. c 4. a 5. b 6. e</td></tr></table>	A. 1. barber 1. peper 2. motor 3. solar	B. 1. d 2. f 3. c 4. a 5. b 6. e
	A. 1. barber 1. peper 2. motor 3. solar	B. 1. d 2. f 3. c 4. a 5. b 6. e	
	Vocabulary		
<table border="1"><tr><td data-bbox="276 861 901 1029">1. e 2. f 3. g 4. b 5. c</td><td data-bbox="901 861 1526 1029">6. h 7. a 8. d 9. Answers will vary 10. Answers will vary</td></tr></table>	1. e 2. f 3. g 4. b 5. c	6. h 7. a 8. d 9. Answers will vary 10. Answers will vary	
1. e 2. f 3. g 4. b 5. c	6. h 7. a 8. d 9. Answers will vary 10. Answers will vary		

**PROBLEM SOLVING**  
Lesson 6.5

Name \_\_\_\_\_

**Problem Solving • Find Equivalent Fractions**

**Essential Question** How can you use the strategy make a model to solve problems using equivalent fractions?

**Number and Operations—Fractions—N.F.1**  
MATHEMATICAL PRACTICES  
MP.1, MP.3, MP.4



**Unlock the Problem**

Anaya is planting a flower garden. The garden will have no more than 12 equal sections.  $\frac{3}{4}$  of the garden will have daisies. What other fractions could represent the part of the garden that will have daisies?

**Read the Problem**

<b>What do I need to find?</b> Fractions that could represent the part of the garden that will have daisies.	<b>What information do I need to use?</b> $\frac{3}{4}$ of the garden will have daisies. The garden will not have more than 12 equal sections.	<b>How will I use the information?</b> I can make a table to find equivalent fractions inside the problem.
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**Solve the Problem**

I can make a table and draw models to find equivalent fractions.  
**MathTalk:** Possible explanation: as the number of parts increases, the size of the parts decreases.



1. What other fractions could represent the part of the garden that will have daisies? Explain.  
Possible answer: since  $\frac{6}{8}$  and  $\frac{9}{12}$  are both equivalent to  $\frac{3}{4}$ , they represent the same part of the garden as  $\frac{3}{4}$ .

**Math Talk**  
**Mathematical Practices**  
Compare the models of the equivalent fractions. How does the number of parts relate to the size of the parts? Explain.

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### Try Another Problem

Two friends are knitting scarves. Each scarf has 3 rectangles, and  $\frac{2}{3}$  of the rectangles have stripes. If the friends are making 10 scarves, how many rectangles do they need? How many rectangles will have stripes?



#### Read the Problem

##### What do I need to find?

I need to find how many rectangles they need for 10 scarves and how many rectangles will have stripes.

##### What information do I need to use?

Each scarf has 3 rectangles.  $\frac{2}{3}$  of the rectangles have stripes. There are 10 scarves.

##### How will I use the information?

I will make a table to find the fraction of rectangles with stripes for different numbers of scarves.

#### Solve the Problem

Scarves	1	2	3	4	5	6	7	8	9	10
Number of Rectangles with Stripes	2	4	6	8	10	12	14	16	18	20
Total Number of Rectangles	3	6	9	12	15	18	21	24	27	30

Possible answer:  $\frac{20}{30}$  of the rectangles have stripes. The friends need to make 30 rectangles, and 20 of them will have stripes.

2. Does your answer make sense? Explain how you know.

Yes. Possible explanation: for 1 scarf,  $\frac{2}{3}$  means 2 rectangles have stripes out of a total of 3 rectangles. For 10 scarves,  $\frac{2}{3} \times \frac{30}{10} = \frac{20}{30}$  which means 20 rectangles have stripes out of a total of 30 rectangles.

Possible strategies: draw a diagram, find a pattern, act it out, make a table, make a list; explanations will vary.

Math Talk

Mathematical Practices

What strategy did you use and why?

254

Social Studies: Read "How did the movement of people and ideas change in California?" and answer the questions.  
**HSS 4.4.1 How did the movement of people and ideas change in California?**

1. When did travel to California and communication with its people improve? (page 92)

Travel to California and communication with its people improved during the 1850s and 1860s due to technology.

2. Write the sequence of events for a Pony Express rider. (page 92)

- A. First, a rider carried the mail about twelve miles.
- B. Then he changed horses and rode another twelve miles.
- C. After one rider had gone about 75 miles, another rider took over.
- D. The mail traveled an average of 200 miles a day and took nine to ten days to get to California.

3. Why do you think the telegraph replaced the Pony Express? (Page 93)

The telegraph replaced the Pony Express because it was faster in transmitting messages. It sends signals along wires using electricity.

Day

2

ANSWER KEY	
Grade: 4	Unit: 5
Week: 4	Title: Your World Up Close
Question	Answer
1	A, D
2	B
3	B, C
4	D
5	A
6	B
7	C
8	D
9	B
10	<p>Sample Response:</p> <p>Magnified images, made possible by an electron microscope, allows us to see things we <u>can not</u> see with our naked eyes. The more an image is magnified, the more detail we see. These magnified images have helped scientists understand the causes of diseases and how they behave. Scientists also use electron micrographs to see how objects change over time.</p>

Name \_\_\_\_\_

Share and Show

Unlock the Problem

- ✓ Use the Problem Solving Mathboard.
- ✓ Underline important facts.
- ✓ Choose a strategy you know.

1. Kesha is helping plan a race route for a 10-kilometer charity run. The committee wants to set up the following things along the course:

- Viewing areas:** At the end of each half of the course.
- Water stations:** At the end of each fifth of the course.
- Distance markers:** At the end of each tenth of the course.

Which locations have more than one thing located there?  
 First, make a table to organize the information.

Location	Number of Locations	Fraction Located	NR the Locations
Viewing Areas	2	$\frac{1}{2}$	(1, 5)
Water Stations	5	$\frac{1}{5}$	(2, 4, 6, 8, 10)
Distance Markers	10	$\frac{1}{10}$	(1, 2, 3, 4, 5, 6, 7, 8, 9, 10)

Next, identify a relationship. Use a common denominator, and find equivalent fractions.

Finally, identify the locations at which more than one thing will be set up. Circle the fractions.

**Both the viewing areas, all the water stations, the distance markers located at  $\frac{2}{10}$ ,  $\frac{4}{10}$ ,  $\frac{6}{10}$ ,  $\frac{8}{10}$ , and  $\frac{10}{10}$ .**

2. **Think It Over** What if distance markers will also be placed at the end of every fourth of the course? Will any of those markers be set up at the same location as another distance marker, a water station, or a viewing area? Explain. **Yes. The marker located at  $\frac{2}{4}$  will be located at a viewing area and another distance marker; the marker located at  $\frac{5}{4}$  will be located at the last viewing area, water station, and distance marker.**

3. If six students signed up to volunteer for the race, there were equal groups of students, and each group had a different task. How many students were in each group? **14 students**



**On Your Own**

4. **Thinking Mathematically** A baker cut a pie in half. He cut each half into 3 equal pieces and each piece into 2 equal slices. He sold 6 slices. What fraction of the pie did the baker sell?

$\frac{6}{12}$  or  $\frac{1}{2}$



5. **Learning** Andy cut a tuna sandwich and a chicken sandwich into a total of 15 cuttable-size pieces. He cut the tuna sandwich into 9 more pieces than the chicken sandwich. Andy ate 8 pieces of the tuna sandwich. What fraction of the tuna sandwich did he eat?

$\frac{8}{12}$  or  $\frac{2}{3}$

**1 WRITE** *→* **Math**  
**Show Your Work**

6. **Reasoning** Luke threw balls into three buckets at a carnival. The number on the bucket gives the number of points for each throw. What is the least number of throws needed to score exactly 100 points? Explain.



13 throws; Possible explanation:  $10 \times 9 = 90$ ,

$1 \times 6 = 6$ , and  $2 \times 2 = 4$ ; since  $90 + 6 + 4 = 100$ ,

the least number of throws is  $10 + 1 + 2 = 13$ .

7. **Thinking Mathematically** Victoria arranges flowers in vases at her restaurant. In each arrangement,  $\frac{2}{3}$  of the flowers are yellow. What other fractions can represent the part of the flowers that are yellow? Shade the models to show your work.



$\frac{8}{12}$  Possible answer:  $\frac{6}{9}$

Social Studies: Read “The Transcontinental Railroad”, “Starting the Railroad”, and “Railroad Workers” and answer the questions.

4. Why do you think people called Theodore Judah’s railroad the “transcontinental” railroad? (page 94)

Theodore Judah’s railroad was called the “transcontinental” railroad because it extends the railroad service existing in the East to the middle of the country and to the West Coast. It means it crossed the continent.

5. How did the Big Four impact transportation in the United States? (page 94)

The Big Four consisting of Leland Stanford, Charles Crocker, Collis Huntington, and Mark Hopkins were the investors in the transcontinental railroad that Theodore Joshua built. Their investment made possible the formation of the Central Pacific Railroad Company that served the middle of the country to the West Coast.

6. Write the details in the text that describe why railroad work was dangerous in the Sierra Nevada (page 95)

Railroad work was dangerous in Sierra Nevada because workers had to dig tunnels and use explosives to blast through mountainsides. Many of the workers died as a result.

3

Read "At Your Fingertips" and answer the questions. Read the story twice and fill out the chart. Possible responses.

1. He discovered that because all fingerprints are different, they might be used to identify people.
2. He discovered that our fingerprints remain the same. He also discovered that no two people have the same fingerprints.
3. All of the dates are in time order; the first one is 1858 and the last one is 1903.

Name \_\_\_\_\_



### Mid-Chapter Checkpoint

#### Vocabulary

Choose the best term from the box.

1. **Equivalent fractions** name the same amount in different forms.
2. A **common denominator** is a common multiple of two or more denominators.

#### Vocabulary

common denominator  
equivalent fractions  
factor

#### Concepts and Skills

Write two equivalent fractions. Possible answers are given.

3.  $\frac{2}{3} = \frac{4}{6} = \frac{6}{9}$
4.  $\frac{1}{3} = \frac{2}{6} = \frac{3}{9}$
5.  $\frac{3}{4} = \frac{6}{8} = \frac{9}{12}$

Tell whether the fractions are equivalent. Write = or  $\neq$ .

6.  $\frac{2}{3} \neq \frac{4}{12}$
7.  $\frac{5}{8} = \frac{10}{12}$
8.  $\frac{1}{4} = \frac{4}{8}$

Write the fraction in simplest form.

9.  $\frac{6}{8} = \frac{3}{4}$
10.  $\frac{25}{100} = \frac{1}{4}$
11.  $\frac{11}{10}$

Write the pair of fractions as a pair of fractions with a common denominator. Possible answers are given.

12.  $\frac{3}{10}$  and  $\frac{2}{5} = \frac{3}{10}$  and  $\frac{4}{10}$
13.  $\frac{1}{3}$  and  $\frac{1}{4} = \frac{4}{12}$  and  $\frac{3}{12}$

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14. Sam needs  $\frac{1}{2}$  cup mashed bananas and  $\frac{1}{4}$  cup mashed strawberries for a recipe. He wants to find whether he needs more bananas or more strawberries. How can he write  $\frac{1}{2}$  and  $\frac{1}{4}$  as a pair of fractions with a common denominator? (5.S1.1)

Possible answer:  $\frac{2}{4}$  and  $\frac{1}{4}$

15. Karen will divide her garden into equal parts. She will plant corn in  $\frac{2}{3}$  of the garden. What is the fewest number of parts she can divide her garden into? (5.S1.1)

3 parts

16. Dilcia is making scarves. Each scarf will have 5 rectangles, and  $\frac{2}{3}$  of the rectangles will be purple. How many purple rectangles does she need for 3 scarves? (5.S1.1)

8 purple rectangles

17. Paul needs to buy  $\frac{1}{2}$  pound of peanuts. The scale at the store measures parts of a pound in sixteenths. What measure is equivalent to  $\frac{1}{2}$  pound? (5.S1.1)

$\frac{8}{16}$  pound

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Social Studies: Read "Artifacts: Train Schedule" and answer the questions.

**Artifacts: Train Schedule** (page 96)

- Name one of the Big Four: Leland Stanford (his name is written on the train schedule)
- 7:05 am

4

Grammar: Combining Sentences, Proofread

Grammar: Comparing with More and Most

- |         |          |
|---------|----------|
| 1. more | 6. most  |
| 2. more | 7. more  |
| 3. most | 8. most  |
| 4. more | 9. more  |
| 5. most | 10. most |

When to Use More and Most

- The roller coaster is the most thrilling ride in the entire theme park!
- I think this pattern is uglier than the last one we saw.
- She was the most careful volunteer at the shelter.
- You are most considerate than I am.
- That was the most amazing sight I've ever seen!

## Combining Sentences

1. I want to go to the movies, but I don't want to go ice skating.
2. The dog, a playful pup, ran around the backyard.
3. I am late for school, but I am almost ready to leave.
4. He finished his homework quickly.
5. Wolves, shy creatures, stay away from humans.

## Grammar: Proofread

1. I think you are thirstier than I am.
2. Possible response: The cat is black, but the dog is white.
3. She is the most creative person I know.
4. Possible response: My red coat is very warm.
5. He is a more talented singer than I am.
6. She was the most interesting person at the party.

Lesson 6.6

Name \_\_\_\_\_

### Compare Fractions Using Benchmarks

**Essential Question** How do you use benchmarks to compare fractions?

**Unlock the Problem**

David made a popcorn snack. He mixed  $\frac{1}{2}$  gallon of popcorn with  $\frac{1}{4}$  gallon of dried apple strips. Did he use more dried apple strips or more popcorn?

**Activity** Compare  $\frac{1}{2}$  and  $\frac{1}{4}$ .

**Materials** Fraction strips

Use four fraction strips to compare  $\frac{1}{2}$  and  $\frac{1}{4}$ . Record on the model below.

Say David used more popcorn.

**Math Talk**

**Mathematical Practices**

Explain how the number of eighth-size parts in  $\frac{1}{2}$  is related to the number of eighth-size parts you need to make  $\frac{1}{4}$ .

**Possible explanation:**  $\frac{1}{2}$  has 4 parts. Since there are 8 parts in the whole, you need 4 parts to make a half. Since 5 parts is greater than 4 parts,  $\frac{5}{8} > \frac{1}{2}$  and  $\frac{5}{8} > \frac{1}{4}$ .

1. Write the fractions equivalent to  $\frac{1}{2}$ . What is the relationship between the numerator and the denominator of fractions equivalent to  $\frac{1}{2}$ ?  
**Possible answer:**  $\frac{2}{4}, \frac{3}{6}, \frac{4}{8}, \frac{5}{10}$ ; the numerator is half the denominator.
2. How many eighths are equivalent to  $\frac{1}{2}$ ?  
**4 eighths or  $\frac{4}{8}$**
3. How can you compare  $\frac{1}{2}$  and  $\frac{1}{4}$  without using a model?  
**Possible answer:** 4 eighths is equivalent to  $\frac{1}{2}$ . Since 5 eighths is more than 4 eighths,  $\frac{5}{8} > \frac{1}{2}$ .

Chapter 6 259

**Benchmarks** A **benchmark** is a known size or amount that helps you understand a different size or amount. You can use  $\frac{1}{2}$  as a benchmark to help you compare fractions.

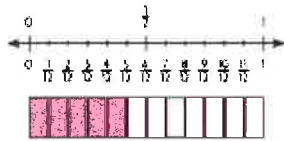


**Example** Use benchmarks to compare fractions.

A family hiked the same mountain trail. Eric and his father hiked  $\frac{2}{3}$  of the trail before they stopped for lunch. Jill and her mother hiked  $\frac{5}{6}$  of the trail before they stopped for lunch. Who hiked farther before lunch?

Compare  $\frac{2}{3}$  and  $\frac{5}{6}$  to the benchmark  $\frac{1}{2}$ .

**STEP 1** Compare  $\frac{2}{3}$  to  $\frac{1}{2}$ .



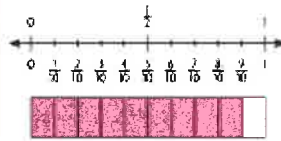
Think:  $\frac{2}{3}$  is **greater** than  $\frac{1}{2}$ .



Since  $\frac{2}{3}$  is **less** than  $\frac{3}{4}$  and  $\frac{5}{6}$  is **greater** than  $\frac{1}{2}$ , you know that  $\frac{2}{3} < \frac{5}{6}$ .

So **Jill and her mother** hiked farther before lunch.

**STEP 2** Compare  $\frac{5}{6}$  to  $\frac{1}{2}$ .



Think:  $\frac{5}{6}$  is **greater** than  $\frac{1}{2}$ .



4. Explain how you can tell  $\frac{2}{3}$  is less than  $\frac{1}{2}$  without using a model.

Possible explanation:  $\frac{2}{3}$  is equivalent to  $\frac{4}{6}$ . Since 4 is less

than 6,  $\frac{4}{6}$  is less than  $\frac{6}{6}$  or  $\frac{1}{1}$ .

5. Explain how you can tell  $\frac{5}{6}$  is greater than  $\frac{1}{2}$  without using a model.

Possible explanation:  $\frac{5}{6}$  is equivalent to  $\frac{5}{10}$ . Since 5 is greater

than 5,  $\frac{5}{10}$  is greater than  $\frac{5}{10}$  or  $\frac{1}{2}$ .

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Social Studies: Read “How did different people coming to California affect our state?” and answer the questions.  
**Hss 4.4.3 How did different people coming to California affect our state?**

1. Use dates to describe the immigration of different groups to California. (Page 104)
  - A. In the 1840s, there were about 15,000 people living in California in addition to the California Indians.
  - B. In 1850, about 77, 600 more people had arrived.
  - C. In 1860 the population had reached 380,000.
  - D. In 1848 migrants came from all over; some migrated from US territories or states; others were people from other countries such as Peru, Chile, Italy, Ireland, Germany, and Russia
  - E. From 1850 to 1870 Chinese immigration increased.

Day  
5

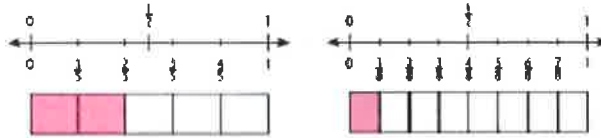
Determine a Main Idea from Informational Text - Topic: Dog Heroes  
 Answers will vary.

Name \_\_\_\_\_

**Share and Show**



1. Compare  $\frac{2}{5}$  and  $\frac{1}{8}$ . Write  $>$  or  $<$ .



$\frac{2}{5} > \frac{1}{8}$

Compare. Write  $<$  or  $>$ .

2.  $\frac{1}{2} < \frac{4}{6}$

3.  $\frac{3}{10} < \frac{1}{2}$

4.  $\frac{11}{12} > \frac{4}{8}$

5.  $\frac{5}{8} > \frac{2}{5}$

Possible explanation: a third-size part of a whole is smaller than half of the whole.

**Math Talk**

**Mathematical Practices**

Explain how you know  $\frac{5}{8} < \frac{1}{2}$ .

**On Your Own**

Compare. Write  $<$  or  $>$ .

6.  $\frac{6}{10} > \frac{3}{8}$

7.  $\frac{1}{3} < \frac{7}{12}$

8.  $\frac{2}{5} < \frac{7}{8}$

9.  $\frac{4}{8} > \frac{2}{10}$

10.  $\frac{1}{4} > \frac{1}{2}$

11.  $\frac{6}{6} > \frac{1}{3}$

12.  $\frac{4}{5} > \frac{1}{6}$

13.  $\frac{3}{8} < \frac{9}{10}$

**Reason Quantitatively Algebra** Find a numerator that makes the statement true. Possible answers are given.

14.  $\frac{2}{4} > \frac{5}{8}$

15.  $\frac{8}{10} > \frac{2}{8}$

16.  $\frac{10}{12} > \frac{5}{4}$

17.  $\frac{2}{5} > \frac{7}{10}$

18. When two fractions are between 0 and  $\frac{1}{2}$ , how do you know which fraction is greater? Explain.

Possible answer: the fraction that is closer to  $\frac{1}{2}$  is greater.

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**Problem Solving > Applications**



19. **Write a Question** Sandra ran  $\frac{1}{12}$  of a mile. Lamar ran  $\frac{1}{4}$  of a mile. Who ran farther? Explain.

Lamar. Possible explanation: Sandra ran  $\frac{1}{12}$  mile farther than a half mile ( $\frac{6}{12}$ ). Lamar ran  $\frac{1}{4}$  mile farther than a half mile ( $\frac{3}{12}$ ). Since  $\frac{1}{4}$  mile is farther than  $\frac{1}{12}$  mile, Lamar ran farther.



**WRITE** Start Show Your Work

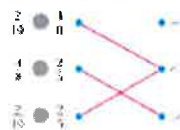
20. **What's the Question?** Selena ran farther than Marry.

Possible question: Selena ran  $\frac{1}{4}$  mile, Marry ran  $\frac{1}{8}$  mile. Who ran farther?

21. **Write a Question** Chloe made a small pan of ziti and a small pan of lasagna. She cut the ziti into 8 equal parts and the lasagna into 9 equal parts. Her family ate  $\frac{1}{3}$  of the lasagna. If her family ate more lasagna than ziti, what fraction of the ziti could have been eaten?

Possible answer:  $\frac{1}{8}$

22. **Write a Question** James, Ella, and Ryan biked around Eagle Lake. James biked  $\frac{1}{10}$  of the distance in an hour. Ella biked  $\frac{1}{5}$  of the distance in an hour. Ryan biked  $\frac{2}{5}$  of the distance in an hour. Compare the distances biked by each person by matching the statements to the correct symbol. Each symbol may be used more than once or not at all.



262 **FOR MORE PRACTICE**  
Standards Practice Book

Social Studies: Read pages 105 and 106 ( continuation of “How did different people coming to California affect our state?”) and answer the questions.

2. How did some Chinese railroad workers stand up for their rights in 1867? (105)

In 1867, nearly 2,000 Chinese railroad workers went on strike to demand equal pay and work hours.

**Primary Source:** Documents: Chinese Exclusion Act (Page 106)

1. What words in the document’s introduction mean “something comes to an end.”

Expiration (end)

Suspension, suspended (stopped)

2. Answers will vary.

Sample: Congress passed this act to stop or prevent Chinese worker immigration to the United States. It is fair/unfair because \_\_\_\_\_.





# Compton USD

## Learning Packet # 6

**ELD**

**Grade 4**

**Name:** \_\_\_\_\_



# 4th Grade-ELD Learning Packet

## TABLE OF CONTENTS

### Week 7

Day	Lesson	Date Completed
1	<b>Vocabulary:</b> Follow this steps: a. Say the word aloud b. Read the sentence aloud c. Find a cognate to the word and say it aloud d. Write a sentence using each word *Use the pictures to help yourselves to find the cognates and to build the sentences.	
	<b>Vocabulary: Antonyms.</b> Read the information in the box. Complete activities 1-4.	
	<b>r-Controlled Vowel Syllables/Frequently Misspelled Words.</b> Read the information in the box. Then, complete sections A (questions 1-5) and B (questions 1-5)	
	<b>Genre/Text Feature:</b> Read the text "Scott Aldrich's Micro Art". Answer questions 1-4	
2	<b>Comprehension and Fluency:</b> Read the literary passage "At Your Fingerprints": Answer questions in section A (1-3). Then, complete section B.	
	<b>Comprehension:</b> Read the passage "At Your Fingerprints" again . Then, complete the Sequence graphic organizer with the information from the text.	
3	<b>Differentiated Texts:</b> Read the expository text "A Close-Up of Our Universe". Respond to the text by reading and completing the sentences 1-3. Then, Complete the sentences at the bottom..	
	<b>Writing Traits: Voice.</b> Read the Draft Model. Use the questions to help you to revise the draft. Then, revise the draft by adding words and phrases that show a formal voice.	
	<b>Write to Sources:</b> Read the Text in the box. Then, follow the directions 1-4 to mark the text.	
4	<b>Leveled Reader:</b> Read the book "Secrets of the Ice". Then, <ul style="list-style-type: none"> <li>Complete the questions on page 15</li> </ul>	
5	<b>Leveled Reader:</b> Read the book "Secrets of the Icer". Then, <ul style="list-style-type: none"> <li>Read the text "Super-Vision" - pages 16-19</li> <li>Complete the questions on pages 20-21</li> </ul>	

#### Recommended Online Usage





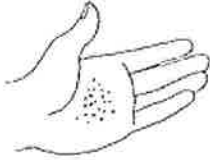
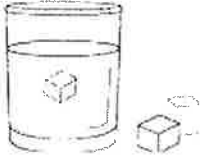
<input type="checkbox"/> I-Ready Reading - 45 minutes per week	<input type="checkbox"/> I-Ready Math - 45 minutes per week
<input type="checkbox"/> Imagine Learning for English Learners - 90 minutes per week	<input type="checkbox"/> Dreambox - 90 minutes per week





Name \_\_\_\_\_

Use the word chart to study this week's vocabulary words.  
Write a sentence using each word in your writer's notebook.

Word	Context Sentence	Illustration
typical	That huge pumpkin is not the <u>typical</u> size.	
mingle	The writers were able to <u>mingle</u> with each other after the meeting.	
humid	The climate in the rain forest is <u>humid</u> .	
cling	Why does the kitten <u>cling</u> to the branch?	
gritty	The sand in my hand feels <u>gritty</u> .	
dissolves	Watch as the sugar <u>dissolves</u> in the water.	

Name \_\_\_\_\_

Words that have opposite meanings are called **antonyms**. For example, the words *rough* and *smooth* are antonyms. You can find out if a word has an antonym by looking in a **thesaurus**. A thesaurus is a book that lists words in alphabetical order. Following each word is a list of its synonyms and antonyms.

Read each pair of sentences. Choose an antonym for the underlined word from the box below. Write the antonym on the line.

specific

identical

entire

detailed

1. I only wanted to eat half of the apple. But the apple was so delicious that I ate the \_\_\_\_\_ thing!
2. Exercising is a general activity. Jumping rope is a more \_\_\_\_\_ activity.
3. We asked him for a short, simple answer. Instead, he gave us an answer that was long and \_\_\_\_\_.
4. These two puppies do not look different. They look the same because they are \_\_\_\_\_.

Name \_\_\_\_\_

When a vowel is followed by the letter *r*, the letters act as a team to form a special vowel sound. This letter team is always in the same syllable and is called an *r*-controlled vowel syllable.

*ter* as in *enter*      *or* as in *organ*      *lar* as in *dollar*

**A. Read each word in bold. Circle the *r*-controlled vowel syllable. Then write the syllable on the line. The first one has been done for you.**

- |           |      |            |                        |
|-----------|------|------------|------------------------|
| 1. powder | pow  | <b>der</b> | _____ <b>der</b> _____ |
| 2. motor  | mo   | tor        | _____                  |
| 3. zipper | zip  | per        | _____                  |
| 4. solar  | so   | lar        | _____                  |
| 5. singer | sing | er         | _____                  |

Some word pairs are often misspelled because they sound very similar to other words and may have similar spelling patterns. Although the two words may sound alike, they have different meanings and spellings.

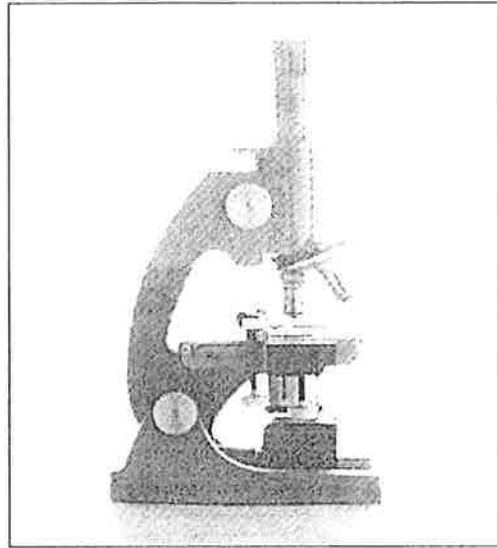
**B. Draw a line to match the words that are frequently misspelled. The first one has been done for you.**

- |           |       |           |
|-----------|-------|-----------|
| 1. loose  | _____ | a. affect |
| 2. lie    | _____ | b. than   |
| 3. then   | _____ | c. passed |
| 4. effect | _____ | d. lose   |
| 5. past   | _____ | e. lay    |
- (Note: A line is drawn from '1. loose' to 'd. lose')*

Name \_\_\_\_\_

## Scott Aldrich's Micro Art

Scott Aldrich is an artist. He uses microscopes and light. Aldrich trained to be a chemist, or someone who works with chemicals. He used microscopes to look at chemicals. The shapes he saw looked like art. Aldrich uses light filters. The filters let certain colors pass through chemicals. Then he takes pictures of the chemicals. He uses a camera with a microscope in it. The pictures look like familiar things!



Siri Stafford

In his photography Aldrich reveals the world as seen through a microscope.

Answer the questions about the text.

1. How do you know this is expository, or informational, text?

---

2. What does the photograph show? Why is the photograph important?

---



---

3. What is another text feature in this text?

---

4. What does the caption tell you about Aldrich's art?

---



---

Name \_\_\_\_\_

Read the passage. Use the summarize strategy to make sure you understand the text.

## At Your Fingertips

6       What makes you different? Is it  
15       your eyes? Is it your hair? Is it your  
22       name? One thing that sets you apart  
28       is your fingerprints. Other things may  
35       not be certain, but fingerprints are a  
40       reliable way to identify people.

47       As we age, our looks change. Our  
53       hair and height may change. Even  
59       our face may change shape. Our  
65       fingerprints stay the same. You will  
73       have the same prints as an adult that  
78       you did as a child.

84       Two people cannot have the same  
91       prints. Looking at the tips of your  
97       fingers quickly might not prove much.

110      But, a detailed look shows that there are swirls and ridges. There are  
123      shapes specific to you. The shapes are not the same for others. This  
134      makes your prints unique and explains why they are so helpful.

145      In 1858, Sir William Herschel of England had people sign papers  
156      with handprints. He then used fingerprints. He noticed that no prints  
168      were identical. They were all different. He saw that prints might be  
used to identify people.



Fingerprinting is a reliable way to identify people.

Name \_\_\_\_\_

In 1892, scientist Sir Francis Galton wrote a book about prints. He proved that fingerprints do not alter. Our prints stay the same during our life. He found that the chance of two people having the same prints is 1 in 64 billion!

In 1901, the London police began using prints to find suspects in a crime. They helped police know who to arrest. In 1903, the New York State Prison system began using prints.

A scan of your fingers can act as a "key." Scans can unlock a door or open files on a computer. This method keeps things safe.

Whether used to sign papers, find people who commit crimes, or unlock doors, prints help to identify people. When we want to know who a person is, we can ask their name. We can look at their face. But a sure way is to look closely at the swirls and ridges on the tips of their fingers.



Stockbyte/Getty Images

**Every fingerprint has a unique set of swirls and ridges.**



Name \_\_\_\_\_

**A. Reread the passage and answer the questions.**

**1. Reread the fourth paragraph. What did Sir William Herschel discover in 1858?**

---



---



---

**2. The next date in the passage is 1892. What did Sir Francis Galton discover in 1892?**

---



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**3. Authors use sequence to present information. Sequence organizes events in time order. How do you know that the author used sequence in the text?**

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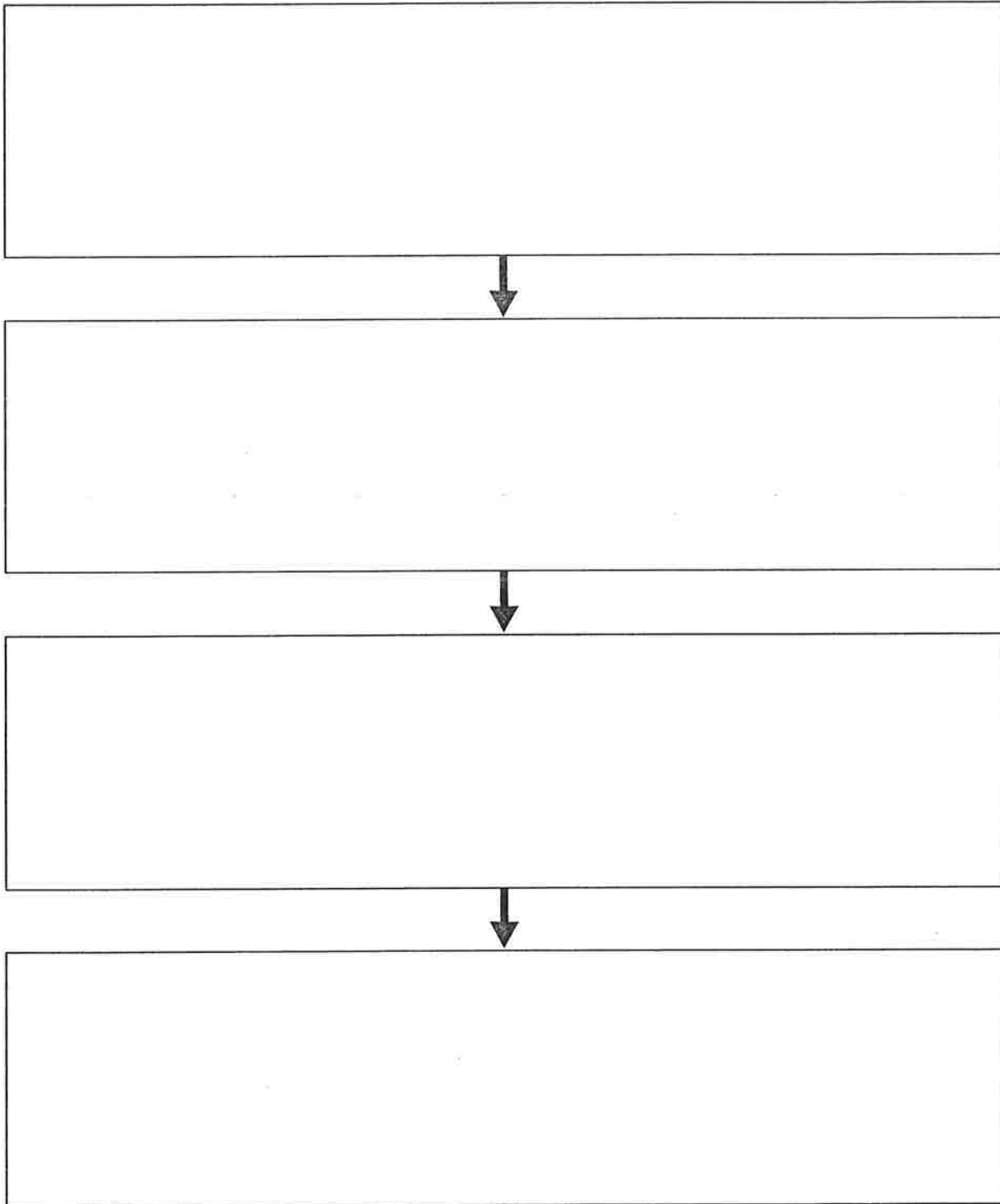
**B. Work with a partner. Read the passage aloud. Pay attention to rate. Stop after one minute. Fill out the chart.**

	Words Read	-	Number of Errors	=	Words Correct Score
First Read		-		=	
Second Read		-		=	

Read the directions. Pair students to answer the questions using basic and content vocabulary. Then have them share their answers with the group.

Name \_\_\_\_\_

Read the selection. Complete the sequence graphic organizer.





## Essential Question

What can you discover when you look closely at something?

Use Graphic Organizer 87 to take notes while you read.

# A Close-Up of Our Universe

## Expository Text

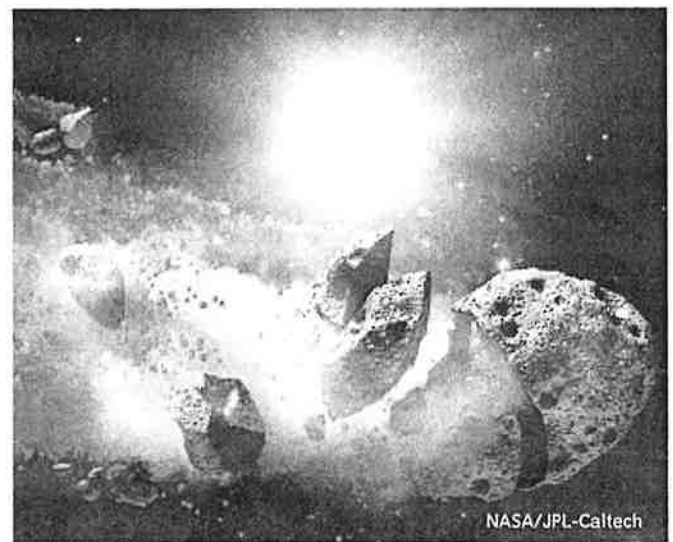
For hundreds of years, astronomers have been observing distant objects in space from Earth using telescopes. Telescopes magnify objects so they appear closer and larger. But scientists needed clearer **images** of our universe. So in 1990 they sent the first telescope into outer space. NASA launched the Hubble Telescope to orbit above Earth. Since then, it has taken amazing images of our solar system and universe.

Later in 2003, NASA launched another powerful telescope into space. The Spitzer Space Telescope **captures** images of areas in space never seen before. It has taken images of the centers of galaxies. A galaxy is a large group of stars. There are many galaxies in the universe. Spitzer has captured images of clouds of dust mingling around young stars. From these images, scientists are learning how planets like Earth are formed.

At times, Hubble and Spitzer telescopes have worked together, too. They have taken images of the most faraway galaxies. The young stars in these galaxies are millions of years old!

These galaxies are in the early stages of the universe.

What will future space telescopes be like? In 2018, NASA will launch the James Webb Space Telescope into space. For the next ten years, it will be in orbit. The Webb will help scientists examine the history of our universe. Scientists will study the first galaxies. They will see stars form inside dust clouds. Studying the universe with telescopes will help us discover more about Earth, too.



The Spitzer Space Telescope has provided scientists with information about what rocky planets are made of. An artist used that information to illustrate an exploding asteroid around a dead star.

# Respond to the Text

Name \_\_\_\_\_

Read the text. Use the graphic organizer 87 to record your ideas and notes. Have a collaborative conversation with your partner. Use the sentences below to start the conversation. Cite text evidence and record your ideas on the graphic organizer. Present your ideas to the class.

1. Describe what scientists discovered by looking at images of clouds of dust through the Spitzer Space Telescope.

By looking at images of clouds of dust, scientists discovered \_\_\_\_\_

\_\_\_\_\_

2. Discuss the kinds of images the Hubble and Spitzer telescopes have taken together.

The Hubble and Spitzer telescopes have taken images of \_\_\_\_\_

\_\_\_\_\_

3. Explain what the James Webb Space Telescope will help scientists examine.

\_\_\_\_\_

\_\_\_\_\_

**Write Work** with a partner. Discuss your notes about "A Close-Up of Our Universe." Then write your answer to the Essential Question.

**What can you discover when you look closely at something?**

The Spitzer and Hubble telescopes helped scientists discover \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

The James Webb Space Telescope will help scientists \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Name \_\_\_\_\_

**A. Read the draft model. Use the questions that follow the draft to help you use a formal voice.**

### Draft Model

The teacher uses this thing a lot. You can't pick it up, but you can write all over it. It gets totally dusty with chalk. It's not a super cool thing, but it does the job.

1. What are some examples of conversational language in the first sentence?
2. What formal language can be used to replace these words in the first sentence?
3. How will formal language improve the draft model?
4. Where else in the draft model can formal language be used to replace conversational words or slang?

**B. Now revise the draft by adding words and phrases that show a formal voice.**

---



---



---



---



---



---



---

Name \_\_\_\_\_

Delia used text evidence from two different sources to answer the prompt: *How do A Drop of Water and "The Incredible Shrinking Potion" convince readers to look closely at something?*

The authors of *A Drop of Water* and "The Incredible Shrinking Potion" convince readers that things look different when they are magnified. We see amazing details we had not seen before.

*A Drop of Water* is an informative text. The author uses words and photos to show how and why water changes. For example, he includes photos of a snowflake magnified to 60 times its actual size. He also shows sleet that is 15 times its actual size. This helps readers see the most amazing details they could not see on their own.

In the story, "The Incredible Shrinking Potion," Isabel and Mariela have to look at the world in a different way when they shrink themselves to save their classmates. Now it is as though everything in their world is magnified because they are so small. For example, Isabel has to avoid the wide wooden grooves on the table. She never even noticed them when she was her normal height. Both authors manage to convince readers that it is important to take a closer look when things are magnified.

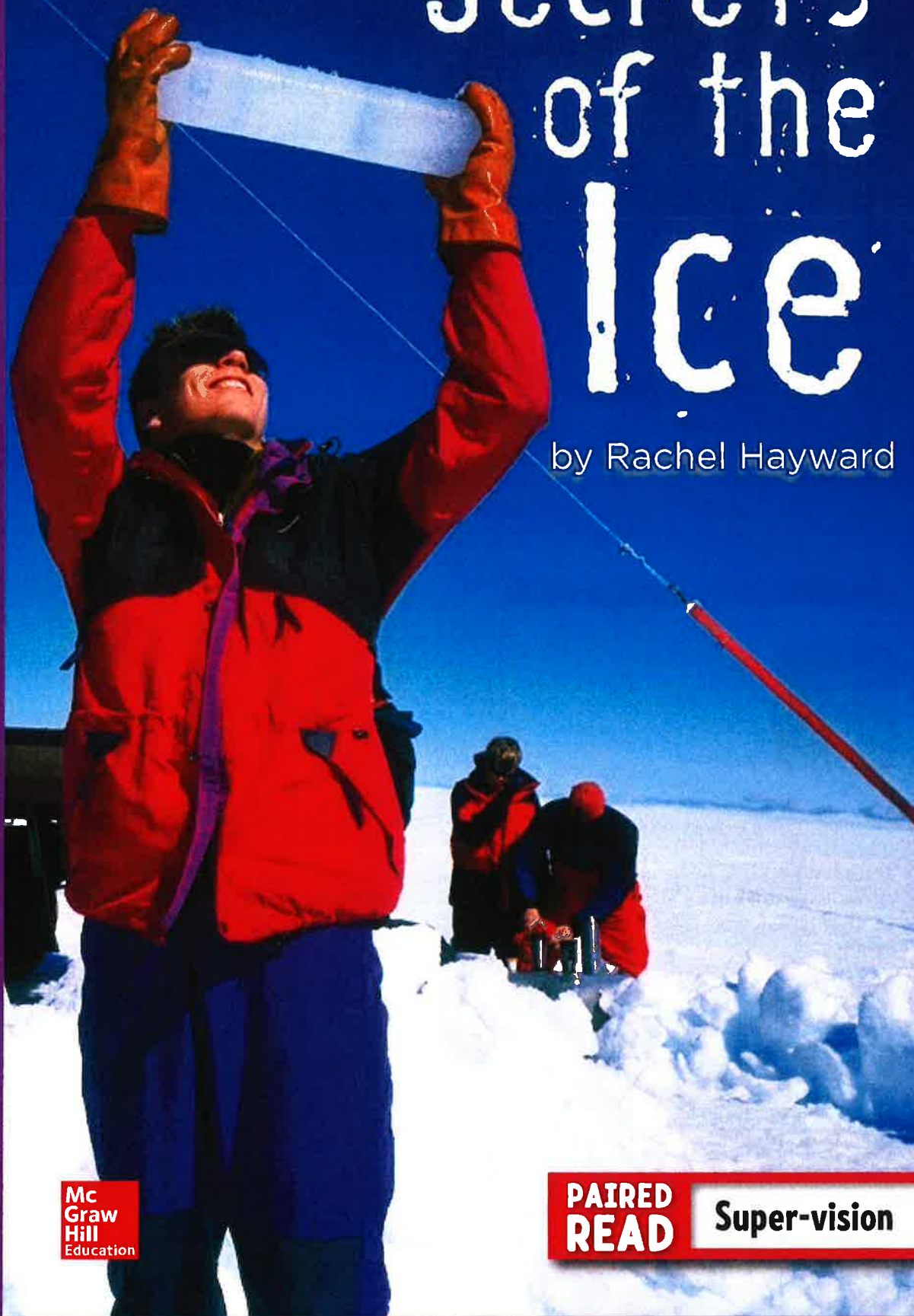
Reread the passage. Follow the directions below.

1. **Underline** Delia's opinion in the first paragraph.
  2. **Draw a box** around an example Delia includes to support her opinion.
  3. Delia uses a formal voice, so she avoids using contractions. **Circle** an example of formal voice.
  4. **Write** the example of how Delia uses *most* to compare.
-

Expository  
Text

# Secrets of the Ice

by Rachel Hayward



Mc  
Graw  
Hill  
Education

PAIRED  
READ

Super-vision



# STRATEGIES & SKILLS

## Comprehension

**Strategy:** Summarize

**Skill:** Sequence

## Vocabulary

clings, dissolves, gritty, humid,  
magnify, microscope, mingle,  
typical

## ELL Vocabulary

captures, extract, substances

## Content Standards

### Science

Physical Science

Word Count: 1,113\*\*

**Photography Credit:** Ragnar Th Sigurdsson/Alamy Stock Photo

\*\*The total word count is based on words in the running text and headings only. Numerals and words in captions, labels, diagrams, charts, and sidebars are not included.

[mheducation.com/prek-12](http://mheducation.com/prek-12)



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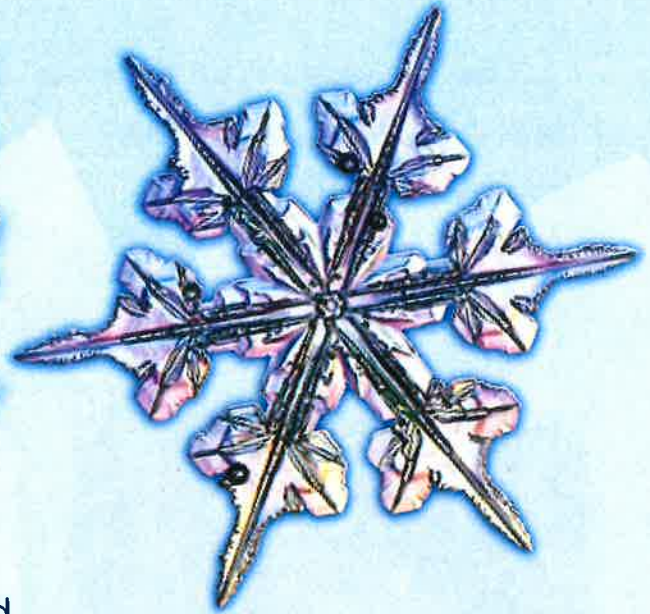
D



**Essential Question**

What can you discover when you look closely at something?

# Secrets of the Ice



by Rachel Hayward

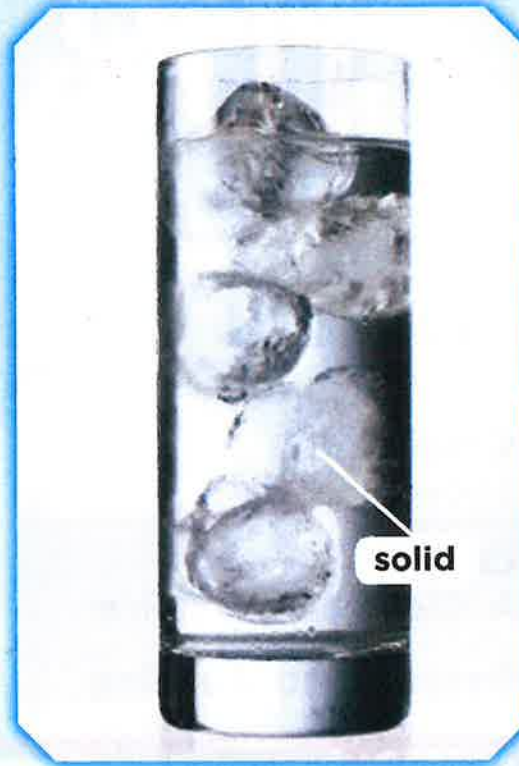
<b>Chapter 1</b>	
The Properties of Water.....	2
<b>Chapter 2</b>	
Snow and Ice.....	6
<b>Chapter 3</b>	
A Close Look at Ice .....	10
<b>Respond to Reading</b> .....	15
<b>PAIRED READ</b>	
<b>Super-vision</b> .....	16
<b>Glossary/Index</b> .....	19
<b>STEM</b> Focus on Science .....	20

# ❄️ CHAPTER 1 ❄️

## The Properties of Water

What is clear, wet, and comes out of a faucet?  
What is cold, hard, and floats in a glass? What is  
invisible and in the air?

The answer is the three **states** of water. Water  
can be a liquid (water), a solid (ice), or a gas  
(vapor or steam).



Water naturally occurs on Earth  
as a liquid (left), a solid  
(center), and a gas (right).

(b) Brand X Pictures/Punchstock (b) 81a/age fotostock





The water in this bottle froze and expanded, and so the bottle broke.



Water has special qualities. Water dissolves substances. Salt, sugar, and gases, such as oxygen and carbon dioxide, dissolve in water.

At 32 degrees Fahrenheit (0 degrees Celsius), water freezes to ice. Most substances shrink when they freeze, but water expands. If a bottle of water freezes, water expands and the bottle breaks.

When water is a gas or vapor, it is usually invisible. Air with a lot of **water vapor** feels humid and sticky.

Water is always moving and changing its state, from liquid to vapor to solid. This is called the water cycle.

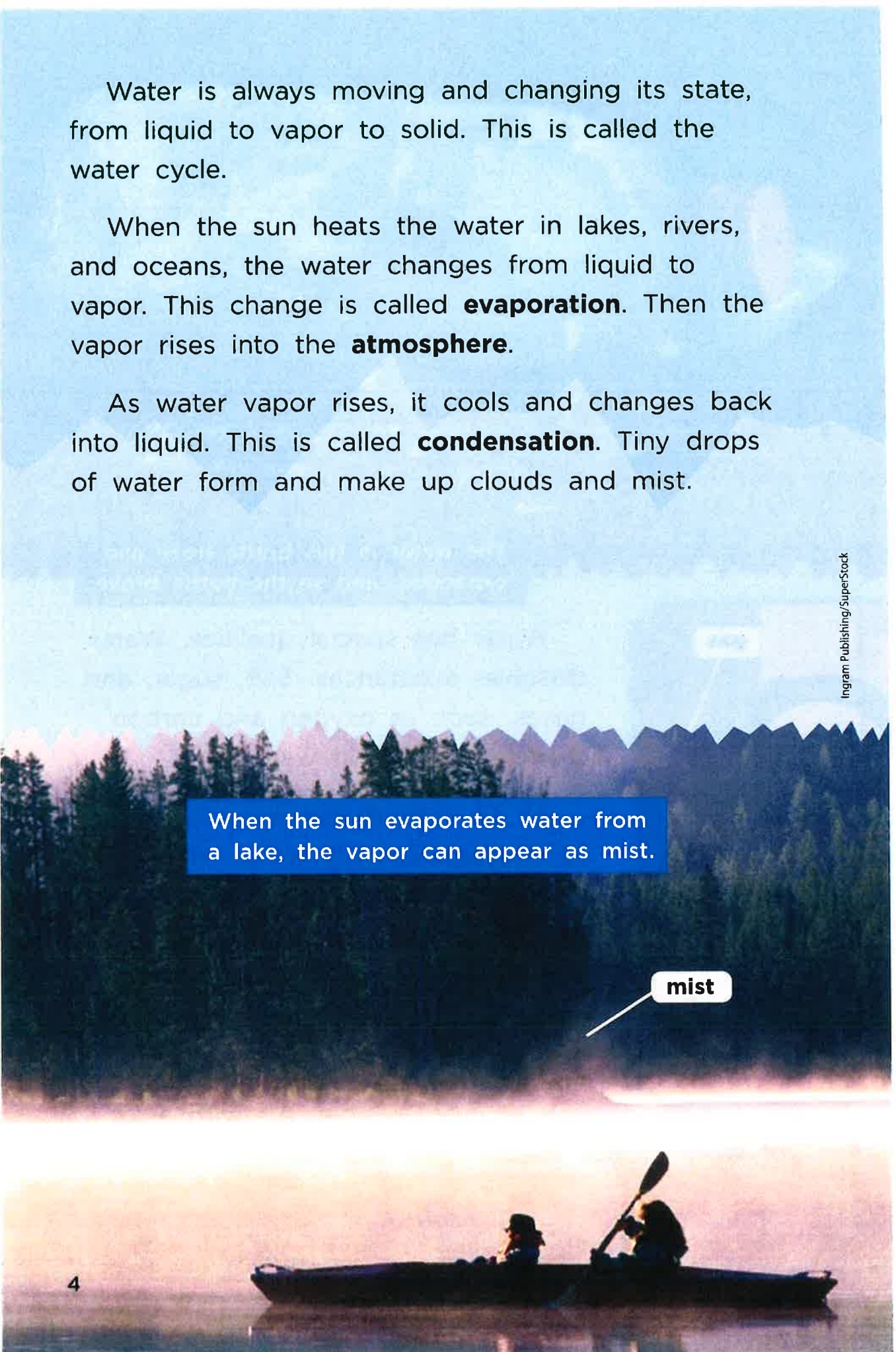
When the sun heats the water in lakes, rivers, and oceans, the water changes from liquid to vapor. This change is called **evaporation**. Then the vapor rises into the **atmosphere**.

As water vapor rises, it cools and changes back into liquid. This is called **condensation**. Tiny drops of water form and make up clouds and mist.

Ingram Publishing/SuperStock

When the sun evaporates water from a lake, the vapor can appear as mist.

mist





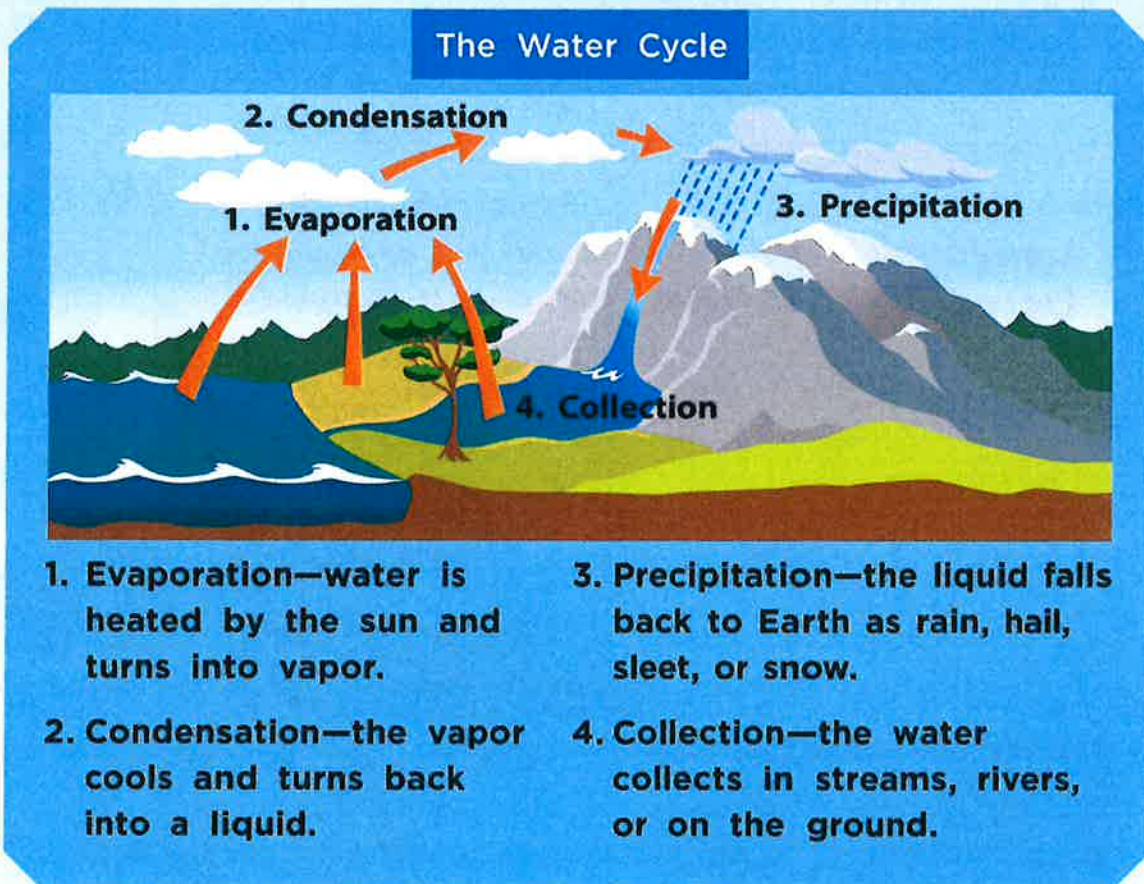
When water droplets join together in clouds, they become heavy. They fall back to Earth as **precipitation**. The precipitation could be rain, hail, sleet, or snow.

The water falls to Earth and collects in the rivers, streams, or ground. Then the sun heats up the water, and the water cycle starts again.

As water moves around, it captures substances from the environment. These substances stay in the water when it changes into ice or vapor.

**STOP AND CHECK**

What happens in the water cycle?



## ❄️ CHAPTER 2 ❄️

# Snow and Ice

Snow forms when water vapor condenses into tiny drops of water. Cold air freezes drops of water into ice crystals. The crystals grow and stick to other ice crystals. When the group of crystals gets heavy, it falls to Earth as a snowflake.

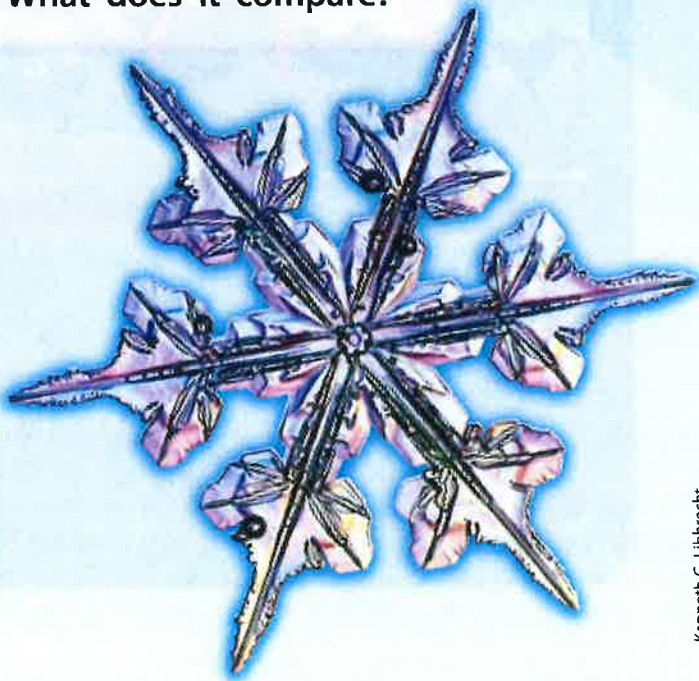
Ice crystals grow in many different shapes. At a very cold temperature (around 5 degrees Fahrenheit), crystals have a simple shape. At a warmer temperature (around 15 degrees Fahrenheit), the crystals are bigger and have a more complicated shape.

Dust may mingle with the water and change the size and shape of an ice crystal.

### Language Detective

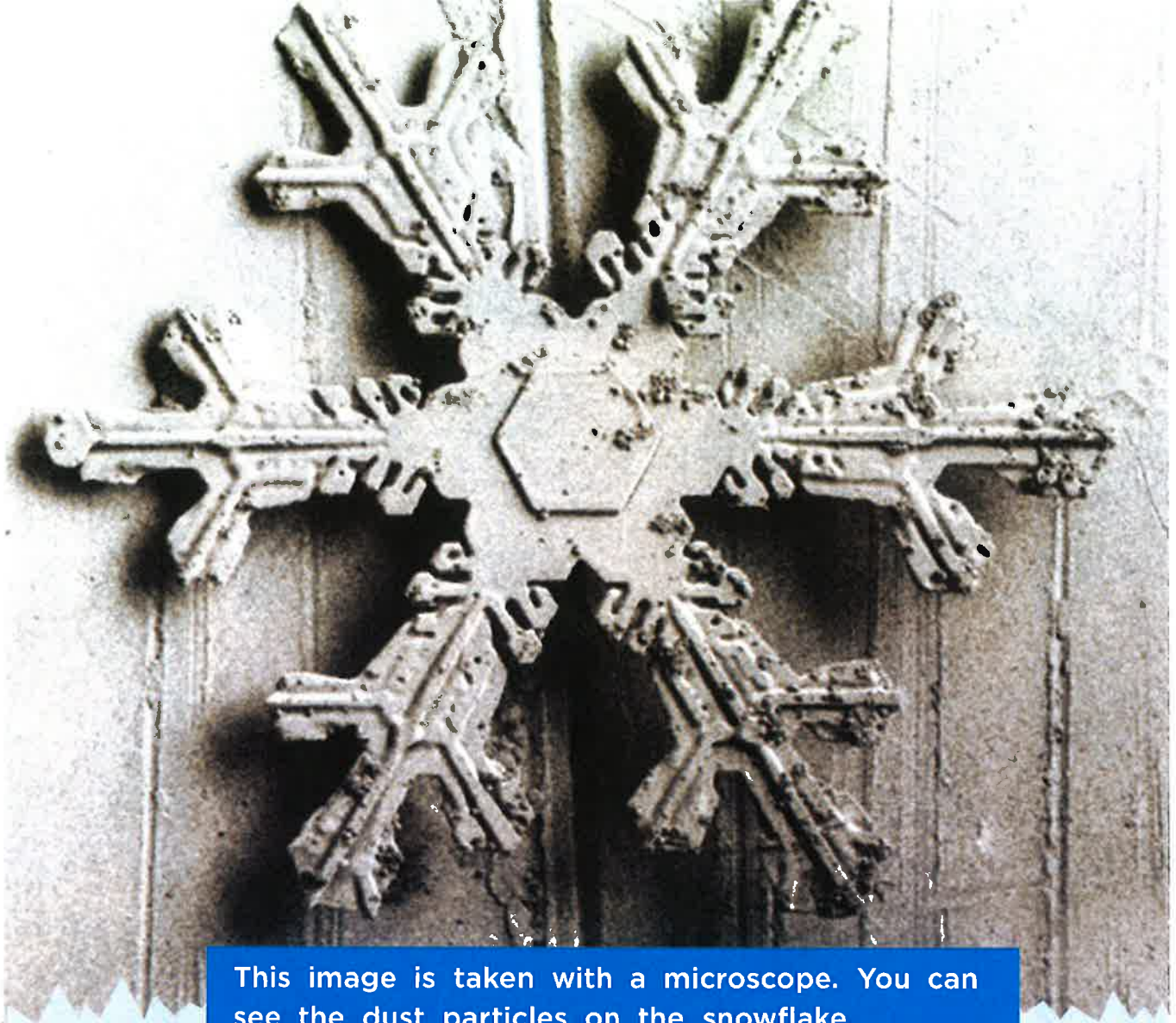
More complicated is a comparative adjective. What does it compare?

This image of a snow crystal was taken by a special microscope.



Kenneth G. Libbrecht





This image is taken with a microscope. You can see the dust particles on the snowflake.

Ice crystals contain information about the environment. Water vapor clings to **particles** in the air, such as dust or ash. When the vapor changes into liquid and then into ice, the particles freeze into ice crystals as well.

Snow catches tiny air bubbles. The bubbles contain gases such as oxygen and carbon dioxide.

**In Other Words** too; also. En español, *as well* quiere decir *también*.

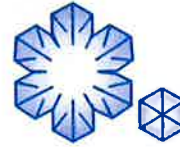
# Looking Closely at Snowflakes

If you examine snowflakes with a microscope, you can see different types of snowflakes. Most ice crystals have six sides.

**Bullet Rosette**



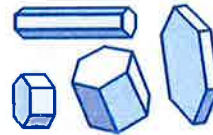
**Sectioned Plate**



**Capped Column**



**Simple Prisms**



**Double Plate**



**Split Plate and Star**



**Fernlike Stellar Dendrite**



**Stellar Dendrite**



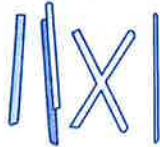
**Hollow Column**



**Stellar Plate**



**Needle**



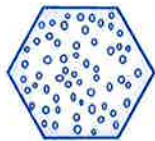
**Triangular Crystal**



**Radiating Dendrite**



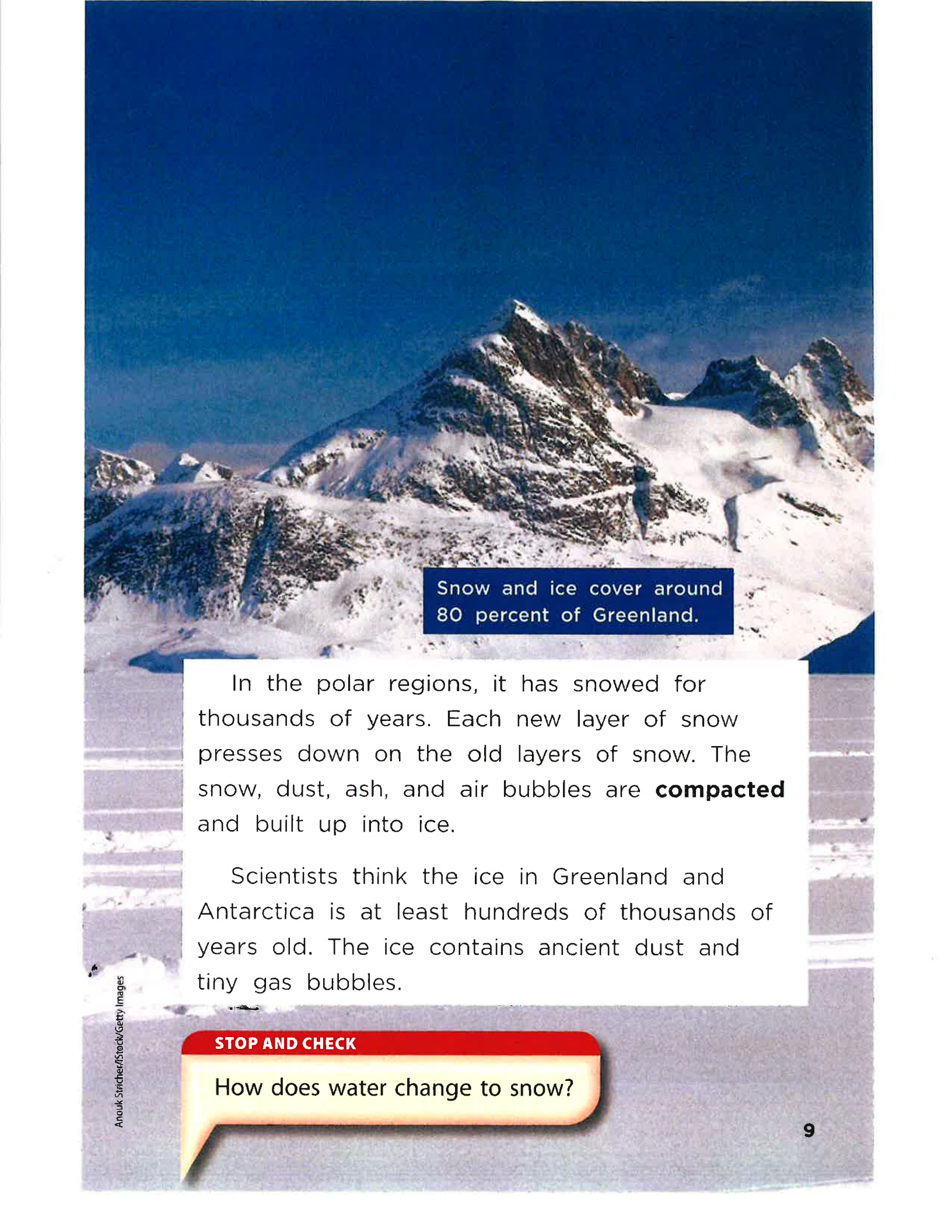
**Rimmed Crystal**



**12-sided Snowflake**







Snow and ice cover around 80 percent of Greenland.

In the polar regions, it has snowed for thousands of years. Each new layer of snow presses down on the old layers of snow. The snow, dust, ash, and air bubbles are **compacted** and built up into ice.

Scientists think the ice in Greenland and Antarctica is at least hundreds of thousands of years old. The ice contains ancient dust and tiny gas bubbles.

**STOP AND CHECK**

How does water change to snow?

## ❄️ CHAPTER 3 ❄️

# A Close Look at Ice

Scientists study the ice in Greenland and Antarctica. They want to learn about Earth's climate and atmosphere in the past.

Scientists extract a long column of ice. The column of ice is called an ice core. They use a hollow drill with a sharp tip. The drill spins and cuts through the ice. As the drill moves down, it fills with ice.

### The Best Place to Drill

Scientists look for a place where the ice has not melted or moved. Scientists also look for a place that does not have deep cracks in the ice. They use radar to calculate how deep the ice is and how many layers of ice there are.



Scientists use a drill to extract ice cores.



The ice core is removed in sections. After one section of ice is extracted, the drill is put into the same hole to remove a section of older ice.

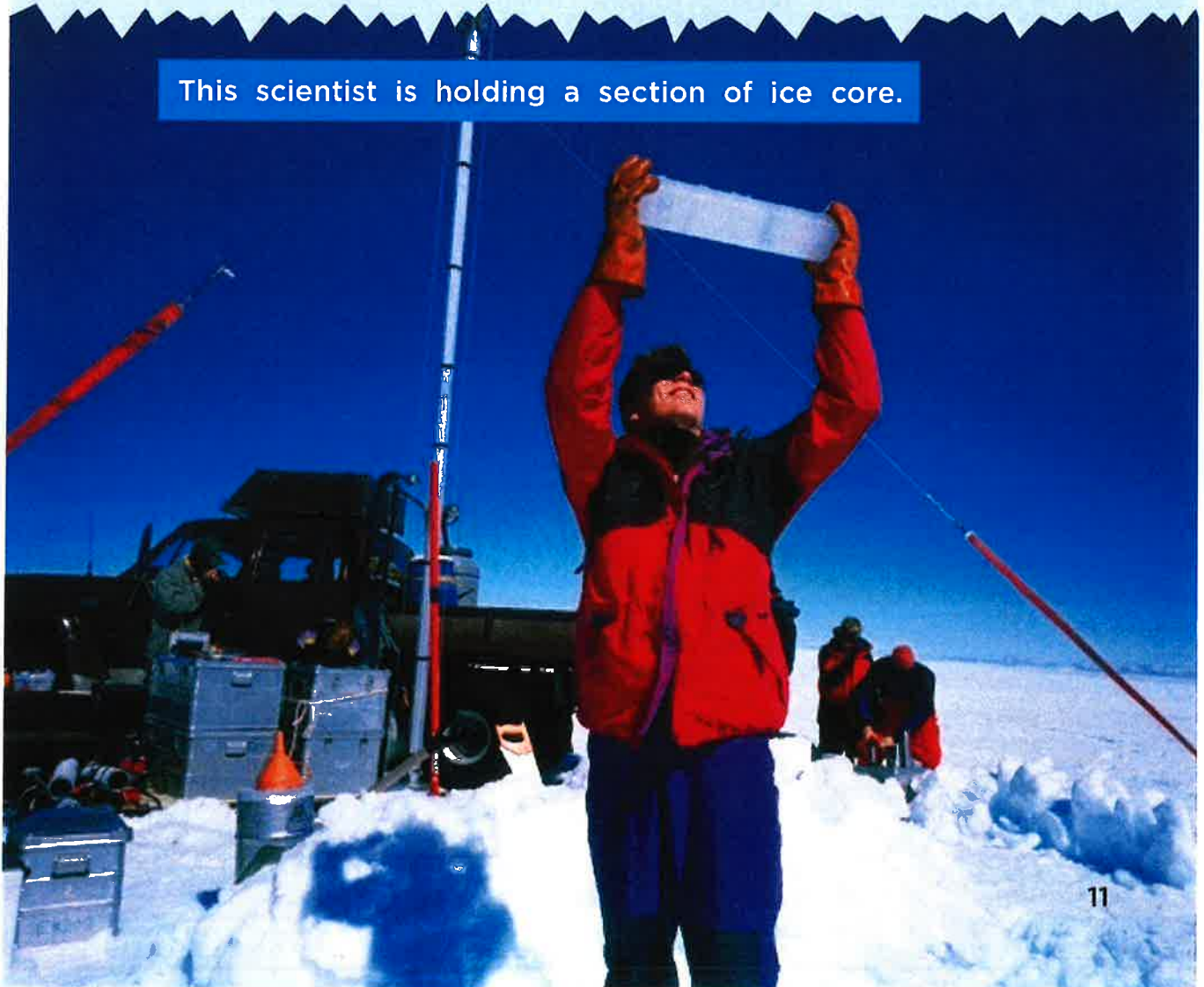
A typical section of ice is between 2 feet and 10 feet long. The total ice core could be 300 feet long. Polar regions have extremely thick ice. An ice core may be extracted from 2 miles down.

Ragnar Th Sigurdsson/Alamy Stock Photo

**Language  
Detective**

Older is a comparative adjective.  
What is the superlative form?

This scientist is holding a section of ice core.





Scientists analyze the sections of ice core at a laboratory. They use powerful microscopes to magnify the tiny particles in the ice. If scientists find ash or gases in the ice core, it might mean that a volcano erupted when the ice layer formed. If they find salt, it might show that there were strong winds blowing over the ocean when the ice formed.

**In Other Words** it is possible. En español, *it might* quiere decir *es posible*.

When a strong light shines on the section of ice core, you can see the layers of ice.



Scientists can study oxygen in the air bubbles in the ice core to figure out the temperature when the ice formed.

Scientists also figure out the amount of “greenhouse gases,” such as carbon dioxide and methane, that are in the ice cores. These gases trap the sun’s heat inside the atmosphere.

Scientists use the amount of greenhouse gases to calculate the temperature of Earth in the past.

Karrm Agabi/Science Source

A scientist examines a section of ice core under a microscope.





The information in ice cores tells us how the climate changed in the past. This information helps scientists predict the climate in the future.

As a solid, liquid, or gas, water captures important information about our world. Ancient ice has a lot of information that can teach us about the past. We learn when we look closely at things.

**STOP AND CHECK**

What can scientists learn from ice cores?

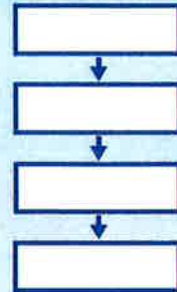
Gerald Kooyman/CORBIS

This glacier in Antarctica contains ice and snow that built up over many years.

# Respond to Reading

## Summarize

Use important details to summarize how scientists in *Secrets of the Ice* study the ice. Your graphic organizer may help you.



## Text Evidence

1. Turn to page 10. What features on this page help you identify the kind of text *Secrets of the Ice* is? **GENRE**
2. Look at the diagram on page 5. How does it explain how the water cycle works? **SEQUENCE**
3. What does the word *expands* mean on page 3? Use context clues and an antonym on the same page to figure out the meaning. **ANTONYMS**
4. Reread Chapter 3. Write about how scientists find information in the ice. What happens first, next, last? Include details from the text in your answer. **WRITE ABOUT READING**

### Compare Texts

Read about a girl who discovers that she can see things up close.

# SUPER-VISION

Mia sighed. She was bored.

Mia's mom said, "Cheer up!" She wiped an eyelash off Mia's cheek. "Blow this eyelash and make a wish."

Mia blew the eyelash. She made a wish. "Let me see something NEW today!"

She opened her eyes. Her brother Ben had spilled salt and sugar on the table. Mia stared at the gritty white crystals and frowned. Mia noticed that the longer she stared, the bigger the crystals became. The salt crystals had a cube shape, and the sugar crystals had a hexagonal shape.

Mia blinked, and the crystals looked tiny again. Mia stared at a different object, and it was magnified. When she blinked, the object looked normal.



Mia realized she had microscopic vision. It made ordinary things extraordinary. With her microscopic vision, Mia examined the hair follicles on her arm.

Mom told her, “Mia, take the trash out, please.”

When Mia went to the front yard, she saw enormous spiderwebs and leaves. Mia saw the world in a new way.

Mia lifted the lid of the trash can. She shrieked. There were rotten apples, banana peels, and moldy bread. All the leftover food looked horrible. Mia ran to the house.



Later, with microscopic vision, Mia saw ugly monsters marching toward Ben's foot! Mia gasped.



Mom asked, "Mia, what are you doing?"

Mia blinked. The monsters were ants.

Mia took an eyelash from Ben's cheek, closed her eyes, and blew it into the air. "I want my normal eyesight!" she wished.

Mia opened her eyes and stared at Ben. Nothing changed. Everything looked the same. She kissed Ben.

Mom said, "You are in a better mood now."

Mia said, "I can see things in a new way now!"

Illustration: Scott Pearson



## Make Connections

What does Mia discover about the world with her microscopic vision? **ESSENTIAL QUESTION**

How are the scientists in *Secrets of the Ice* similar to Mia in *Super-vision*? **TEXT TO TEXT**

---

# Glossary

**atmosphere** the layer of gases that surround Earth  
(page 4)

**compacted** pressed together to become harder  
and take up less space (page 9)

**condensation** the process of a gas cooling and  
becoming a liquid (page 4)

**evaporation** the process of water heating and  
becoming a gas (page 4)

**particles** tiny pieces (page 7)

**precipitation** rain, hail, sleet, or snow that falls to  
Earth (page 5)

**states** forms or conditions of being (page 2)

**water vapor** water that has become a gas (page 3)

---

# Index

Antarctica, 9, 10, 14

greenhouse gases, 13

Greenland, 9, 10

ice cores, 10–14

ice crystals, 6–8

snowflakes, 6–8

water cycle, 4, 5

water vapor, 2–7

# Focus on Science

**Purpose** To create a mini water cycle

## Procedure

Work with a partner. You will need a large bowl, plastic wrap, a glass that is shorter than the bowl, water, and some coins.

**Step 1**

Pour the water into the bowl until it is about a quarter full.

**Step 2**

Put the glass in the center of the bowl.

**Step 3**

Cover the bowl tightly with plastic wrap. Set the coins in the center of the plastic cover, above the glass.

**Step 4**

Put the bowl in a sunny spot for a few days. Observe and record what happens daily.

**Conclusion** What happened? Is the water level in the bowl the same? What changed with the glass? Why?



# Thinkmark

---

## The Topic

What is *Secrets of the Ice* mostly about?

---

## Text Structure

How does the author organize information in *Secrets of the Ice*?

What process does the author explain first?

How does that help you understand about what the scientists do?

---

## Vocabulary

What new words did you learn in the text?

What helped you understand what they meant?

---

## Author's Purpose

Why do you think the author wrote *Secrets of the Ice*?

---

## Conclusions

What is the most important thing you learned in *Secrets of the Ice*?

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4.5.4

# 4th Grade-ELD Learning Packet

## ANSWER KEY

### Week 7

Day	Lesson
1	<p><b>Vocabulary:</b></p> <ol style="list-style-type: none"><li>1. The blueberries my Mom bought this week are not the typical size. They are huge.</li><li>1. I mingle with my friends in the park after school.</li><li>2. This morning the weather was humid.</li><li>3. The squirrels cling to the tree branches in the backyard.</li><li>4. The peaches that my Mom bought this week have a gritty texture.</li><li>5. Oil does not dissolve in the water.</li></ol> <p><b>Vocabulary: Antonyms.</b></p> <ol style="list-style-type: none"><li>1. entire</li><li>2. specific</li><li>3. detailed</li><li>4. identical</li></ol> <p><b>r-Controlled Vowel Syllables/Frequently Misspelled Words.</b></p> <p>A. 1. der    2. tor    3. per    4. lar    5. er B. 1. d    2. e    3. b    4. a    5. c</p> <p><b>Genre/Text Feature:</b> Read the text "Scott Aldrich's Micro Art".</p> <ol style="list-style-type: none"><li>1. The text provides information.</li><li>2. A world as seen through a microscope. The photograph is important because the audience can see what the author sees.</li><li>3. The picture caption.</li><li>4. Aldrich reveals the world as seen through a microscope.</li></ol>
2	<p><b>Comprehension and Fluency:</b> Read the literary passage "At Your Fingerprints".</p> <p><b>A.</b></p> <ol style="list-style-type: none"><li>1. People sign with handprints first and then with fingerprints.</li><li>2. He found that the chance of two people having the same fingerprints is 1 in 64 billion.</li><li>3. Because of the timeline of the events.</li></ol> <p><b>B.</b> Open response</p> <p><b>Comprehension:</b> Read the passage "At Your Fingerprints" again .</p> <p><b>Sequence Graphic Organizer:</b> Open response</p>
3	<p><b>Differentiated Texts:</b></p> <ol style="list-style-type: none"><li>1. How rocky planets like Earth are formed.</li><li>2. the most faraway galaxies.</li><li>3. Possible responses: It will help scientists examine the history of our universe; the first galaxies; and stars forming inside dust clouds.</li></ol> <p><b>Write:</b></p> <ul style="list-style-type: none"><li>• The Spitzer and Hubble telescopes helped scientists discover how rocky planets like Earth are formed; faraway galaxies.</li><li>• The James Webb Space Telescope will help scientists examine the history of our universe, including the first galaxies and stars forming inside dust clouds.</li></ul> <p><b>Writing Traits: Voice.</b></p> <ol style="list-style-type: none"><li>1. this thing</li><li>2. a blackboard</li></ol>

	<p>3. will make it more specific, academic, and understandable for everyone who reads it.</p> <p>4. It's not a super cool thing</p> <p><b>Revised Draft:</b> Open response</p>
4	<p><b>Write to Sources:</b> Open responses</p> <p><b>Leveled Reader:</b> Read the book "Secrets of the Ice". Then, Summarize: Open response</p> <p>Test Evidence:</p> <ol style="list-style-type: none"> <li>1. Making connections with what scientists study. The photograph</li> <li>2. Visual sequence</li> <li>3. Occupies more space. If a bottle of water freezes, water expands and the bottle breaks. <b>Antonym</b> shrinks</li> <li>4. Open response</li> </ol>
5	<p><b>Leveled Reader:</b> Read the text "Super-Vision" - pages 16-19</p> <p><b>Focus on Science:</b> Open response</p> <p><b>Thinkmark:</b> Open response</p>