**Christina School District Assignment Board**

**Grade Level: 3rd**

**Week 3: of April 20, 2020**

| | Day 1 | Day 2 | Day 3 | Day 4 | Day 5 |
|---|---|---|---|---|---|
| **ELA** | Read *Looking For a Bear.* Write to tell how the character changed throughout the text. | Read *Looking For a Bear* again to increase fluency. Answer questions 1-5. | Read *Looking For a Bear* again to increase fluency. Answer questions 6-10. | Read the Word Study sheet. Use the words to write your own sentences. | Contractions are shortened words or phrases. The apostrophe shows where the letters have been left out of the words. Circle the contractions you find on the first two pages of *Looking For a Bear.* |
| **Math** | **Fractions of a Circle/Fraction Draw & Compare** *Please complete the attached activities titled Fractions of a Circle and Fraction Draw & Compare* |  **Geoboard Quilt Blocks** Here is an example of a quilt block with rotational symmetry. With the attached dot paper, can you create 3 quilt block patterns with rotational or line symmetry? What is the fraction of each piece? What happens to the pattern when you put more than one block | **Patchwork Fractions** *Please complete the attached activity page titled Patchwork Fractions.* | **Patchwork Fractions & Story Problems** *Please complete the attached activity page titled Patchwork Fractions & Story Problems* | **Unit 6 Review** *Please complete the attached Unit 6 Review pages.* |

**Christina School District Assignment Board**

| | | | | | |
|---|---|---|---|---|---|
| | | next to each other? If you have crayons or colored pencils what happens to the colors? What if you added more colors? | | | |
| **Science** | **Windstorms:**<br>Think and write your answers to the following:<br>a) Do you have strong winds where you live?<br>b) Have you ever experienced a natural hazard like a tornado, hurricane, or dust storm?<br>c) What kind of problems do you think strong winds cause? (Hint: Think about buildings, trees, power lines)<br>d) What kinds of ideas have engineers come up with to protect houses from strong winds?<br>e) What could you do to protect your house during a windstorm? | **Design a Wind-Proof House:**<br>Need: "Design…" paper, 2 blank papers, 4 paperclips, 6 toothpicks, 2 small pieces of tape<br>Do: Cut out paper house, ONLY cutting dashed lines. Fold on solid lines. ROOF: Put each "A" flap flat against roof and tape for roof shape. HOUSE: Overlap "B" flaps. Fold "C" flap over them for house shape. Do NOT tape.<br>WIND MAKER: Create a fan from 1 paper by folding a paper back and forth until fan is created. Put paper clip on end to hold and spread out fan. Put roof on top of house base. Wave Wind Maker at house. Can you blow it away?<br>Write answer to #1. Using only materials listed above, try to come up with way to keep house from blowing away. Answer #2. Try another design and answer #3. Then answer #4. | **Windstorms Reflections:**<br>Write your best answers to the following:<br>a) What do hurricanes, tornadoes, and dust storms have in common?<br>b) How are hurricanes, tornadoes, and dust storms different?<br>Reflect on your Wind-Proof House and write your answers to the following:<br>c) What problem were you trying to solve?<br>d) How did you test your designs to see whether they worked or not?<br>e) Engineers are always working to improve their designs. How could you improve your best design? What else would you try?<br><br>(SEE OPTIONAL EXTENSION, Day 4) | **A Dangerous Dust Storm:**<br>Read article. Try to read as much as you can on your own. Write your best answer to the following:<br>Based on the article, what should people do to stay safe during a dust storm? Support your answer with information from the article.<br>OPTIONAL EXTENSION:<br>**WHAT'S IN THE WIND:**<br>Need:<br>a few plastic lids<br>petroleum jelly<br>paper punch<br>yarn<br>windy day<br>-Punch a hole at one end of each lid.<br>-Thread each hole with a length of yarn and knot the ends of the yarn together to form a loop for hanging.<br>-Spread petroleum jelly over one side of each lid.<br>-Take the lids outdoors on a windy day and hang them in various areas.<br>-Leave them outside for about an hour or two to collect what may be blowing in the wind.<br>-Retrieve the lids and see what they have collected. | **The Tornado Drill:**<br>Read article. Try to read as much as you can on your own. Write your best answers to the following:<br><br>a) Compare and contrast what people do to stay safe during a dust storm with what people do to stay safe during a tornado.<br><br>b) Imagine that Jonas moved to a school where there were dust storm drills. What would he probably have to do during a dust storm drill? Support your answer with information from both texts. |
| **Social Studies** | Complete Activity 1 from the document titled, "How Do We Know About Long Ago?" | Complete Activity 2 from the document titled, "How Do We Know About Long Ago? | Complete Activity 3 from the document titled, "How Do We Know About Long Ago? | Complete Activity 4 from the document titled, "How Do We Know About Long Ago? | Complete Activity 5 from the document titled, "How Do We Know About Long Ago? |

# Looking for a Bear

by W.M. Akers

"I want to see the bears!"

"I don't care. I want to see the whales first."

"But bears are so much better."

"Yeah, if you're seven. I'm ten now. I like whales."

"So what? I want to see the bears."

"I don't care! Coming to the museum was my idea, and we're seeing the whales first."

"Bears!"

"Whales!"

"Bears!"

"Whales!"

"Mommmmm! Graham is being mean!" shouted Sarah. Everyone in the main lobby of the Museum of Natural History turned to look at her. Mom turned around with an embarrassed look on her face-the one that she called mortified.

"What did he do?" whispered Mom.

"He said that bears are for little kids, and that we have to see the whales first."

"We're going to see everything in the museum. We have all afternoon."

"But I want to start with the *bears*."

"Then you should have asked nicely instead of shouting. Graham, take us to the whales."

Sarah's heart sank. Graham didn't even have to say anything. The look he gave her was bad enough. He was smiling ear to ear like one of the chimpanzees in the Africa exhibit. She dragged her feet all the way to Ocean Life. She knew she shouldn't have shouted, but Graham made her so angry. And the simple fact was, they didn't have all afternoon. It was 3:00 PM now, and the museum closed at 5:15 PM. Sarah had seen the sign. She had read her mother's watch. She knew there was not much time left for bears.

Ever since they started learning about them the year before at school, Sarah had had bears on the brain. She had paid extra close attention during that unit and now knew all sorts of facts about bears. Grizzly bears were some of the biggest in the world, and they were her favorite.

"Did you know," she asked her mother, "that grizzly bears can get as big as 850 pounds?"

"I did, Sarah. You mentioned that several times in the car."

"Well, did you know they can run 35 miles an hour?"

"Yes, I did."

"That's speeding in some places!" said Sarah, but Mom didn't seem to care.

"Whales are way bigger than bears," said Graham. "That means they're better."

"Yeah, but whales live in the ocean."

"So what's wrong with the ocean?"

"It means they're wet all the time. And they smell like fish."

"You smell like fish!" Graham cracked up. Clearly, he thought he was very clever.

"How big are whales?" asked Sarah.

"What do you mean?"

"Grizzly bears weigh 850 pounds. How much do whales weigh?"

"Uh...I don't know. A whole lot."

Sarah scoffed. Graham didn't even know anything about whales. He just wanted to make sure she was unhappy. She had been looking forward to this trip for months. She read about the museum online, about all the dioramas that were built in the 1940s. They were a very old-fashioned kind of exhibit, but they looked beautiful in the pictures. It was as close as she could get to a real bear, and she had stayed up all the night before thinking about it. And now Graham was ruining the fun.

The Ocean Life exhibit was dark and quiet. Spooky sounds filtered down from the speakers which were supposed to make them feel like they were underwater. Sarah didn't feel underwater. She just felt grumpy.

"Oh look," she said. "A whale."

"That's a humpback whale," said Graham, doing his best to show off.

"No, it's not. It's a beluga whale. Read the sign."

The model of the beluga was one of the ugliest animals she had ever seen. It had a smooshed-up face and a sad grey color, and it looked like it definitely smelled like fish.

"Well I think it's so good that I'm going to stand here and appreciate it," said Graham. "For a while."

"Mom-can I please just go look at the bears by myself?" asked Sarah.

"No," said Mom. "You have to stay in this room."

As Graham pretended to be interested in the whale, Sarah watched the seconds tick by on her mother's watch. Finally, she couldn't take the beluga any longer. She stomped away, her arms swinging at her side, looking desperately for something in the Ocean Life exhibit that

wasn't ugly, boring, or stinky. And then, from across the room, she saw it.

It was a diorama of Alaskan seals swimming just below a sheet of ice. Above them, peering hungrily into the water was a polar bear, looking so real that Sarah flinched when she saw it. It had snow-white fur, a wet-looking, black nose, and claws as sharp as razor blades. As Sarah pressed her face up against the glass to look at it, she forgot about the whales behind her. The polar bear was the most beautiful thing she had ever seen.

**Name:** _____ **Date:** _____

**1.** What does Sarah want to see?

A. ocean life

B. whales

C. bears

D. African mammals

**2.** What is the main conflict in the story?

A. Sarah wants to see the bears, but Graham wants to see the whales.

B. Sarah wants to see the whales, but Graham wants to see the bears.

C. Sarah does not want to be at the Museum of Natural History.

D. Sarah has been at the Museum of Natural History for too long.

**3.** Read the following sentences about Sarah: "She read about the museum online, about all the dioramas that were built in the 1940s. They were a very oldfashioned kind of exhibit, but they looked beautiful in the pictures. It was as close as she could get to a real bear, and she had stayed up all the night before thinking about it."

What conclusion can be drawn about Sarah based on this evidence?

A. Sarah had never been to a museum before visiting the Museum of Natural History.

B. Sarah became interested in bears when she started preparing for her trip to the Museum of Natural History.

C. Sarah probably wants to work at a museum when she grows up.

D. Sarah's trip to the museum meant a lot to her.

**4.** Read the following sentences: "She stomped away, her arms swinging at her side, looking desperately for something in the Ocean Life exhibit that wasn't ugly, boring or stinky."

How is Sarah feeling at this point in the story?

A. sad

B. angry

C. tired

D. excited

**5.** What is this story mostly about?

A. Sarah's relationship with her brother

B. Sarah's knowledge about bears

C. Sarah's trip at the Museum of Natural History

D. dioramas at the Museum of Natural History

**6.** Read the following sentences:

"Grizzly bears weigh 850 pounds. How much do whales weigh?"

"Uh...I don't know. A whole lot."

Sarah **scoffed**. Graham didn't even know anything about whales.

As used in the passage, what does "**scoffed**" most nearly mean?

A. made fun of

B. knew a lot

C. shouted

D. mumbled

**7.** Choose the answer that best completes the sentence below.

_____ Sarah is dragged to the Ocean Life exhibit, she gets to see a bear.

A. As a result

B. Above all

C. Previously

D. Even though

**8.** Which exhibit does Sarah's family visit first?

_____

_____

_____

**9.** How do Sarah's feelings change when she sees the polar bear?

**10.** Explain whether Sarah has a good time at the Museum of Natural History. Use information from the passage to support your answer.

## Focus 24 Word Study Warm Up (1-2 minutes)

A prefix is a word part that is added to the beginning of a base word. The prefix changes the meaning of the base word, but it cannot stand alone. The prefix *re-* means "again"; the prefix *un-* can mean "not" or "opposite of."

| | | |
|---|---|---|
| unfold | rejoin | untie |
| reheat | unfair | unclear |
| reuse | rewrite | unsure |

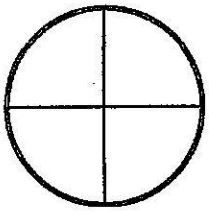
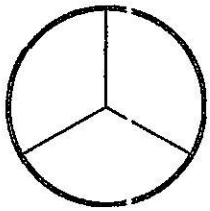
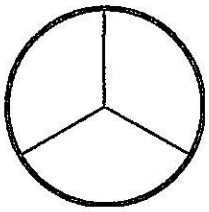
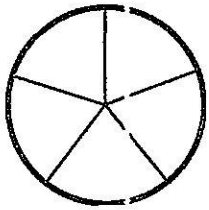
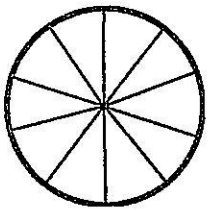
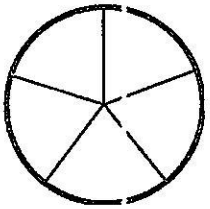
## Fluency sentences (1-2 minutes)

1. Unfold the map to find the route.
2. A plumber will rejoin the pipes.
3. Can you help me untie this knot?
4. I will reheat the leftover food.
5. Sometimes things are unfair.
6. The directions on the test were unclear.
7. Reuse that side of the paper.
8. Please rewrite your story.
9. I am unsure which bus to take.

NAME | DATE

# Fractions of a Circle

**1** Fill in the circle to show each fraction.

| | | | |
|---|---|---|---|
| ex $\frac{1}{4}$ |  | a $\frac{1}{3}$ |  |
| b $\frac{2}{3}$ |  | c $\frac{1}{5}$ |  |
| d $\frac{2}{10}$ |  | e $\frac{2}{5}$ |  |

**2** Look at the fractions you shaded in above. Use them to help complete each number sentence by writing <, >, or =.

| | | | | | |
|---|---|---|---|---|---|
| ex | $\frac{1}{3} > \frac{1}{5}$ | a | $\frac{2}{5}$ $\frac{2}{3}$ | b | $\frac{2}{3}$ $\frac{2}{10}$ |
| c | $\frac{2}{10}$ $\frac{1}{5}$ | d | $\frac{2}{5}$ $\frac{2}{10}$ | e | $\frac{1}{4}$ $\frac{2}{10}$ |

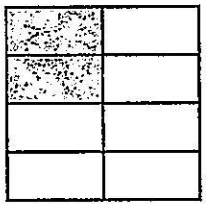
**CHALLENGE**

| | | | | | |
|---|---|---|---|---|---|
| f | $\frac{1}{18}$ $\frac{1}{9}$ | g | $\frac{2}{18}$ $\frac{1}{9}$ | h | $\frac{1}{9}$ $\frac{2}{20}$ |

NAME | DATE

# Fraction Draw & Compare

**1** Divide each square into the number of pieces you need to model the fraction. Then shade in the correct amount.

| | |
|---|---|
| **ex** $\frac{2}{8}$  | **a** $\frac{2}{4}$ |
| **b** $\frac{3}{4}$ | **c** $\frac{2}{3}$ |
| **d** $\frac{4}{8}$ | **e** $\frac{6}{8}$ |

**2** Look at the fraction you shaded in above. Use them to help complete each equation by writing <, >, or =.

| | | |
|---|---|---|
| **ex** $\frac{4}{8} > \frac{2}{8}$ | **a** $\frac{2}{4}$ $\frac{3}{4}$ | **b** $\frac{6}{8}$ $\frac{2}{8}$ |
| **c** $\frac{2}{4}$ $\frac{4}{8}$ | **d** $\frac{1}{4}$ $\frac{1}{8}$ | **e** $\frac{2}{4}$ $\frac{2}{8}$ |

**3** **CHALLENGE** Use what you know about fractions to complete each equation by writing <, >, or =.

| | | |
|---|---|---|
| **a** $\frac{1}{8}$ $\frac{1}{16}$ | **b** $\frac{3}{16}$ $\frac{5}{16}$ | **c** $\frac{2}{4}$ $\frac{8}{16}$ |

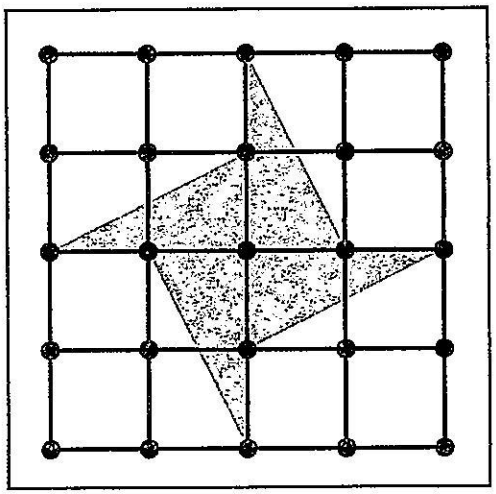
 

NAME | DATE

# Patchwork Fractions

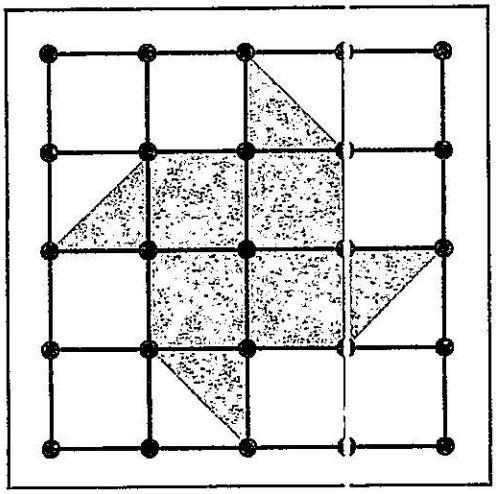
**1** Circle all the fractions that describe the shaded part of each geoboard patchwork quilt block, if the geoboard is 1 whole unit.

**a**



$\frac{2}{8}$ $\frac{1}{2}$ $\frac{1}{4}$ $\frac{4}{16}$

**b**



$\frac{1}{4}$ $\frac{6}{16}$ $\frac{1}{2}$ $\frac{3}{8}$

**2** Choose two fractions that you marked in part a above, and explain why they are equivalent.

**3** Fill in the bubble next to the equation that will help you solve each word problem. Then solve the problem. Show all your work.

**a** Rosa wants to buy a T-shirt for each of her 4 cousins. The T-shirts cost $12 each.

○ $4 + 12 = d$ ○ $4 \times 12 = d$ ○ $12 - 4 = d$ ○ $12 \div 4 = d$

Rosa will spend $ _____ on T-shirts for her cousins.

**b** Marco has some boxes of cookies. Each box has 6 cookies. There are 24 cookies in all. How many boxes of cookies does Marco have?

○ $6 + 24 = b$ ○ $6 \times 24 = b$ ○ $24 - 6 = b$ ○ $24 \div 6 = b$

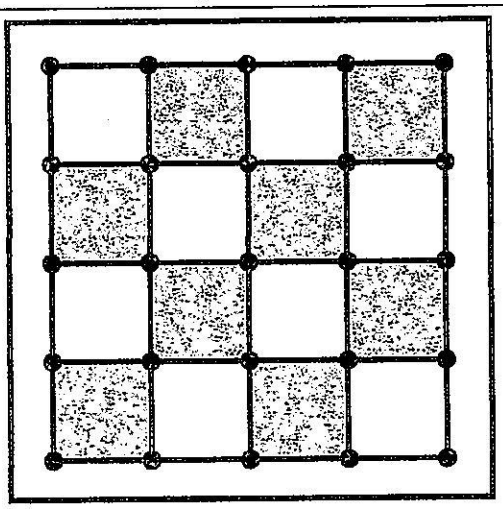
Marco has _____ boxes of cookies.

NAME | DATE

# Patchwork Fractions & Story Problems page 1 of 2

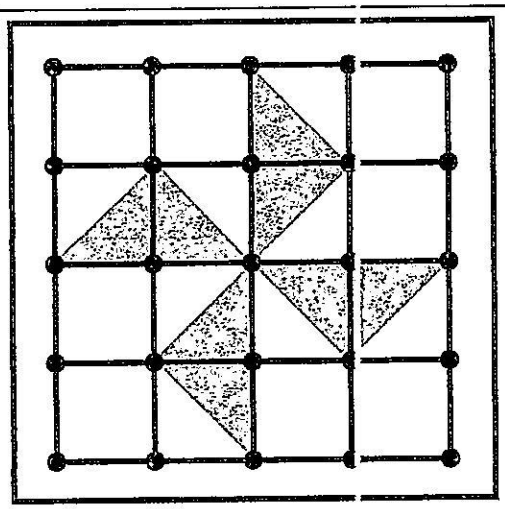
**1** Mark all the fractions that describe the shaded part of each geoboard patchwork quilt block, if the geoboard is 1 square unit.

**a**



$\frac{2}{8}$ $\frac{1}{2}$ $\frac{2}{4}$ $\frac{4}{8}$

**b**



$\frac{2}{8}$ $\frac{1}{2}$ $\frac{1}{4}$ $\frac{4}{16}$

**2** Choose two fractions that you marked in part a above, and explain why they are equivalent.

**3** Fill in the bubble next to the equation that will help you solve each word problem. Then solve the problem. Show all your work.

**a** Kara built a pen for her rabbit. It is 3 feet by 6 feet. What is the area of the pen?

○ $3 + 6 = a$ ○ $3 \times 6 = a$ ○ $6 - 3 = a$ ○ $6 \div 3 = a$

The rabbit's pen has an area of _____ square feet.

**b** Steve's dog buried 27 bones. That's 3 times as many bones as David's dog buried. How many bones did David's dog bury?

○ $3 + 27 = b$ ○ $3 \times 27 = b$ ○ $27 \div 3 = b$ ○ $27 - 3 = b$

David's dog buried _____ bones.

*(continued on next page)*

NAME | DATE

## Patchwork Fractions & Story Problems page 2 of 2

**4** Lee wanted to put a fence around his vegetable garden. His brother asked him to put a fence around his garden, too. Lee's garden was 5 feet wide and 10 feet long. His brother's garden was 6 feet wide and 7 feet long. How many feet of fencing will Lee need? Show all your work.

**5** **CHALLENGE** After Lee fenced in the two gardens, his neighbor gave him another 26 feet of fencing. Lee and his brother decided to make a rectangle-shaped garden for their little sister.

**a** Draw and label 4 different ways 26 feet of fencing could be used to outline a rectangle.

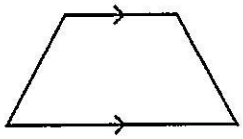
**b** Circle the rectangle that you think would make the best garden and explain why.

NAME | DATE

# Unit 6 Review page 1 of 2

A *quadrilateral* is a shape with 4 sides. Here are some different kinds of quadrilaterals.

Trapezoid: a quadrilateral with exactly 1 pair of parallel sides

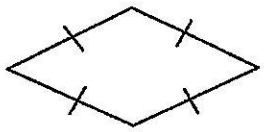


*Mathematicians use little arrows like these to show that two sides are parallel.*

Rectangle: a quadrilateral with 2 pairs of parallel sides and 4 right angles

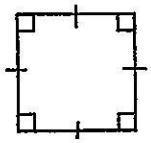
*Mathematicians mark right angles with little squares like these.*

Rhombus: a quadrilateral with 4 sides that are all the same length

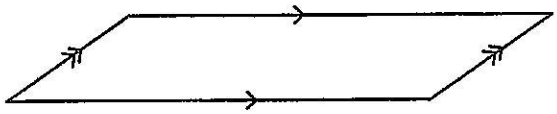


*When the sides of a shape are marked with little tic-marks like these, it tells you that the sides are equal.*

Square: a quadrilateral with 4 right angles and 4 sides that are all the same length



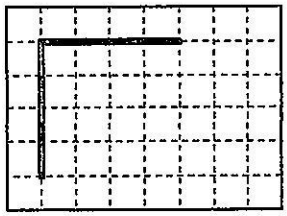
Parallelogram: a quadrilateral with 2 pairs of parallel sides



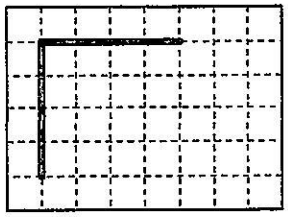
*When a shape has more than one pair of parallel sides, mathematicians use more arrow heads to show which pairs of sides are parallel.*

**1** Draw in the missing sides to complete each quadrilateral.

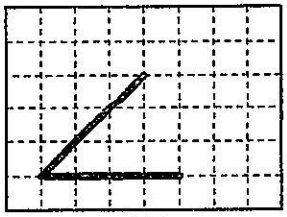
**a** square



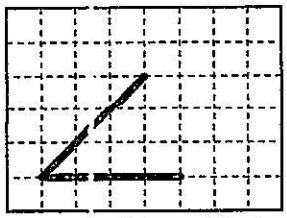
**b** trapezoid



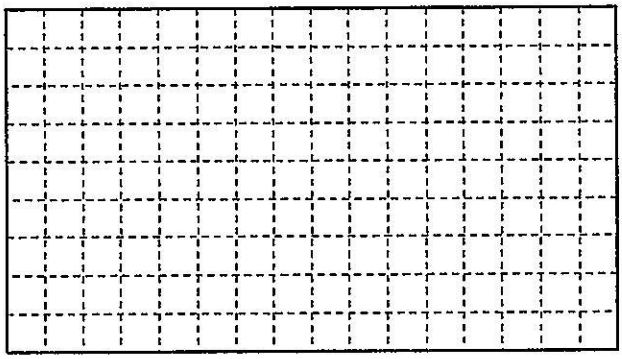
**c** parallelogram



**d** trapezoid



**2** Mayra says that squares and rectangles are parallelograms too, but rhombuses are not. Is she correct? Explain your answer. Use the grid if you want to.

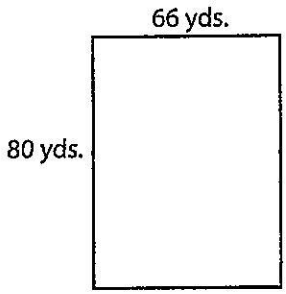


*(continued on next page)*

NAME | DATE

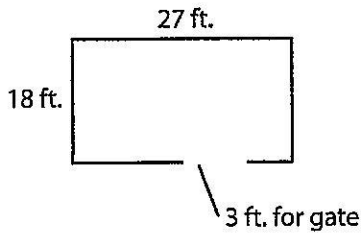
## Unit 6 Review page 2 of 2

**3 a** When Danny has lots of extra energy, his mom tells him to do laps around the block. His block is 66 yards wide and 80 yards long. How many yards are in one lap around Danny's block? Show all your work.




**b** **CHALLENGE** There are 1,760 yards in a mile. How many full laps would Danny have to run around the block to run a mile? Show all your work.

**4** Danny and his mom are building a fenced region for their dog in the backyard. The region measures 18 ft. by 27 ft. The gate they plan to put in is 3 feet wide. How many feet of fencing will they need? Show all your work.



**How Do We Know About Long Ago?**

| | |
|---|---|
| Benchmark Standard | History 3a: Students will understand that historical accounts are constructed by drawing logical inferences from artifacts and documents. |
| Grade Band | 2-3 |
| Vocabulary / Key Concepts | Artifact – an object made by a person.<br>Document – paper on which there is written or printed information |

***This lesson is a Part of the DRC unit "How Do We Know About Long Ago?"***
***Modified by CSD for use at home.***

**ACTIVITY 1: Use a separate sheet of paper to answer the following questions.**
Imagine you went to sleep one night and woke up the next morning and the walls in your house were a different color.

1. What do you think happened over night?
2. How do you know what happened if you were not there?
3. What can't you learn from the evidence?

A Google search indicted that the oldest known person lived to be 122 years old. Based on the timeline below, do you think people from 244 years ago are still alive?

| 244 years ago | approximately 50 years ago | approximately 30 years ago | 7-8 years ago |
|---|---|---|---|
| Our Country Was born | Grandparents were born | Parents were born | 2nd / 3rd graders were born |

Read the following story about the birth of our country.

***A Story About Long Ago***

*Over 200 years ago, long before anyone we know was born, our country – the United States of America – was created. We used to be part of another country called England, but the people in our country decided that they wanted to have their own country.*

*So, a group of Americans wrote their ideas down on a document that is called the Declaration of Independence (see the image below). The Declaration stated that we were now going to be free from England. And so, the United States of America was born.*


Declaration of Independence

*Later, a different group of Americans wrote another document called the Constitution. The Constitution describes rules for our country. It also lists rights that Americans have.*

*After reading the Constitution, one famous American named Benjamin Franklin looked up to the front of the room and saw a chair with a sun carved onto it. People were not sure if the sun carved into the chair was supposed to be a rising or a setting sun (see image below to the left).*

Rising Sun Chair

*Ben Franklin said that it had to be a rising sun because he believed that the new Constitution would make our country rise to greatness.*

What do you think?
Is it rising or setting?

**What do you think? (Use the same sheet of paper from above to answer the questions).**

1. Some students think that the only way to know what happened long ago is to have witnessed it.
2. Do you, or someone you know, believe this?
3. It is possible in many cases to know what happened long ago without witnessing it. You can do this by analyzing artifacts and documents.
4. After you woke up and noticed the walls were a different color (from ACTIVITY 1 scenario), would you…
    a. Look at the walls closely to determine if they were painted or colored?
    b. Look around for a paint can and/or a paint brush (or other utensils that may have been used to color the walls?
    c. Look around for clothes with paint on them
    d. If you found clothes, who did they belong to?
5. By asking these types of questions and other similar ones, this is how a historian analyzes artifacts and documents to determine what happened long ago.

6. So, how do you know what happened long ago?

**ACTIVITY 2: (Use the FRAYER MODEL for both artifact and document on page 4)**

- Complete the FRAYER MODEL for "artifact" and
- Complete the FRAYER MODEL for "document"

Is the Declaration of Independence an artifact or a document? Why?
Is the Rising Sun Chair an artifact or a document? Why?

**ACTIVITY 3: (You can use the same sheet of paper you used from ACTIVITY 1)**
Walk around your home and list examples and non-examples of artifacts and documents found in your home.

REMEMBER: One way we can learn about what happened long before any of us were even alive is by examining artifacts and documents. Artifacts and documents provide us with clues about what life was like long ago. *History* is the study of the past and the people who piece together the stories of the past for a living are called *historians*. But, students can work toward becoming historians while they are in school. Or, they can practice the skills used by historians to become better citizens.

**“Artifact” FRAYER MODEL**

| DEFINITION | KEY CHARACTERISTICS / FACTS & DETAILS ABOUT THE WORD |
|---|---|
| USE THE WORD IN A SENTENCE | DRAW A PICTURE |

Artifact

**“Document” FRAYER MODEL**

| DEFINITION | KEY CHARACTERISTICS / FACTS & DETAILS ABOUT THE WORD |
|---|---|
| USE THE WORD IN A SENTENCE | DRAW A PICTURE |

Document

TRASH CAN IMAGE




**ACTIVITY 4: Complete the table**

**Part 1**: Observe / Analyze the picture, "Trash Can Image." List artifacts and documents in the appropriate columns in the table below.

| ARTIFACTS | DOCUMENTS |
| --- | --- |
| | |

**ACTIVITY 4:**

**Part 2**: Now you are going to pretend that you are a historian. Historians study people and what their lives were like in the past. The trash is sitting outside of a house where someone or some people once lived. The person or people moved several days ago. Your task is to look at artifacts and documents in the "trash can" image and answer the questions on the "Trash Can History Graphic Organizer" (see below). Your answers must be based on the artifacts and documents that appear in the image.

**TRASH CAN HISTORY GRAPHIC ORGANIZER**

| QUESTION | ANSWER | HOW DO YOU KNOW? |
|---|---|---|
| **Who** lived in the house where the trash came from? | | |
| **What** are some things that the people in this house did? | | |
| **When** do you think the people moved? | | |
| **Where** do you think the people spent their free time? | | |
| **Why** might some people think that adults lived in this house? | | |

**ACTIVITY 5**:

DEBRIEF YOUR THOUGHTS:

1. Do you know the person or people who lived inside the house where the trashcan sits?
2. How you ever met the person(s) who lived inside the house?
3. Is it possible to know things about the people in the house without ever having seen or spoken with them? How?
4. How might historians know about what happened long ago if no one is still alive from that time period?
5. What could you not learn about the people based on what they left behind?

REMEMBER: Historians make inferences about artifacts and documents that people leave behind. The artifacts and documents provide clues about what happened long ago.

Your name: _____ Partner's name: _____

# Design a Windproof House

## 1. WHAT'S THE PROBLEM?

The problem with our house is _____

_____

(describe what you noticed when testing your house)

Why does it matter? Why is it important to fix it? _____

_____

## 2. CREATE AND TEST YOUR FIRST DESIGN.

**Design #1:** Draw your design.

What happened when you tested Design #1? _____

_____

_____

_____

_____

_____

Your name: _____ Partner's name: _____

## 3. CREATE AND TEST YOUR SECOND DESIGN.

**Design #2:** Draw your design.

What happened when you tested Design #2? _____

_____

_____

_____

_____

_____

## 4. WHICH DESIGN WORKED BETTER AND WHY?

Which one was easiest to build? Which one used the fewest materials? Which one do you think would last the longest?

Design #1 / Design #2 (choose one) worked best because _____

_____

_____

_____

_____

A DANGEROUS DUST STORM:

One day in 2011, in Phoenix, Arizona, a woman was getting in her car, which was parked in her driveway. Suddenly, her husband ran out of the house. He was waving his arms and yelling.

Without another word, the woman ran back in her house and shut the front door. The husband and wife stood at their front window. A few minutes later, the sky began to darken. And then, sand began to swirl around the house. Soon, sand and dust were everywhere, blowing all around the house. This lasted for almost an hour.

The woman and her husband were watching an especially violent type of dust storm. A dust storm is a kind of storm where wind picks up clouds of sand and dust from the desert and blows them into the air. Phoenix is built in the middle of the Sonoran Desert. It gets several dust storms every year. Most of the dust storms are very small, but some of them are very big. A large, thick dust storm hit Phoenix in 2011. It was more than a mile tall and 50 miles wide. Severe dust storms can last for up to three hours.

These dust storms happen in other areas too. Countries in the northern part of Africa can get very violent dust storms that last a long time. If this type of dust storm strikes near a farm, it can cover the farm with dust and sand. This means the farmer can no longer plant crops. Often the farm must be abandoned.

Dust storms can be very dangerous. When a dust storm hits, it makes it difficult to see. If you are outside during a dust storm, you may not be able to see more than a few inches in front of you. When a dust storm is approaching Phoenix, the local weather stations start broadcasting warnings for people to get off the street. People are told to park their cars, so they don't crash. Airplanes are not allowed to take off from or land at the Phoenix airport because the pilots cannot see well.

The dust in a dust storm can also make people sick. Some of the dust can carry pesticides and toxins. People go inside during a dust storm so that they do not inhale the dust. People with pets, like dogs and cats and horses, also bring their animals inside so that they do not get sick.

Weather forecasters are always trying to get better at predicting when a dust storm will happen. The sooner they know a dust storm is coming, the sooner they can warn people about it. The sooner people are warned about a dust storm, the more lives will be saved. This is because more people will be able to get to safety before the dust storm strikes.

Paul Fisher and his family have lived in Arizona for more than 20 years. He can remember seeing many intense dust storms during that time. One time, he was out walking his dog, Jimbo, shortly after he had moved to Phoenix. As he was walking, he looked out at the desert and saw what looked like a big, dark wall. He stared at it for a few minutes. Suddenly, he realized what he was looking at. He grabbed Jimbo and ran back to the house. He was just able to get inside before the storm hit.

"Once you're in a [violent dust storm], you never forget it," he said. "It's like a thunderstorm, but instead of rain, all you can see is sand."

THE TORNADO DRILL:

The alarm went off again.  Jonas knew what to do this time. They all had to go out in the hall, sit next to each other, and curl up into a ball. This was in case there was a tornado. Jonas hadn't understood how in the world going into the hall and curling up into a ball would help you if you got hit by a tornado. Then his teacher had told him that they went into the hall to be away from windows that might break during a tornado. Curling up was in case something fell on you. That's why they put their hands over their neck, to protect it in case something sharp fell.

Molly had just joined the class, and she sat next to Jonas. When the alarm went off, Molly hid under her desk. Jonas had to tell her to get out from under there and follow the class in the hall.

It turned out to be a drill, just like last time. After a few minutes, all the students went back into their classroom and sat back down at their desks. After school, Jonas teased Molly about hiding under her desk when the alarm went off. "Scaredy cat!" he said.  Molly laughed at him. "I wasn't scared," she replied. Molly explained. She had moved to Oklahoma from California last week. In school in California, when the alarm went off, it was an earthquake drill, not a tornado drill. During the earthquake drill, you were supposed to hide under your desk.

Kanisha overheard them. She told them she had just visited her cousins in Florida, and there they are more likely to face a hurricane instead of a tornado or an earthquake. One time the weather forecaster on the nightly news said that a hurricane had formed near Florida, and that the hurricane would probably impact the area. So school was closed completely the next day.

There are other storms that can be predicted at least a day before they hit, and schools might close if severe weather were likely to impact the areas near the schools. Jonas had cousins in Minnesota. They told him that they had three days in a row with no school because it wouldn't stop snowing. They had known about the snowstorm from a prediction by the weather forecaster the day before it started to snow.

"Any storm is scary, but I think earthquakes and tornadoes are the scariest," Molly said. "The weather forecaster can probably tell you if a hurricane or snowstorm will come. With earthquakes and tornadoes, you never know."

MYSTERY science
Stormy Skies | Mystery 4

# Paper House Model