

Fourth Grade Assignment Bundle

Name: _____ Class: _____

The Biggest Little Artist in the World

By LeeAnn Blankenship
2016

In this informational text, LeeAnn Blankenship discusses the success of Willard Wigan, a famous artist who creates sculptures that can only be seen using a microscope. As you read, take notes on why Willard creates tiny art.

- [1] Five-year-old Willard Wigan struggled to tell the difference between an *M* and a *W* or a 6 and a 9. Unfortunately, his schoolteacher knew nothing about dyslexia, a learning disability that can make letters and numbers confusing. She didn't try to help him.

Not surprisingly, Willard didn't like school. Usually, his mind drifted — to playing outside, to his dog Maxie, or to the ants that lived near his family's garden shed. Willard was especially curious about those ants. He felt like them — small and insignificant.¹



"The Four Seasons, as seen in the eyes of four needles" by Rex Features via AP Images is used with permission.

Building Ant Houses

Willard noticed that the ants were coming and going from a hole in the dirt. One ant was carrying a blade of grass, and Willard thought, *He's trying to build a house, so I am going to help him!*

Gathering splinters of wood and carefully splitting them with a shard of glass, Willard constructed a little building. Then he sprinkled sugar inside to encourage the ants to move in. When they did, Willard built more houses.

- [5] At school, Willard still struggled, but now he knew he could do something special. Maybe he wasn't a failure after all. If he had trouble with his reading or math, Willard later went home and created tiny furniture for the ant houses. Sometimes, he made ant coats and hats with fabric scraps. He even built an ant school, with teeny swings, ladders, seesaws, and a merry-go-round.

His artistic skill increased, and a love for little things began to grow in his heart.

Carving on Toothpicks

At age nine, Willard began carving faces on toothpicks.

1. **Insignificant** (*adjective*): unimportant

He discovered that his ability improved when he held his breath as he worked. When he showed his mother the carved faces, she said, “This is what you do well. You must strive² to be the best in the world.”

With her encouragement, Willard continued. When he quit school at age 15 to help support his family, Willard still spent his spare time³ carving. His confidence grew as more people appreciated his talent.

- [10] Eventually, he quit his factory job to pursue his dream of becoming one of the best artists in the world. Willard’s mother advised him, “The smaller you carve, the bigger your name will become.” So he began to carve even smaller.

The Tiniest Artwork

Now, years later, Willard carves the tiniest artwork in the world! His sculptures are so small that several can fit on a period at the end of a sentence.

Using a powerful microscope, Willard carves grains of sand, flecks of gold, bits of fiber, and even specks of dust.

To make his carving instruments, Willard drills a hole in the point of a needle and inserts a diamond shard for cutting. As he carves, he holds his work with a tiny hook. But static electricity⁴ sometimes causes a sculpture to flit away — lost forever.

Willard works best at night when there are few disturbances.⁵ He calms his body and, holding his breath, he carves between heartbeats when blood is not pulsing through his fingertips. He often works for months to complete a sculpture. Then he paints it with bits of acrylics.⁶ Willard’s favorite paintbrush is one hair from the back of a dead housefly!

- [15] For details like the ropes on a ship, he has found that cobwebs or strands of glue are perfect.

To move his sculptures, Willard uses an eyelash. But even that can be tricky. Once, while moving a microscopic⁷ Alice in Wonderland, his cell phone rang. Startled, Willard took in a quick breath. When he looked back, Alice was gone. After laboring⁸ for weeks to carve her, he’d accidentally inhaled her! Willard had to start all over again. Luckily, the second Alice was even better than the first.

Willard sculpts everything from famous people to fictional characters. His subjects range from dragons and polar bears to the Statue of Liberty.

Because of their beauty and rarity,⁹ his sculptures have made Willard a wealthy man. But he says, “Success isn’t about material things like an expensive watch or a costly ring; it’s about persevering¹⁰ and achieving your dreams.”

-
2. **Strive (verb):** to make great efforts to achieve something
 3. time when one is not working
 4. when the build-up of electrical charges is moved to another object
 5. **Disturbance (noun):** an interruption of peace
 6. a type of paint
 7. so small that it can only be visible with a microscope
 8. **Labor (noun):** work
 9. **Rare (adjective):** uncommon and therefore valuable

Willard Wigan, microsculptor, has done just that. The man who felt small as a boy has shown the world that something small can really be BIG.

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Text-Dependent Questions

Directions: For the following questions, choose the best answer or respond in complete sentences.

1. PART A: Which sentence describes the central idea of the text?
 - A. Small art requires more talent and creativity than big art.
 - B. Willard found something that he loved and worked hard to succeed at it.
 - C. Art is an important way for kids to express themselves.
 - D. Willard was supported by his teachers and family to pursue art.

2. PART B: Which detail from the text best supports the answer to Part A?
 - A. "Willard was especially curious about those ants. He felt like them — small and insignificant." (Paragraph 2)
 - B. "If he had trouble with his reading or math, Willard later went home and created tiny furniture for the ant houses." (Paragraph 5)
 - C. "Eventually, he quit his factory job to pursue his dream of becoming one of the best artists in the world." (Paragraph 9)
 - D. "He calms his body and, holding his breath, he carves between heartbeats when blood is not pulsing through his fingertips." (Paragraph 13)

3. How does the author organize the information in "The Biggest Little Artist in the World"?
 - A. The author discusses Willard's struggles early on in life, and then how he became a successful artist.
 - B. The author explains what Willard's art looks like, and then discusses its significance to Willard.
 - C. The author provides a step-by-step guide for how Willard creates each one of his tiny sculptures.
 - D. The author describes how Willard was treated before he was a famous artist and compares it to how he is treated now.

4. What is the relationship between Willard's troubles in school and his interest in art?

Discussion Questions

Directions: Brainstorm your answers to the following questions in the space provided. Be prepared to share your original ideas in a class discussion.

1. Willard creates some of the tiniest art in the world. How do you think he was able to achieve this? What do you think is necessary to become the best at what you love?
2. It was Willard's dream to create tiny art. What is your dream? What would you have to do in order to achieve your dream?
3. Willard pursued tiny art because it made him happy. What about tiny art made him happy? What's a hobby that brings you joy and why?

Name: _____ Class: _____

I Practiced

By JonArno Lawson
2008

JonArno Lawson is a writer of books for both children and adults. In this poem, a speaker describes the process of practicing to get better at a skill. As you read, take notes on how the speaker feels about practicing.

[1] I practiced in the shower.
I practiced in the car.
I practiced in a downtown
karaoke¹ sushi bar.

[5] I practiced in the basement.
I practiced in my head.
I practiced on my bicycle.
I practiced in my bed.

But the fact is,
[10] though I act as
if I practice
all the time,
it still seems
I'm either
[15] stuck before
or getting past
my prime.²

I practiced in the darkness.
I practiced while I read.
[20] I practiced full of confidence,
I practiced full of dread.³
I practiced for the living,
I practiced for the dead —

maybe I practiced
[25] when I should have just been doing it
instead?



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"I Practiced" from Black Stars in a White Night Sky by JonArno Lawson. Copyright © 2008 by JonArno Lawson. Published by WordSong, an imprint of Boyds Mills Press. Used by permission.

1. a form of entertainment where people perform and sing the words to popular songs
2. The phrase 'past my prime' means to be too old to do all the things you used to do.
3. **Dread (noun):** great fear

Text-Dependent Questions

Directions: For the following questions, choose the best answer or respond in complete sentences.

1. PART A: Which sentence describes the theme of the poem?
 - A. Sometimes taking a lot of time to practice prevents you from discovering and trying something new.
 - B. With enough practice, anyone can master anything.
 - C. It's good to take breaks from practicing, even when you're learning a new skill.
 - D. People are inspired to try something new because they fear failure.

2. PART B: Which detail from the text best supports the answer to Part A?
 - A. "I practiced in a downtown / karaoke sushi bar." (Lines 3-4)
 - B. "though I act as / if I practice / all the time," (Lines 10-12)
 - C. "I practiced full of confidence, / I practiced full of dread." (Lines 21-22)
 - D. "maybe I practiced / when I should have just been doing it" (Lines 25-26)

3. What does stanza 3 reveal about the speaker (Lines 9-17)?
 - A. The speaker doesn't think they are improving.
 - B. The speaker is thinking about giving up on practicing.
 - C. The speaker is afraid to take the next step.
 - D. The speaker only pretends to practice.

4. Why does the poet repeat the word "practice" over and over again?

Discussion Questions

Directions: Brainstorm your answers to the following questions in the space provided. Be prepared to share your original ideas in a class discussion.

1. Think of an activity or skill that you have practiced a lot. Why do you practice it? Do you think becoming perfect at a skill should be the goal of practice? Why or why not?
2. Do you think practicing a lot makes you successful? Why doesn't the speaker succeed at the skill even though they practice all the time?
3. In the poem, the speaker describes practicing a new skill, but not doing it. How do you think fear could stop someone from trying a new skill or activity?

Selecting Books for Your Child: Finding 'Just Right' Books

By: Kathleen Rogers

How can parents help their children find books that are not "too hard" and not "too easy" but instead are "just right"? Here's some advice.

Five finger rule

1. Choose a book that you think you will enjoy.
2. Read the second page.
3. Hold up a finger for each word you are not sure of, or do not know.
4. If there are five or more words you did not know, you should choose an easier book.
5. Still think it may not be too difficult? Use the five finger rule on two more pages.

Choose a book that is a good fit for you!

Read two or three pages and ask yourself these questions:

Will it be an easy, fun book to read?

- Do I understand what I am reading?
- Do I know almost every word?
- When I read it aloud, can I read it smoothly?
- Do I think the topic will interest me?

If most of your answers were "yes", this will be an easy book to read independently by yourself.

Will this book be too hard for me?

- Are there five or more words on a page that I don't know, or am unsure of?
- Is this book confusing and hard to understand by myself?
- When I read it aloud, does it sound choppy and slow?

If most of your answers were "yes," this book is too hard. You should wait awhile before you read this book. Give the book another try later, or ask an adult to read the book to you.

Tips on reading with your child

- When they can't read the word, say...
- Can you sound it out?
- Fingertap it.
- Can you think of the word or movement that helps you remember that vowel sound?
- What is the first and last sound? What word would make sense?
- Does it have a pattern that you have seen in other words? (ex-an, ack)
- How does the word begin?
- You said_____. Does that make sense?
- What word would make sense that would start with these sounds?
- Put your finger under the word as you say it.

When they want to read a book that is too hard, say...

- Let's read it together.
- This is a book you will enjoy more if you save it until you are older — or later in the year.
- [Be honest!] When people read books that are too hard for them, they often skip important parts. You will have more fun with this book if you wait until you can read it easily.

HERE'S THE IMPACT OF READING 20 MINUTES PER DAY!

A student who reads

20:00

minutes per day

will be exposed to
1.8 MILLION
words per year
and scores in
90th PERCENTILE
on standardized tests

A student who reads

5:00

minutes per day

will be exposed to
282,000
words per year
and scores in
50th PERCENTILE
on standardized tests

A student who reads

1:00

minute per day

will be exposed to
8,000
words per year
and scores in
10th PERCENTILE
on standardized tests

Source: Nagy, Anderson and Herman, 1987

Home Reading Log

Student Information

Student Name		Grade Level	
School Name		Teacher	

Log

[illegible]

A

Correct _____

Multiply.

1	$3 \times 2 =$		23	$7 \times 5 =$	
2	$30 \times 2 =$		24	$700 \times 5 =$	
3	$300 \times 2 =$		25	$8 \times 3 =$	
4	$3000 \times 2 =$		26	$80 \times 3 =$	
5	$2 \times 3000 =$		27	$9 \times 4 =$	
6	$2 \times 4 =$		28	$9000 \times 4 =$	
7	$2 \times 40 =$		29	$7 \times 6 =$	
8	$2 \times 400 =$		30	$7 \times 600 =$	
9	$2 \times 4000 =$		31	$8 \times 9 =$	
10	$3 \times 3 =$		32	$8 \times 90 =$	
11	$30 \times 3 =$		33	$6 \times 9 =$	
12	$300 \times 3 =$		34	$6 \times 9000 =$	
13	$3000 \times 3 =$		35	$900 \times 9 =$	
14	$4000 \times 3 =$		36	$8000 \times 8 =$	
15	$400 \times 3 =$		37	$7 \times 70 =$	
16	$40 \times 3 =$		38	$6 \times 600 =$	
17	$5 \times 3 =$		39	$800 \times 7 =$	
18	$500 \times 3 =$		40	$7 \times 9000 =$	
19	$7 \times 2 =$		41	$200 \times 5 =$	
20	$70 \times 2 =$		42	$5 \times 60 =$	
21	$4 \times 4 =$		43	$4000 \times 5 =$	
22	$4000 \times 4 =$		44	$800 \times 5 =$	

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B Improvement _____ # Correct _____

Multiply.

1	$4 \times 2 =$		23	$9 \times 5 =$	
2	$40 \times 2 =$		24	$900 \times 5 =$	
3	$400 \times 2 =$		25	$8 \times 4 =$	
4	$4000 \times 2 =$		26	$80 \times 4 =$	
5	$2 \times 4000 =$		27	$9 \times 3 =$	
6	$3 \times 3 =$		28	$9000 \times 3 =$	
7	$3 \times 30 =$		29	$6 \times 7 =$	
8	$3 \times 300 =$		30	$6 \times 700 =$	
9	$3 \times 3000 =$		31	$8 \times 7 =$	
10	$2 \times 3 =$		32	$8 \times 70 =$	
11	$20 \times 3 =$		33	$9 \times 6 =$	
12	$200 \times 3 =$		34	$9 \times 6000 =$	
13	$2000 \times 3 =$		35	$800 \times 8 =$	
14	$3000 \times 4 =$		36	$9000 \times 9 =$	
15	$300 \times 4 =$		37	$7 \times 700 =$	
16	$30 \times 4 =$		38	$6 \times 60 =$	
17	$3 \times 5 =$		39	$700 \times 8 =$	
18	$30 \times 5 =$		40	$9 \times 7000 =$	
19	$6 \times 2 =$		41	$20 \times 5 =$	
20	$60 \times 2 =$		42	$5 \times 600 =$	
21	$4 \times 4 =$		43	$400 \times 5 =$	
22	$400 \times 4 =$		44	$8000 \times 5 =$	

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A

Correct _____

Multiply.

1	$1 \times 4 =$		23	$21 \times 3 =$	
2	$10 \times 4 =$		24	$121 \times 3 =$	
3	$11 \times 4 =$		25	$42 \times 2 =$	
4	$1 \times 2 =$		26	$142 \times 2 =$	
5	$20 \times 2 =$		27	$242 \times 2 =$	
6	$21 \times 2 =$		28	$342 \times 2 =$	
7	$2 \times 3 =$		29	$442 \times 2 =$	
8	$30 \times 3 =$		30	$3 \times 3 =$	
9	$32 \times 3 =$		31	$13 \times 3 =$	
10	$3 \times 5 =$		32	$213 \times 3 =$	
11	$20 \times 5 =$		33	$1213 \times 3 =$	
12	$23 \times 5 =$		34	$2113 \times 3 =$	
13	$3 \times 3 =$		35	$2131 \times 3 =$	
14	$40 \times 3 =$		36	$2311 \times 3 =$	
15	$43 \times 3 =$		37	$24 \times 4 =$	
16	$4 \times 2 =$		38	$35 \times 5 =$	
17	$70 \times 2 =$		39	$54 \times 3 =$	
18	$74 \times 2 =$		40	$63 \times 6 =$	
19	$2 \times 3 =$		41	$125 \times 4 =$	
20	$60 \times 3 =$		42	$214 \times 3 =$	
21	$62 \times 3 =$		43	$5213 \times 2 =$	
22	$63 \times 3 =$		44	$2135 \times 4 =$	

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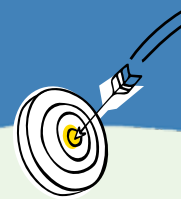
B Improvement _____ # Correct _____

Multiply.

1	$1 \times 6 =$		23	$21 \times 4 =$	
2	$10 \times 6 =$		24	$121 \times 4 =$	
3	$11 \times 6 =$		25	$24 \times 2 =$	
4	$1 \times 2 =$		26	$124 \times 2 =$	
5	$30 \times 2 =$		27	$224 \times 2 =$	
6	$31 \times 2 =$		28	$324 \times 2 =$	
7	$3 \times 3 =$		29	$424 \times 2 =$	
8	$20 \times 3 =$		30	$3 \times 2 =$	
9	$23 \times 3 =$		31	$13 \times 2 =$	
10	$5 \times 5 =$		32	$213 \times 2 =$	
11	$20 \times 5 =$		33	$1213 \times 2 =$	
12	$25 \times 5 =$		34	$2113 \times 2 =$	
13	$4 \times 4 =$		35	$2131 \times 2 =$	
14	$30 \times 4 =$		36	$2311 \times 2 =$	
15	$34 \times 4 =$		37	$23 \times 4 =$	
16	$4 \times 2 =$		38	$53 \times 5 =$	
17	$90 \times 2 =$		39	$45 \times 3 =$	
18	$94 \times 2 =$		40	$36 \times 6 =$	
19	$2 \times 3 =$		41	$215 \times 3 =$	
20	$40 \times 3 =$		42	$125 \times 4 =$	
21	$42 \times 3 =$		43	$5312 \times 2 =$	
22	$43 \times 3 =$		44	$1235 \times 4 =$	

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Explore Dividing Three-Digit Numbers



You have learned about division as equal sharing and about the relationship between multiplication and division. Use what you know to try to solve the problem below.

What is $78 \div 3$?

TRY IT

Learning Target

- Find whole-number quotients and remainders with up to four-digit dividends and one-digit divisors, using strategies based on place value, the properties of operations, and/or the relationship between multiplication and division. Illustrate and explain the calculation by using equations, rectangular arrays, and/or area models.

SMP 1, 2, 3, 4, 5, 6, 7, 8



Math Toolkit

- base-ten blocks
- counters
- bowls
- paper plates
- grid paper
- multiplication models



DISCUSS IT

Ask your partner: How did you get started?

Tell your partner: At first, I thought...

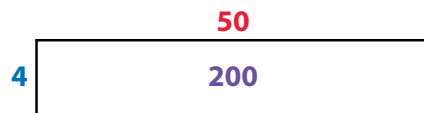
CONNECT IT

1 LOOK BACK

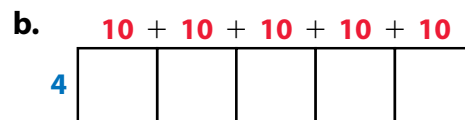
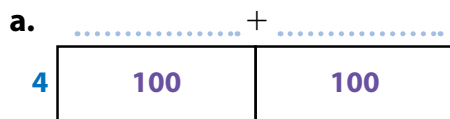
Explain how you found the quotient of $78 \div 3$.

2 LOOK AHEAD

You can solve division problems in many ways. You can use place value, rectangular arrays, area models, equations, and the relationship between multiplication and division. The area model below shows $200 \div 4$.



An area model shows both multiplication ($4 \times 50 = 200$) and division ($200 \div 4 = 50$). You can also use area models to break apart a problem into smaller parts. Fill in the missing labels on two other area models for $200 \div 4$.



3 a. Sometimes there is a remainder left over when you divide.

Fill in the remainder for $21 \div 4$ in the box at the right.

$$\begin{array}{r} 5 \text{ R } \boxed{} \\ 4 \overline{)21} \end{array}$$

b. The **dividend** is $\dots\dots\dots$, the number you are dividing.

c. The **divisor** is $\dots\dots\dots$, the number you are dividing by.

d. The quotient is $\dots\dots\dots$, the result of the division problem.

4 REFLECT

Explain how an area model shows both multiplication and division.

.....

.....

.....

Prepare for Dividing Three-Digit Numbers

- 1 Think about what you know about division. Fill in each box. Use words, numbers, and pictures. Show as many ideas as you can.

Word	In My Own Words	Example
division		
dividend		
divisor		
quotient		
remainder		

- 2 Use the term *equal groups* to describe the division problem shown below.

$$123 \div 5 = 24 \text{ R } 3$$

- 3 Solve the problem. Show your work.

What is $68 \div 4$?

Solution

- 4 Check your answer. Show your work.

Develop Dividing with Arrays and Area Models



Read and try to solve the problem below.

What is $136 \div 4$?

TRY IT



Math Toolkit

- base-ten blocks 
- counters
- bowls
- paper plates
- grid paper
- multiplication models 



DISCUSS IT

Ask your partner: Why did you choose that strategy?

Tell your partner: I do not understand how ...

A

Correct _____

Add.

1	$20 \div 2 =$		23	$68 \div 2 =$	
2	$4 \div 2 =$		24	$96 \div 3 =$	
3	$24 \div 2 =$		25	$86 \div 2 =$	
4	$30 \div 3 =$		26	$93 \div 3 =$	
5	$6 \div 3 =$		27	$88 \div 4 =$	
6	$36 \div 3 =$		28	$99 \div 3 =$	
7	$40 \div 4 =$		29	$66 \div 3 =$	
8	$8 \div 4 =$		30	$66 \div 2 =$	
9	$48 \div 4 =$		31	$40 \div 4 =$	
10	$2 \div 2 =$		32	$80 \div 4 =$	
11	$40 \div 2 =$		33	$60 \div 4 =$	
12	$42 \div 2 =$		34	$68 \div 4 =$	
13	$3 \div 3 =$		35	$20 \div 2 =$	
14	$60 \div 3 =$		36	$40 \div 2 =$	
15	$63 \div 3 =$		37	$30 \div 2 =$	
16	$4 \div 4 =$		38	$36 \div 2 =$	
17	$80 \div 4 =$		39	$30 \div 3 =$	
18	$84 \div 4 =$		40	$39 \div 3 =$	
19	$40 \div 5 =$		41	$45 \div 3 =$	
20	$50 \div 5 =$		42	$60 \div 3 =$	
21	$60 \div 5 =$		43	$57 \div 3 =$	
22	$70 \div 5 =$		44	$51 \div 3 =$	

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B

Improvement _____ # Correct _____

Add.

1	$30 \div 3 =$		23	$86 \div 2 =$	
2	$9 \div 3 =$		24	$69 \div 3 =$	
3	$39 \div 3 =$		25	$68 \div 2 =$	
4	$20 \div 2 =$		26	$96 \div 3 =$	
5	$6 \div 2 =$		27	$66 \div 3 =$	
6	$26 \div 2 =$		28	$99 \div 3 =$	
7	$80 \div 4 =$		29	$88 \div 4 =$	
8	$4 \div 4 =$		30	$88 \div 2 =$	
9	$84 \div 4 =$		31	$40 \div 4 =$	
10	$2 \div 2 =$		32	$80 \div 4 =$	
11	$60 \div 2 =$		33	$60 \div 4 =$	
12	$62 \div 2 =$		34	$64 \div 4 =$	
13	$3 \div 3 =$		35	$20 \div 2 =$	
14	$90 \div 3 =$		36	$40 \div 2 =$	
15	$93 \div 3 =$		37	$30 \div 2 =$	
16	$8 \div 4 =$		38	$38 \div 2 =$	
17	$40 \div 4 =$		39	$30 \div 3 =$	
18	$48 \div 4 =$		40	$36 \div 3 =$	
19	$50 \div 5 =$		41	$42 \div 3 =$	
20	$60 \div 5 =$		42	$60 \div 3 =$	
21	$70 \div 5 =$		43	$54 \div 3 =$	
22	$80 \div 5 =$		44	$48 \div 3 =$	

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4.NBT Mental Division Strategy

Task

Jillian says

I know that 20 times 7 is 140 and if I take away 2 sevens that leaves 126. So $126 \div 7 = 18$.

- Is Jillian's calculation correct? Explain.
- Draw a picture showing Jillian's reasoning.
- Use Jillian's method to find $222 \div 6$.



4.NBT Mental Division Strategy
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Check Understanding

What is the quotient?

$3,265 \div 4 = \underline{\hspace{2cm}}$

Dividing by One-Digit Numbers

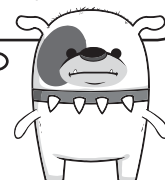
What You Need

- 6 game markers in one color
- 6 game markers in a different color
- Recording Sheet and Game Board

What You Do

1. Take turns. Pick a problem on the **Recording Sheet**.
2. Divide. Write the quotient including the remainder.
3. Your partner uses multiplication to check the answer.
4. If your answer is correct, cover the remainder on the **Game Board** with your game marker. If it is incorrect, your turn ends.
5. Continue until all problems have been solved. The player with the greater number of game markers on the **Game Board** wins.

The remainder must be less than the divisor. If it's not, I divide again.



Go Further!

On a separate sheet of paper, rewrite the dividend of the problem $342 \div 5$ so there is a remainder of 5. Use multiplication and addition to check your answer. Exchange papers with your partner to check.



Center Activity 4.25 ★★ Recording Sheet and Game Board

Partner A _____

Partner B _____

Dividing by One-Digit Numbers

$342 \div 5 =$ _____	$2,176 \div 6 =$ _____	$388 \div 3 =$ _____
$4,632 \div 9 =$ _____	$735 \div 8 =$ _____	$5,178 \div 7 =$ _____
$638 \div 2 =$ _____	$4,519 \div 4 =$ _____	$242 \div 9 =$ _____

3	6	0
7	2	1
5	8	4



**Experiential Learning – Science
Grade 4 Student Materials**

Assignment #1

- A. Think about a time when you experienced or heard about dangerous weather. What happened? What did you do and see? How did it surprise you? Tell someone at home.
- B. **Look at the following 3 sets of pictures.** You can cut them out so that you can look at them side by side.)
What do you notice and what do you wonder?

NOTICE	WONDER



The New Orleans Central Business District – before and after



A road in the Ninth Ward of New Orleans – before and after



Canal Street in the French Quarter of New Orleans – before and after

C. Photo Analysis – Conclusion

What do you think happened to cause the changes that you observed in the after picture?

D. Hurricane Katrina Facts

Hurricane Katrina was the eleventh tropical storm, fifth hurricane, and the second Category 5 hurricane of the 2005 Atlantic hurricane season. The storm formed over the Bahamas on August 23, where it moved east and hit Florida as a Category 1 hurricane two days later. Katrina then crossed over Florida and strengthened into a Category 5 hurricane in the Gulf of Mexico. The storm then hit Louisiana and Mississippi on the morning of August 29. The leftovers of Katrina then died out over the Great Lakes on August 31.

The damage Katrina brought was so bad that 80% of New Orleans was flooded when the levees to the city broke. Most of the people killed by Katrina were thought to have died from drowning. Because of Katrina's effect on the US, the hurricane was known to be one of the deadliest hurricanes in US history.

(levees - an embankment built to prevent the overflow of a river.

https://kids.kiddle.co/Hurricane_Katrina

Questions:

Compare your ideas about the after photos to the real-life event that caused those changes.

Were your ideas similar or different?

What information would you have needed to draw the same conclusion?

Assignment #2

Local Weather

- A. **Personal Description:** How does it feel? Is it cloudy, sunny? Is it windy? Is there precipitation?
- B. **Description from phone or computer:** What words are used to describe the weather. Underline any unfamiliar words or terms. Were they similar or different than yours?
- C. **Weather Conditions Over Time**
Examine the two charts below and answer the questions that follow.

January 26 – February 8, 2020

2 weeks of weather data for Memphis, TN



2 weeks of weather data for Rapid City, SD

Feb 2020 ▾						
SUN	MON	TUE	WED	THU	FRI	SAT
26 48° 29°	27 37° 23°	28 46° 29°	29 45° 31°	30 39° 31°	31 48° 24°	1 67° 40°
2 55° 24°	3 25° 19°	4 27° 13°	5 34° 11°	6 36° 25°	7 30° 19°	8 41° 17°

Weather Data Analysis

Questions:

What patterns did you notice in the weather for Memphis, TN and Rapid City, SD?

How would you dress if you lived in these cities during this time and why – use the weather data?

What do you think the symbols mean? What does the number under the symbol represent? What about the smaller number under the larger number? Why are the numbers and symbols important?

Assignment #3

- What type of outdoor activities do you like to do? Tell someone or write it down in your notebook. Can you do them throughout the year? Why or Why not?
- Consider the pictures below. Describe what each picture represents using your own words by writing down your descriptions in your notebook or below each picture, or

describing them to someone in your family. If you'd like, cut out the pictures and place them in your notebook.



C. Yearly Weather Data

There are three charts of yearly weather data for two cities below:

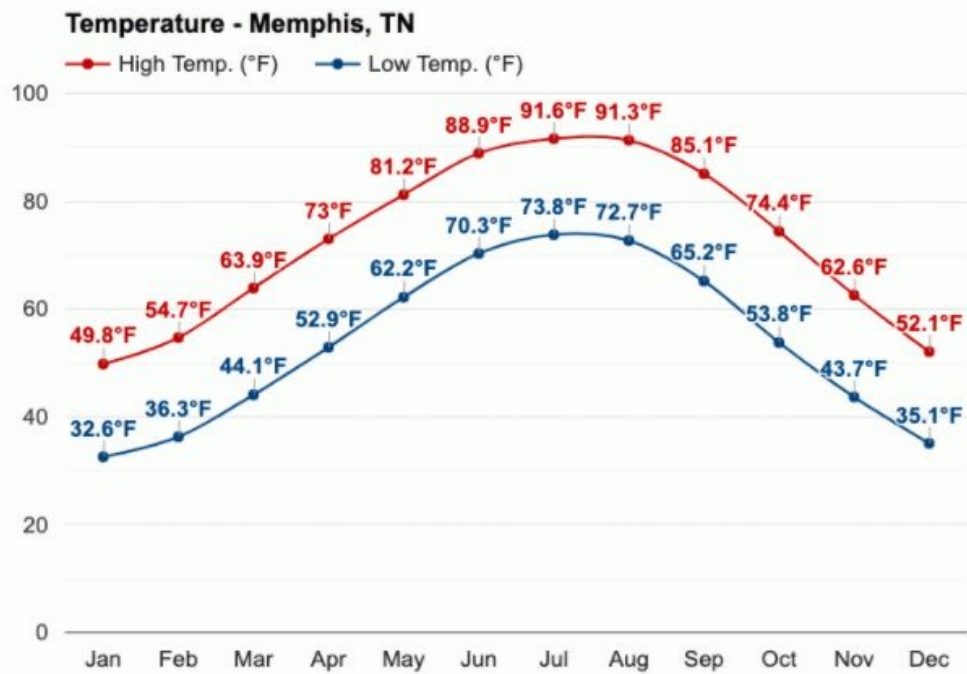
- high and low temperatures
- rainfall
- snowfall

What patterns do you notice? Can you relate these patterns to seasons?

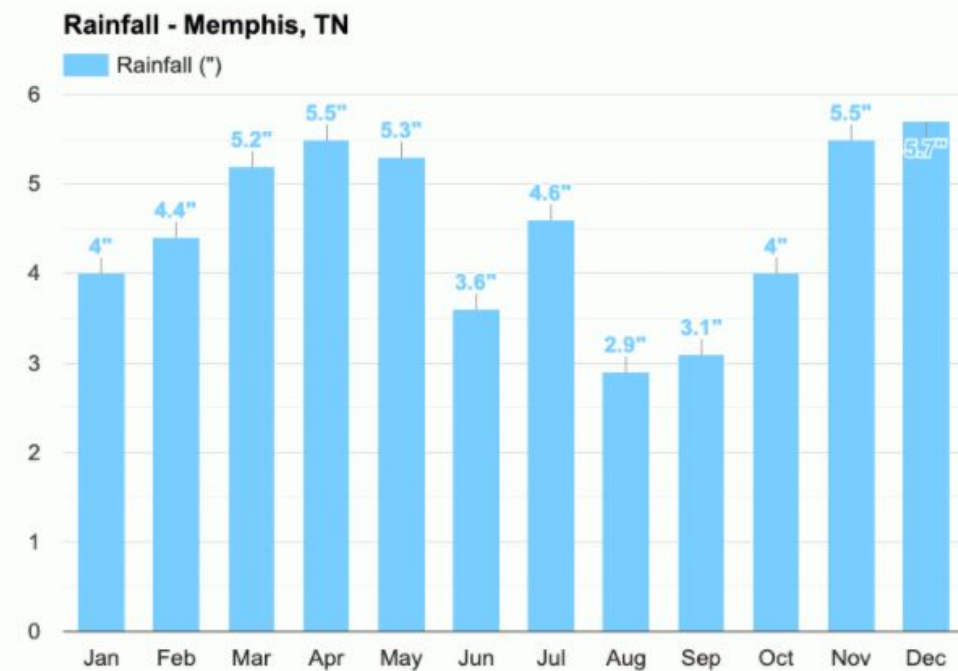
5th Grade Extension: What do you notice about the Memphis, TN and Rapid City, SD weather data? How is the weather data similar and different?

Weather Charts from Memphis, TN

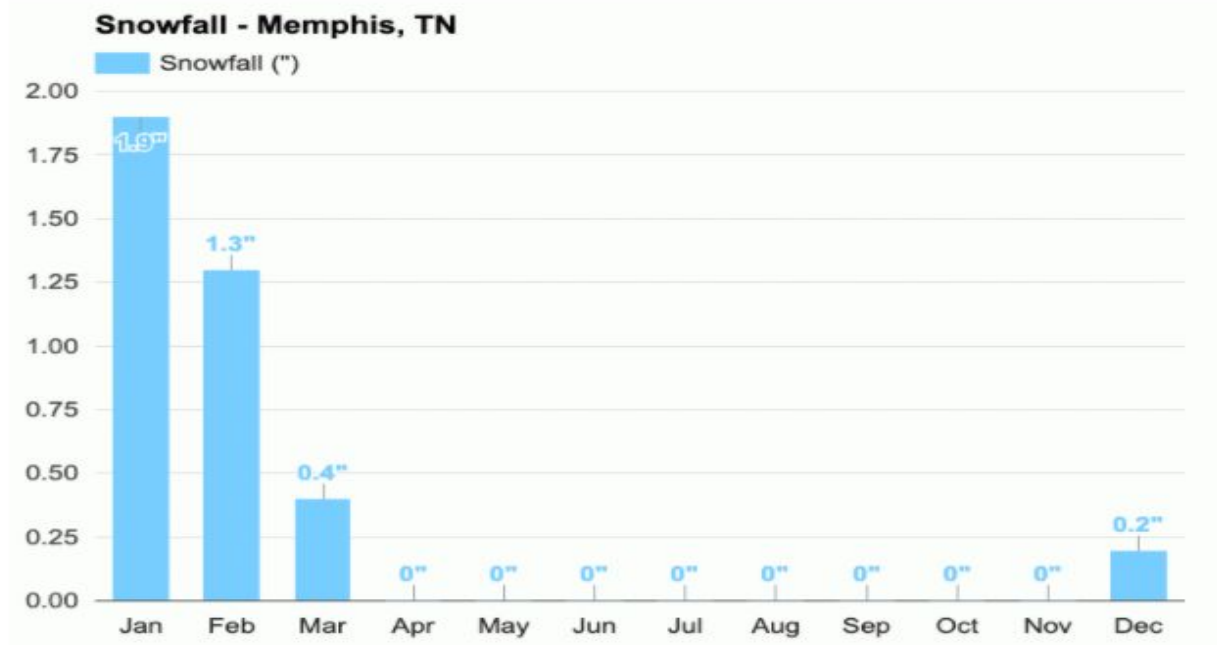
Average temperature Memphis, TN



Average rainfall Memphis, TN

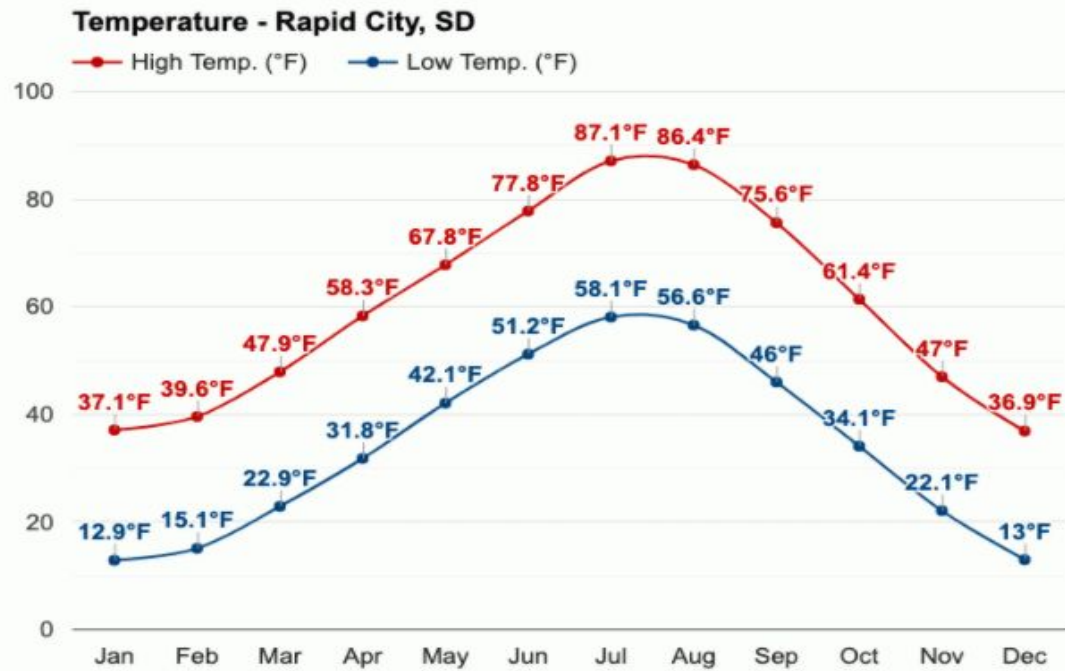


Average snowfall Memphis, TN

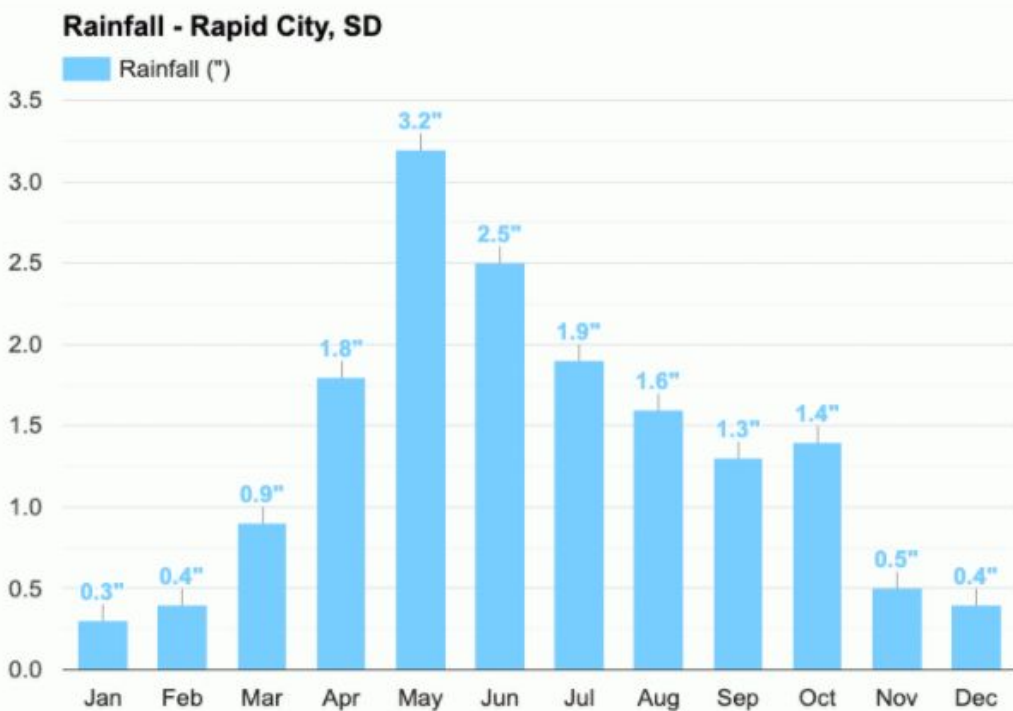


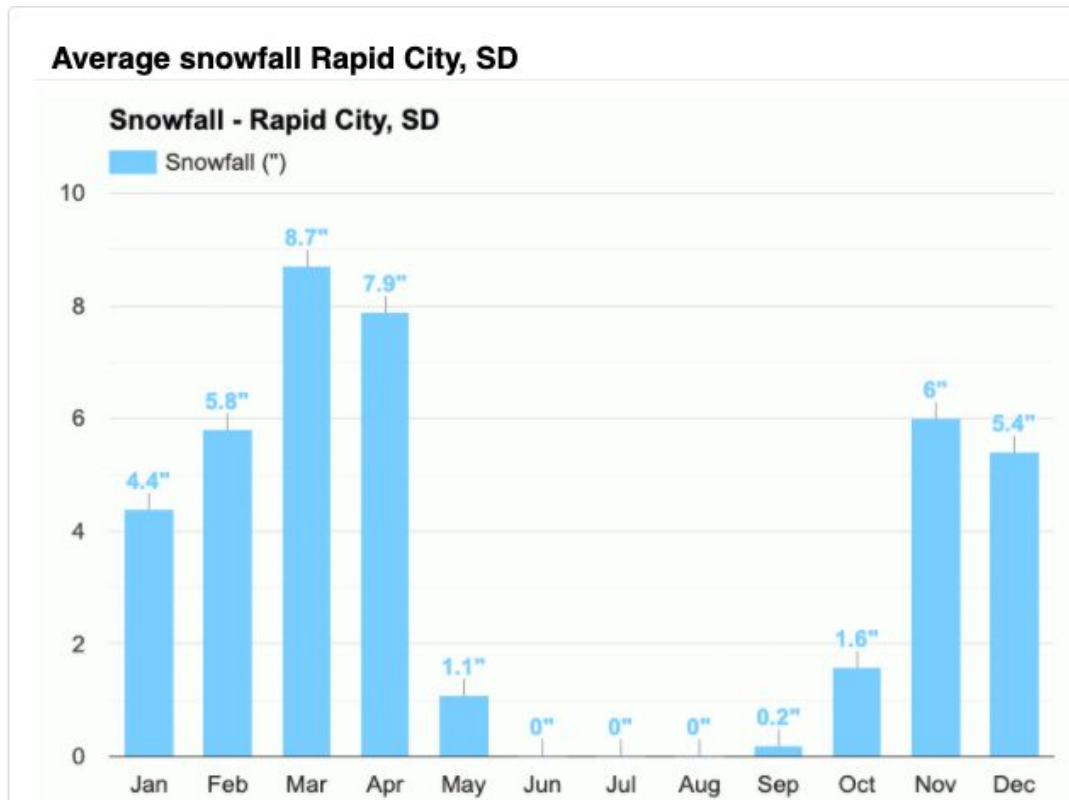
Weather Charts from Rapid City, SD

Average temperature Rapid City, SD



Average rainfall Rapid City, SD





- D. **Weather and Climate Article** – Read the article and describe weather and climate to someone in your own words. Write down your thinking in your notebook.

What is the difference between weather and climate?

We hear about weather and climate all of the time. Most of us check the local weather forecast to plan our days. And climate change is certainly a “hot” topic in the news. There is, however, still a lot of confusion over the difference between the two.

Think about it this way: Climate is what you expect, weather is what you get.

Weather is what you see outside on any particular day. So, for example, it may be 75° degrees and sunny or it could be 20° degrees with heavy snow. That’s the weather.

Climate is the average of that weather. For example, you can expect snow in the Northeast in January or for it to be hot and humid in the Southeast in July. This is climate. The climate record also includes extreme values such as record high temperatures or record amounts of rainfall. If you’ve ever heard your local weather person say “today we hit a record high for this day,” she is talking about climate records.

So when we are talking about climate change, we are talking about changes in *long-term* averages of daily weather. In most places, weather can change from minute-to-minute, hour-to-hour, day-to-day, and season-to-season. Climate, however, is the average of weather over time and space.

https://oceanservice.noaa.gov/facts/weather_climate.html

Assignment #4

A. Weather versus Climate – Indicate whether each statement below is about **weather** or **climate**

- a. Winter is usually the coldest time of year
- b. It is raining and 73°F outside
- c. The sky is cloudy and it looks like it might rain
- d. Our location gets about the same amount of precipitation each year
- e. August is usually the hottest month of the year
- f. It was very cold and windy outside this morning

B. Handling Severe Weather

3rd and 4th Grade Students: Read one article. Underline information about the type of severe weather, the location, and what is being done to limit damage to life and property. Answer the following question: Did the location matter?

5th Grade Students: Read both articles and compare what is being done to prepare or limit damage to life and property in each article. What are the similarities and differences?

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.”

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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."

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- C. Severe Weather Plan (type this website into a computer web browser or on a smartphone for more information about severe weather plans)
<https://www.weather.gov/ama/severesafetyplan>
Talk with a family member about developing a severe weather plan