UCPS
UNION COUNTY PUBLIC SCHOOLS

March 2020

Hello Parents,

We hope that this letter finds you doing well. In an effort to help our students keep their skills sharp, we have provided packets of optional activities for your child to work on from home. These packets are full of review material for your child and will not need to be returned to school.

UCPS is also offering many other resources on our EmpowerED Family Portal on our website. Check them out at www.ucps.k12.nc.us/domain/2917.

Stay safe and healthy!

Marzo 2020

Hola padres

Esperamos que todos se encuentren bien. En un esfuerzo para ayudar a nuestros estudiantes a mantener sus habilidades académicas, hemos creado paquetes de actividades opcionales para que su hijo pueda trabajar en casa. Estos paquetes están llenos de material de repaso para su hijo. No es necesario que su hijo los devuelva a la escuela.

UCPS también ofrece muchos otros recursos en nuestro Portal Familiar Empoderado en nuestro sitio web. Véalos en www.ucps.k12.nc.us/domain/2917 .

¡Esperamos que sigan seguros y de buena salud!

Additional Print Resources - March 2020
Week 3 - 5th Grade

Parent/Guardian Instructions:

You will find learning opportunities for reading, math, science, and social studies below. These lessons and activities are intended to provide you with 30-40 minutes of learning support **per subject** for each day. All materials listed in the learning calendar below are provided in these additional print materials. For reading and math, you will find lesson materials as well as "apply it" materials. "Apply it" materials are in the form of games, reader's responses, etc. Some math activities may require items such as counters. You may use materials commonly found at home (ie: buttons, cereal, beans, playing cards, beads, etc.).

- The i-Ready Grade 5 Reading and Mathematics packets will be used across several weeks. Please refer back to this packet in the weeks that follow and do not discard. Page numbers are listed on daily activities.

Reading

Day 11	Day 12	Day 13	Day 14	Day 15
Lesson: Lesson 11, part 4 - From Furs to Five-Dollar Bills (page 39-40) Read the passage "From Furs to Five-Dollar Bills." Complete the Think and Talk activities. **Apply It:** Have you read about any other types of currency? Find someone in your home to discuss currency with. How has it changed over time? What is the importance? What else could be used if paper money was no longer available?	**Lesson:** Lesson 11, part 6 (page 42-46) Read the passage "What Was the Great Depression?" Answer questions #1-4 in the Think activity.	**Lesson:** Lesson 11, part 6 (page 42-47) Reread the passage "What Was the Great Depression?" Complete the Write activity. Discuss the Learning Target thinking prompt with someone in your home.	**Lesson:** Read the passage "Can They Do It?" on page 48-50. Complete questions 23-26, referencing the text to support your thinking.	**Parent/Guardian Opportunity** **Lesson:** Tools for Instruction - (page 51-52) Find an adult to work with today! Ask them to read the instructions and guide you through the exercise. When the activity asks for a text, choose one of the passages you have read in the materials in a previous lesson.

Math

Day 11- Write Expressions	Day 12- Write Expressions	Day 13- Expression Puzzle	Day 14- Finding Volume Using Unit Cubes	Day 15- Finding Volume Using Unit Cubes
Lesson: Complete pages 211 and 212 "Write Expressions" **Apply It:** Find the Expression *Materials Needed* • *9 game markers in one color* • *9 game markers of a different color (examples: colored candy, construction paper pieces, blocks, coins)*	**Lesson:** Complete pages 213 and 214 "Write and Evaluate Expressions" **Apply It:** Write a Numerical Expression	**Lesson:** Expressions Puzzle	**Lesson:** Complete pages 293 and 294 "Find Volume Using Unit Cubes" **Apply It:** Find the Prism *Materials Needed* • *6 game markers in one color* • *6 game markers of a different color (examples: colored candy, construction* • *Optional: sugar cubes or unit cubes*	**Lesson:** Complete pages 297 and 298 "Find Volume Using Unit Cubes" **Apply It:** Complete pages 297 and 298 Problem Solving

Science

Days 11-15
Complete three activities of your choice from the Force and Motion Choice Board Choice Board. Use the knowledge you have previously learned this year to help you complete these activities. If you have access to the internet, you may research additional information as needed to assist you.

From Furs to Five-Dollar Bills

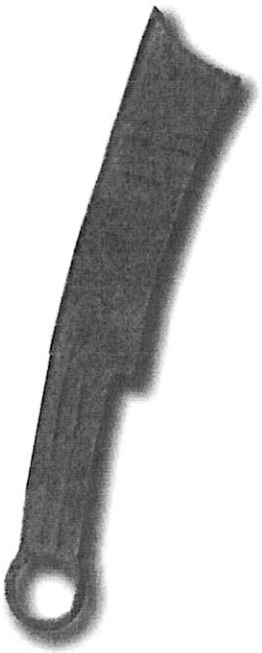
by Jason Liu

1 Imagine paying for new sneakers with a handful of shells. In ancient times, people around the world paid for goods with commodity money. A commodity is a product or raw material offered as payment for another thing. Cows, sheep, or other kinds of animals were bartered for what a person wanted. Furs, beads, grain, giant stones, or salt were also exchanged.

2 Gradually, ancient peoples stopped using cattle and crops as money. Around 1000 B.C.E., the Chinese began to exchange metal tools for what they needed. They also used copper and bronze coins. By 700 B.C.E., the first silver and gold coins were produced in Lydia (what is now Turkey). These coins were stamped with images of different gods or important rulers.

3 Paper money developed in China around 800 C.E. Paper was light and easy to carry. But the Chinese printed too much paper money, and it lost its value. In 1455, the Chinese stopped using paper money for several hundred years. Meanwhile, Europeans only began using paper money in the 1600s.

4 After the American Revolution, the Continental Congress established a national currency based on the dollar in 1785. The first American coins were minted in 1793. These copper cents were produced by hand. Nearly seventy years later, the U.S. government began to issue paper money for the first time in 1861. Since then, the appearance of American coins and bills has changed. For example, today's paper money in the United States has a new design every seven to ten years.



In China, knife money was used from 600 to 200 B.C.E.

This is one of the earliest American silver dollars ever minted.

Close Reader Habits

How can you determine the meaning of *minted* in paragraph 4? Reread the text. **Underline** the sentence that gives a context clue.

Think

Use what you learned from reading the text to answer the following questions.

A context clue may give a definition, an explanation, or an example. Sometimes an author will include a word with a similar meaning. Other times, the clue may be a word with an opposite meaning.

1 This question has two parts. Answer Part A. Then answer Part B.

Part A

What is the meaning of the word currency as it is used in paragraph 4?

- **A** goods used in trade
- **B** an idea accepted by many people
- **C** something that is up-to-date
- **D** the money used in a country

Part B

Which phrase from the passage helps the reader understand the meaning of currency?

- **A** "based on the dollar"
- **B** "produced by hand"
- **C** "lost its value"
- **D** "a new design"

2 Underline the word in the paragraph below that means "traded or exchanged one thing for another."

> A commodity is a product or raw material offered as payment for another thing. Cows, sheep, or other kinds of animals were bartered for what a person wanted. Furs, beads, grain, giant stones, or salt were also exchanged.

Talk

3 Discuss the meaning of minted as it is used in paragraph 4 of the text.

Write

4 **Short Response** Define the word minted. Then describe what words or phrases helped you figure out the meaning of minted. Use the space provided on page 195 to write your answer.

HINT Use quotes from the passage to show what words or phrases help you define *minted*.

Read

Genre: History Article

WORDS TO KNOW
As you read, look inside, around, and beyond these words to figure out what they mean.
- **financial**
- **economy**

WHAT WAS the Great Depression?

by Fran Severs

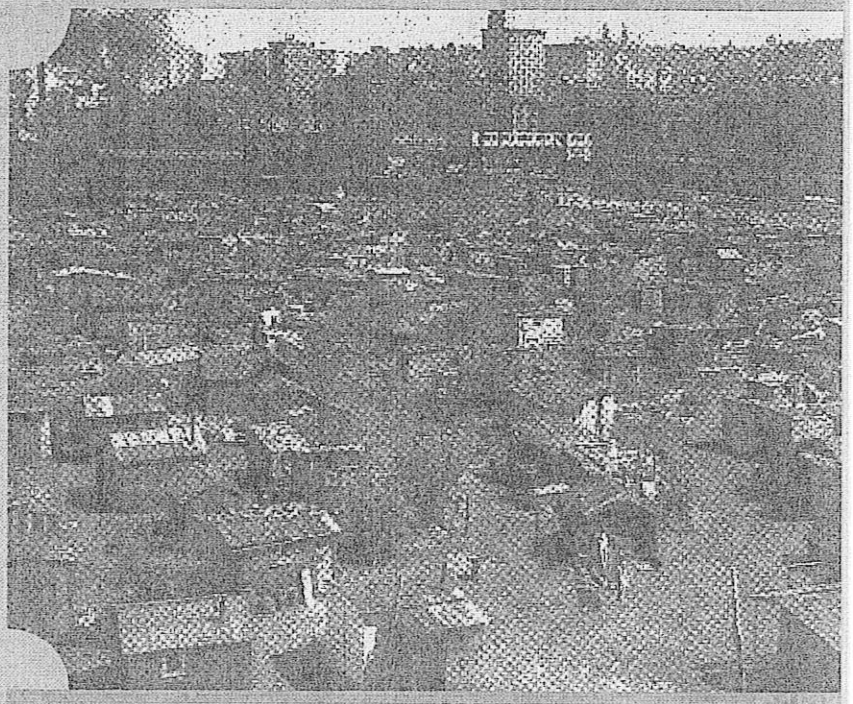
1 When World War I officially ended in 1919, Americans were tired of the war and ready for good times. In the early 1920s, there were plenty of jobs in the United States. People earned good incomes. Businesses grew quickly. During the Roaring Twenties, American consumers enjoyed spending money. Those who could not afford the most expensive items borrowed money so they could "buy now, pay later." They bought new homes. They purchased cars, washing machines, and other large items. They also bought smaller goods, such as toasters and irons. To meet the demand, factories rushed to make even more products. But companies made too many goods, and people stopped buying them. By the end of the 1920s, warehouses were filled up with merchandise that no one bought. Factory production slowed down. Many factory workers lost their jobs.

During the 1920s, many Americans grew wealthier. They spent their money on new inventions such as the electric refrigerator shown in this photograph.

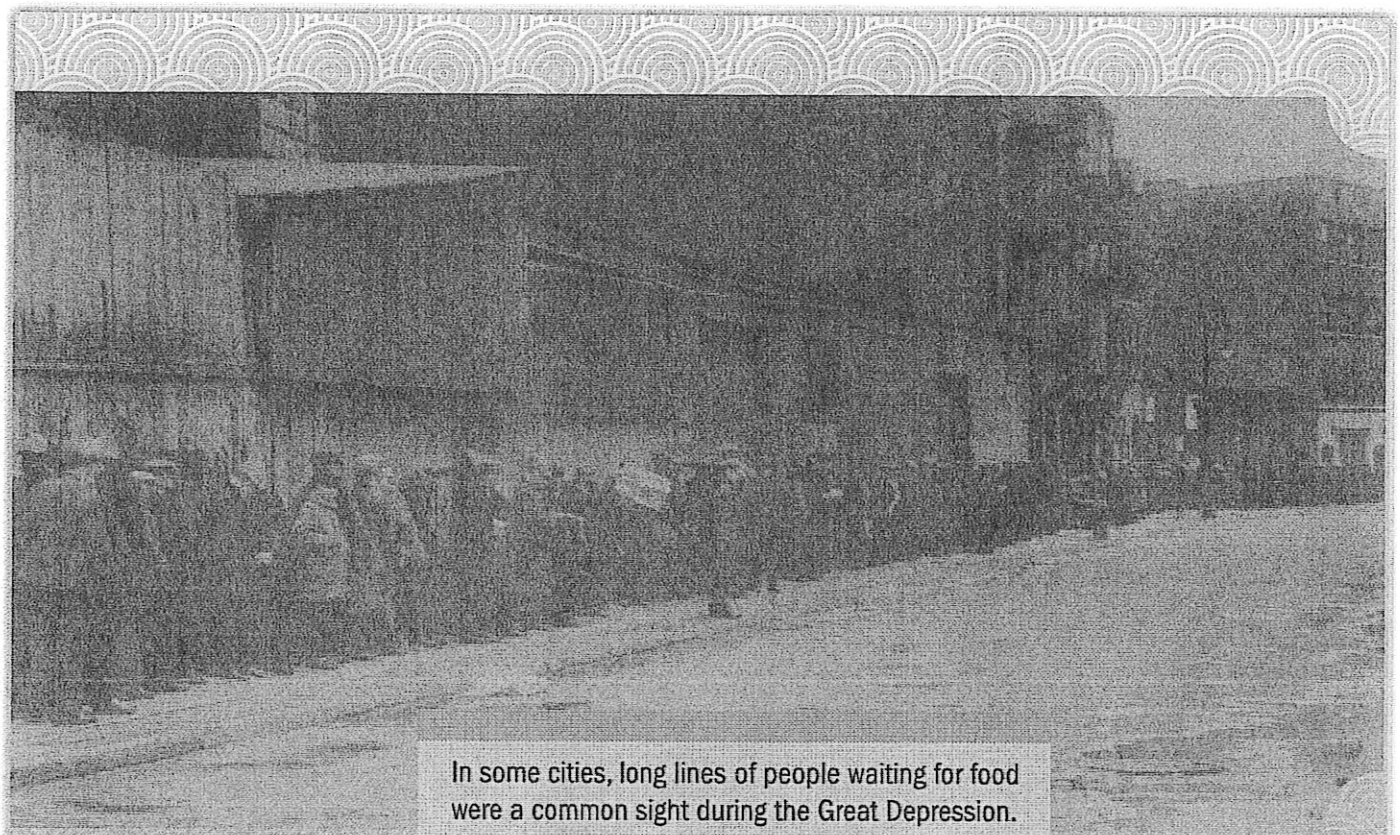
2 At the same time, many Americans decided to invest money in the stock market. They hoped to get rich quickly. The stock market is a place where shares of stock in different companies are bought and sold. People hope to make a high return by buying stock at a low price and selling it at a higher price. From June through September 1929, the prices of stocks soared. Then prices began to dip slightly. Nervous investors began selling millions of stock shares for less than the purchase price, losing billions of dollars. On October 31, 1929, the stock market crashed when stock prices dropped sharply. The crash caused panic. People took their money out of banks, and banks were forced to close. More than 600 banks failed in 1929.

3 The stock market crash led to a financial crisis called the Great Depression. A depression is a serious slowdown in the economy that causes people to lose their jobs and businesses to fail. At the start of the Great Depression, about 1.5 million Americans were out of work. By 1933, about 13 million Americans had lost their jobs. To earn money, jobless people sold apples, pencils, and other items on the streets. They shined shoes or washed and mended clothing for others. They sold their personal belongings. Some were forced to beg for money.

4 Without an income, thousands of jobless Americans lost their homes because they did not have the money to pay rent. If they had borrowed money to buy a house, they could not pay their loans, so the bank took their homes. People were forced to live with friends or family members. If necessary, they stayed in churches or rooming houses. Sometimes, the homeless built shacks from old crates and scrap metal. These temporary homes lacked electricity or running water.



During the Great Depression, many Americans lost not just their jobs but also their homes. For shelter, these men and women built shacks on the outskirts of cities.



In some cities, long lines of people waiting for food were a common sight during the Great Depression. Charities gave bread and soup to people who could not pay to feed themselves.

5 About two million homeless men, women, and children drifted around the country. They broke the law by hitching free rides on trains. They rode from place to place looking for work, food, and shelter. Millions stood in lines for free bread or soup that charity groups provided. In 1931, charity groups in New York City served about 85,000 free meals every day.

6 Under President Franklin D. Roosevelt, America's economy slowly improved. Roosevelt's plan to fix the nation's money problems was called the New Deal. To improve the situation, the government passed laws that changed banking systems, provided the needy with aid, and created new jobs. In 1933, about 25 percent of Americans were jobless. By 1937, the unemployment rate had fallen to about 14 percent. Unfortunately, nearly 8 million Americans still did not have jobs.

7 The Great Depression lasted for more than ten years. In 1941, the United States entered World War II. Factories started making war supplies, such as airplanes, tanks, and ships. As the need for war supplies increased, businesses hired more and more people. America's hard times finally came to an end.

Think Use what you learned from reading the article to answer the following questions.

1 This question has two parts. First, answer Part A. Then answer Part B.

Part A

Read this sentence from paragraph 1.

> By the end of the 1920s, warehouses were filled up with merchandise that no one bought.

What does the word merchandise mean as it is used in this sentence?

- **A** goods
- **B** large items
- **C** shares of stock
- **D** jobs

Part B

Which detail from paragraph 1 **best** supports the answer to Part A?

- **A** ". . . that no one bought . . ."
- **B** ". . . even more products . . ."
- **C** ". . . factory production slowed . . ."
- **D** ". . . lost their jobs . . . "

2 The author uses a word that means "a time of intense difficulty, trouble, or danger." Underline a word in the paragraph below that **best** represents that idea.

> The stock market crash led to a financial crisis called the Great Depression. A depression is a serious slowdown in the economy that causes people to lose their jobs and businesses to fail. At the start of the Great Depression, about 1.5 million Americans were out of work. By 1933, about 13 million Americans had lost their jobs. To earn money, jobless people sold apples, pencils, and other items on the streets. They shined shoes or washed and mended clothing for others. They sold their personal belongings. Some were forced to beg for money.

3 This question has two parts. First, answer Part A. Then answer Part B.

Part A

What is the **best** meaning of the phrase hard times in paragraph 7 of "What Was the Great Depression?"

A a period of great difficulty

B a time when farmers couldn't grow crops

C a time when jobs paid low wages

D a period of mild sadness

Part B

Which sentence from the article helps the reader determine the meaning of the phrase hard times as it is used in paragraph 7?

A "When World War I officially ended in 1919, Americans were tired of the war and ready for good times." (paragraph 1)

B "From June through September 1929, the prices of stocks soared." (paragraph 2)

C "About two million homeless men, women, and children drifted around the country." (paragraph 5)

D "Roosevelt's plan to fix the nation's money problems was called the New Deal." (paragraph 6)

4 Read the sentence from paragraph 1.

To meet the demand, factories rushed to make even more products.

Which dictionary entry **best** defines demand?

A "forceful statement"

B "wish"

C "strong need"

D "question"

Write

5 **Short Response** Paragraph 6 of the passage states, "By 1937, the unemployment rate had fallen to about 14 percent." Define the phrase unemployment rate. Support your definition with at least **one** context clue from the passage.

Learning Target

In this lesson, you figured out the meanings of several challenging words and phrases. Explain how you can use these skills to help you better understand the texts you read in school.

Writing and Research

This is a rough draft of a story. It has some mistakes. Read the story. Then answer the questions that follow.

Can They Do It?

Sunday, March 25. Everyone at Westfield Elementary School approached the date with fear and dread. The servers in the cafetearia prepared meals with worried looks and shaking hands. Teachers buzzed about it in the teachers' room. Students whispered about the approaching date in hallways. The date was so terrifying that some Westfield students break into tears at the mention of it. Others simply sat at their desks, stunned. Sunday, March 25, was the first day of Turn-Off-the-Television-and-Keep-It-Off-for-the-Whole-Week Week.

Mr. Humphrey Blodgett had graduated from Westfield Elementary School before television was even invented. He promised to take the entire school to Wacky World Water Park. In order to win the trip everyone had to turn off his or her television set for a week. Would either Westfield students and Westfield teachers be up to the challenge?

"Does that include basketball games?" Mrs. Travis asked. Mrs. Travis was a huge sports fan.

"What about educational television Mr. Blodgett?" Ms. Morgan, the school librarian, wondered. Mr. Kramer thought he should be able to watch his favorite show "for health reasons."

"No, there will be no television of any kind," Mr. Blodgett answered. "Read a book, take a walk; or play a game." Then, looking right at Mr. Kramer, he added, "Learn to knit. It's very good for the nerves."

"Boy, how tough will this be?" Mr. Kramer complained after Mr. Blodgett had left. But it turned out that it wasn't as difficult as everyone had thought. By the end of the week, the school was buzzing with excitement over having won a wonderful trip.

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23 Read this sentence from the story.

In order to win the trip everyone had to turn off his or her television set for a week.

Which of the following should replace the underlined part to make the sentence correct?

A In order to win the trip everyone,

B In order to win the trip, everyone

C In order, to win the trip everyone

D In order to win, the trip everyone

Go On

24 Read this sentence from the story.

The date was so terrifying that some Westfield students break into tears at the mention of it.

Which word or words should replace the underlined verb to make the sentence correct?

A have broken

B will be breaking

C will break

D broke

25 Read this sentence from the story.

Would either Westfield students and Westfield teachers be up to the challenge?

Which of the following should replace the underlined part to make the sentence correct?

A either Westfield students nor

B neither Westfield students or

C either Westfield students or

D neither Westfield students and

26 Read this sentence from the story.

"Read a book, take a walk; or play a game."

Which of the following should replace the underlined part to make the sentence correct?

A book take, a walk, or

B book, take a walk, or

C book; take a walk; or

D book, take a walk or,

Tools for Instruction

Use Context to Find Word Meaning

Using context to determine a word's intended meaning is an essential reading strategy. Although students are often told to "use the context" to figure out the meaning of an unfamiliar word, they may need more specific guidance. To help students use context effectively, introduce specific types of context clues that they can look for in sentences and paragraphs.

Three Ways to Teach

Identify Sentence-Based Context Clues 20–30 minutes

Connect to Writing Explicitly teach students about the different types of context clues that can be used to determine meanings for unknown words. Then have students develop their own sentences with clues that help classmates guess above-level missing words.

- Display the following chart. Name the first type of clue, and read aloud the example sentence. Help students figure out a meaning for the italicized word and identify the (highlighted) context clues in the sentence, which give a definition for the word. Then guide students to tell how they can recognize definition clues in other sentences. Record a simple explanation in the "What It Does" column.
- Repeat the process to introduce the remaining types of clues. Each time, note signal words that emphasize the clue, including *is, or, and other,* and *but.*

Type of Clue	Example Sentence	What It Does
Definition	An *asteroid* **is a rocky body that orbits the Sun**.	Tells the meaning of the unfamiliar word explicitly
Appositive	An animal that is a *carnivore*, **or meat eater**, may hunt for its food.	Tells the meaning of the unfamiliar word beside it, marked off by commas or dashes
Examples	The streets were filled with **buses, taxis, and other** *vehicles*.	Describes the unfamiliar word by naming types of it
Contrast	Lush, green forests receive **steady rains, but** deserts are bare and *arid*.	Tells the meaning of an unfamiliar word by describing its opposite

- For independent practice, give each student two words likely to have known meanings, such as *skyscraper, meal, author,* and *study.*
- Tell students to write a sentence with their word, leaving a blank in its place. Challenge them to write a sentence with such strong context that listeners will easily guess the word.
- As students read aloud their sentences (saying "blank" for the word), talk about the context clues that helped listeners figure out the missing word. Repeat the activity, challenging students to write a sentence that uses a different type of context clue for their second word.

Identify Paragraph or Text-Based Context Clues 10–15 minutes

Explain that sometimes readers have to read the sentences before and after an unfamiliar word to determine its meaning. Choose a passage with a challenging, above-level word that is not defined in the same sentence but can be understood by rereading the paragraph. Display the paragraph with the word underlined, and model asking and answering questions such as these to determine the word's meaning:

- *What is this paragraph about?*
- *Do the sentences around the unfamiliar word describe it in a different way, by giving a synonym or example or by showing a contrast?*
- *Can I make an educated guess about what the word could mean?*
- *If I replace the word with what I think it might mean, does the sentence make sense with the topic or purpose of the paragraph?*

For independent practice, have partners choose another paragraph that includes one or two unfamiliar words. Have them use the questions above to search for context clues that will help them figure out the meaning of the unfamiliar words.

Use Multiple-Meaning Words to Highlight Context 10–15 minutes

- Explain to students that context clues can help readers clarify the intended meaning of a multiple-meaning word. Say, *Although looking up a word in a dictionary can be helpful, it can sometimes be hard to know which meaning was used in the text when a word has several definitions.*
- Display a list of multiple-meaning words. Then provide sentences using varied meanings for the words.

fan	The fan cheered for her team.	There was only a fan to keep us cool.
fry	The fry swim downstream right after hatching.	My dad will fry potatoes for dinner.
lap	I held the plate in my lap.	We ran one lap around the track.
strike	Watch the hammer strike the nail.	That pitch looks like a strike.

- Discuss how the context clues in each sentence clarify the intended meaning of the word. Provide independent practice by suggesting other multiple-meaning words and asking students to give oral sentences that make each of the word meanings clear. Then ask students to choose one word and draw each of its meanings.

Check for Understanding

If you observe...	Then try...
difficulty using context to define an unfamiliar word	confirming that students have sufficient background knowledge to understand the context. Ask students to briefly summarize the paragraph in their own words. Correct any misunderstandings, and proceed to model using the context to define the unfamiliar word.
errors in determining word meanings based on context	substituting students' definitions for the unfamiliar word, and verifying whether the inserted meaning makes sense.

Name: _____

Write Expressions

Study the example showing how to write a numerical expression. Then solve problems 1–8.

Example

Write a numerical expression to show the following phrase:

12 plus the quotient of 8 and 4

Think about what the words mean:

12 plus	the quotient of	8 and 4
↑	↑	↑
Plus means add.	The quotient is the result of division.	The numbers in the division operation.

Since you add 12 *to the quotient* of 8 and 4, you need to first divide 8 by 4. Use parentheses to show that you do the division first.

The numerical expression is $12 + (8 \div 4)$.

1 Draw a picture to show what the word phrase in the example means.

12 plus the quotient of 8 and 4

2 Suppose you wrote a numerical expression for the phrase "20 minus the product of 5 and 2." To evaluate the expression, should you subtract or multiply first? Explain.

_____

_____

_____

Solve.

3 Write a numerical expression to represent "20 minus the product of 5 and 2." Then evaluate your expression.

4 Which expression represents the phrase "16 divided by the product of 4 and 4." Circle the letter for all that apply.

A $16 \div 4 \times 4$

B $16 \div (4 \times 4)$

C $\frac{16}{4 \times 4}$

D $\frac{4 \times 4}{16}$

5 Write a numerical expression to represent "6 times the difference of 9 and 3". Then evaluate your expression.

6 Write a word phrase for the expression $10 + (6 - 4)$.

7 Shana is doing a craft project using yarn and craft sticks. She has 5 green yarn pieces and 7 blue yarn pieces. She has 3 times as many craft sticks as yarn pieces.

Which expression can you use to find the number of craft sticks Shana has?

A $5 + (7 \times 3)$

B $(5 + 7) \times 3$

C $(5 + 7) + 3$

D $5 \times (7 \times 3)$

8 Look at your answer to problem 7. Evaluate the expression to find the number of craft sticks Shana has.

Vocabulary

evaluate to find the value of an expression.

3×5 is 15.

***Ready*® Center Activity 5.4 ★★**

Find the Expression

What You Need

- 9 game markers in one color
- 9 game markers in a different color
- Game Board

Check Understanding

Angel reads 5 pages of her book each day for 20 days. One day she reads an additional 3 pages. Which expression shows how many pages she has read? Explain.

$(5 \times 20) + 3$
$(20 \times 3) + 5$

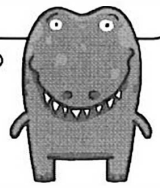
What You Do

1. Take turns. Choose an expression from the **Game Board.** Do not tell your partner what it is.
2. Describe a situation that matches the expression.
3. Your partner identifies the expression that goes with your description.
4. If your partner is correct, he or she covers that expression with a game marker.
5. Repeat until all the expressions are covered. The player with more markers on the **Game Board** wins.

I tried the expression $20 - (2 \times 4)$.

2×4, or 8, is subtracted from 20.

Brad has $20. He buys 2 snacks for $4 each.



Go Further!

Look at the expressions on the **Game Board.** Each partner tries to describe an expression as a series of calculations in a different way.

***Ready*® Center Activity 5.4 ★★ Game Board**

Partner A _____

Partner B _____

Find the Expression

$3 + \frac{18}{6}$	$(6 + 2) \times 5$	$(20 \div 2) \times 5$
$20 - (5 + 2)$	$(10 + 4) \div 2$	$\frac{48}{4 + 2}$
$(14 - 2) \times 3$	$(16 - 4) \div 2$	$(8 + 2) \div 4$

Name: _____

Write and Evaluate Expressions

Day 12

Solve the problems.

1 Look at the expression below. Tell whether each statement about its value is *True* or *False*.

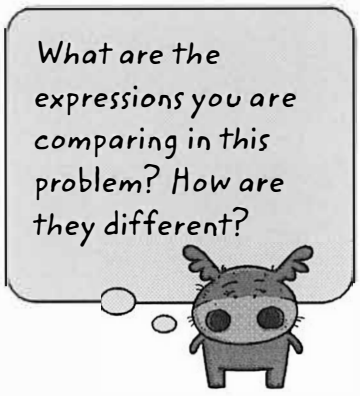
$\frac{1}{2} \times (137 + 87)$

a. It is greater than the value of $\frac{1}{4} \times (137 + 87)$. ☐ True ☐ False

b. It is less than the value of $137 + 87$. ☐ True ☐ False

c. It is greater than the value of $137 + 87$. ☐ True ☐ False

d. It is less than the value of $\frac{1}{8} \times (137 + 87)$. ☐ True ☐ False



2 Which expression represents "14 minus the difference of 7 and 2?"

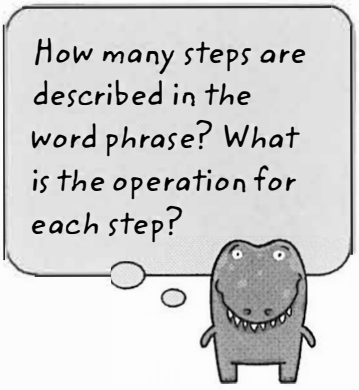
A $14 - 7 - 2$

B $14 - (7 - 2)$

C $14 - (7 + 2)$

D $14 - 7 + 2$

Devon chose **C** as the correct answer. How did he get that answer?



Solve.

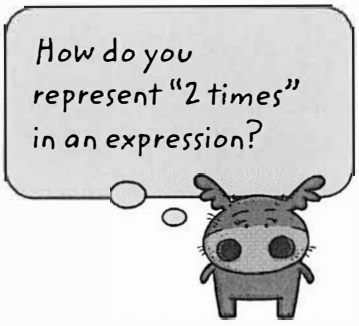
3 Which expression is *not* 2 times the value of the expression 12×9?

A $2 + (12 \times 9)$

B $2 \times (12 \times 9)$

C $(12 \times 9) \times 2$

D $2 \times 12 \times 9$

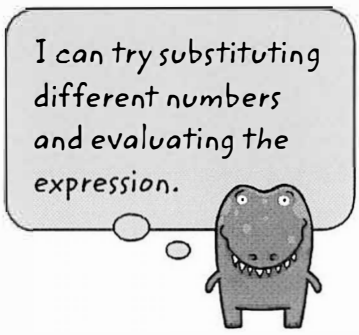


4 Complete each expression to make its value equal to 9.

a. $(24 - \square) \div 2$

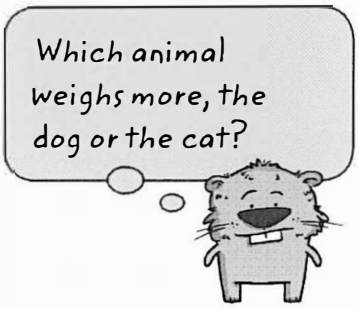
b. $29 - (\square \times 5)$

c. $\square \div (2 \times 3)$



5 Abbey's cat weighs 18 pounds. Her dog weighs 2 pounds more than half her cat's weight. Write and evaluate an expression to show how much Abbey's dog weighs.

Show your work.



Solution: _____

***Ready*® Center Activity 5.3 ★★**

Write a Numerical Expression

What You Need

- Recording Sheet

Check Understanding

There are 4 black pencils and 3 red pencils in each pencil box. Write a numerical expression with parentheses that represents the total number of pencils in 5 pencil boxes.

What You Do

1. Take turns. Pick a word expression on the **Recording Sheet.** Read the word expression aloud.
2. On a separate sheet of paper, write a numerical expression with grouping symbols for the word expression.
3. Your partner checks your work.
4. If your numerical expression is correct, write it on the **Recording Sheet.**
5. If your numerical expression is incorrect, work with your partner to correct it, and then write it on the **Recording Sheet.**
6. Repeat until there is a correct numerical expression for each word expression.

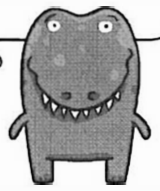
Grouping symbols tell what operation to perform first.

$$\frac{5 + 3}{2}$$

Add first. Divide the sum by 2.

$$3 \times (4 + 10)$$

Add first. Multiply the sum by 3.



Go Further!

Choose four expressions from the **Recording Sheet.** For each expression you choose, write a matching word expression that is different than the one in the activity. Exchange papers with your partner to check.

***Ready*® Center Activity 5.3 ★★ Recording Sheet**

Partner A _____

Partner B _____

Write a Numerical Expression

Word and Numerical Expressions	
Add 6 and 9, and then multiply by 3. _____	2 times the sum of 5 and 6 _____
1 less than 30 divided by 5 _____	21 divided by the sum of 2 and 5 _____
15 minus the sum of 4 and 6 _____	half the sum of 18 and 12 _____
3 times the difference of 12 and 9 _____	Divide the difference of 20 and 5 by the sum of 4 and 1. _____

Teacher note: The puzzle pieces for this task are located on this page and the next page. They should be cut out into 15 pieces before doing the puzzle. The puzzle pieces could be copied on card stock and laminated for durability and future use.

333 x (33 ÷ 3)	(2 x 4) + 8 **Card #1** Six more than the product of 3 times 2	Five less than the sum of 2,345 and 555
(2,345 + 555) - 5	(2 x 3) ÷ 6 **Card #15** Two times larger than 4 plus 8	Subtract 33 from 333 then find one third
(333 – 33) ÷ 3	(8 ÷ 2) + 4 **Card #11** One third the size of the product of 2 and 6	555 times more than the difference of 2,345 and 5
(2,345 – 555) x 5	(3 x 2) + 6 **Card #5** Add 8 and 2 then multiply by 4	Three times the size of 33 plus 333
(333 + 33) x 3	(8 + 4) x 2 **Card #8** Three times larger than the sum of 2 and 6	One fifth the size of the sum of 2,345 and 555
(2,345 + 555) ÷ 5	(6 x 2) ÷ 3 **Card #14** Eight times the size of the product of 4 and 2	Add 33 and 333 then subtract 3
333 – 33 x 3	4 x (8 + 2) **Card #3** Six times as large as 3 plus 2	Add 333 and 33 then divide by 3
(33 + 333) ÷ 3	3 x (6 + 2) **Card #13** One half the size of 8 and 4	5 times as much as 2,345 added to 555
(555 + 2,345) x 5	2 x 4 x 8 **Card #7** Subtract 2 from 8 then multiply by 4	33 less than the quotient of 333 and 3

(5 x 555) + 2,345

(3 + 2) x 6

Card #9

Two more than the difference of 8 and 4

ve than 345 us

(2,345 + 555) + 5

(4 + 8) ÷ 2

Card #6

Two more than the quotient of 6 and 3

33 times as much as the difference of 333 and 3

(333 – 3) x 33

4 x (8 – 2)

Card #10

One half the size of 3 times 6

2,3 5 times as m as

(2,345 ÷ 5) 555

(8 – 4) + 2

Card #2

Six times as much as the difference of 3 and 2

im s larger han 2 345 plus 5

(2,345 + 5) x 555

(6 ÷ 3) + 2

Card #12

Three times the difference of 6 and 2

33 more than the sum of 3 and 333

3 + 333 + 33

(6 x 3) ÷ 2

Card #4

Four times the size of 8 divided by 2

33 more than the quotient of 333 divided by 3

Find Volume Using Unit Cubes

Name: _____

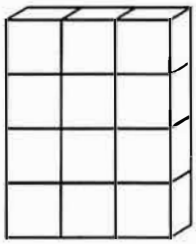
Prerequisite: Count Unit Cubes to Find Volume

Day 14

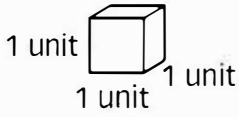
Study the example problem showing how to find volume by counting unit cubes. Then solve problems 1–8.

Example

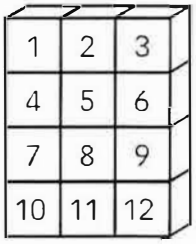
Harry stacked blocks to make a wall. What is the volume of the wall?



The volume of each block is 1 cubic unit.



1 cubic unit



Count the blocks in the wall to find the volume.

There are 12 blocks. The volume is 12 cubic units.

1 The green cubes show 1 layer of figure A.

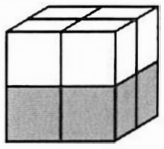
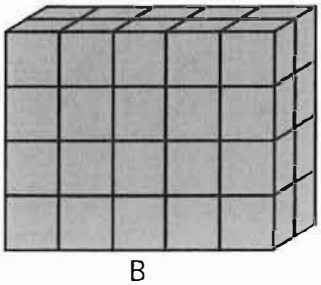

A

Figure A has _____ layers.

There are _____ cubes in each layer.

The volume of figure A is _____ cubic units.

2 Fill in the blanks to describe figure B.


B

_____ layers

_____ cubes in each layer

Volume = _____ cubic units

3 If you add another layer to figure B, what would the volume be? Explain.

_____

_____

_____

Vocabulary

cubic unit a cube, 1 unit on each edge, used to measure volume.

volume the amount of space inside a solid figure.

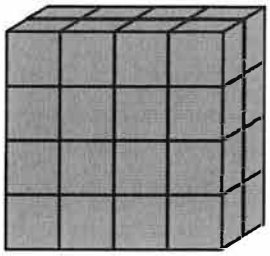
Day 14

Solve.

4 Figure M has _____ layers.

There are _____ cubes in each layer.

The volume of figure M is _____ cubic units.



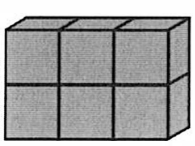
M

5 Figure N is a rectangular prism that has twice the volume of figure M. How many layers and how many cubes in each layer could there be in figure N?

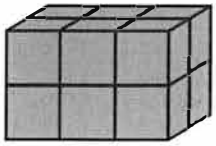
_____

_____

6 What is the volume of figure R? _____



R



S

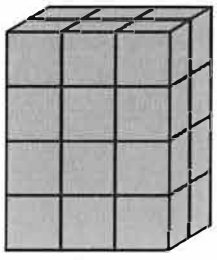
7 How many of figure R does it take to fill figure S? How does the volume of figure S relate to the volume of figure R? Explain.

_____

_____

_____

8 Show how to find the volume of box T. Then draw or describe a different box that has the same volume as box T.



T

***Ready*® Center Activity 5.42 ★★**

Find the Prism

What You Need

- unit cubes or sugar cubes (optional)
- 6 game markers in one color
- 6 game markers in a different color
- Game Board

Check Understanding

A rectangular prism is measured in inches. The expression $(4 \times 4) \times 5$ represents its volume. Use unit cubes to build the prism. Tell its volume and explain how you got your answer.

What You Do

1. Takes turns. Choose a letter.
2. Read the expression next to that letter in the table. Evaluate the expression.
3. Find a prism on the **Game Board** with the same volume as your answer to number 2.
4. Your partner builds the prism with unit cubes to check your work. (optional)
5. If you are correct, cover that prism with a game marker. If you are incorrect, your partner covers that prism with a game marker.
6. Each partner takes four turns. The player with the greater number of game markers wins.

A	20×4
B	$10 + 10 + 10$
C	$(2 \times 3) \times 8$
D	$6 + 6 + 6$
E	$(2 \times 2) \times 6$
F	10×6
G	$12 + 12 + 12$
H	$(2 \times 13) \times 2$
I	8×3

Go Further!

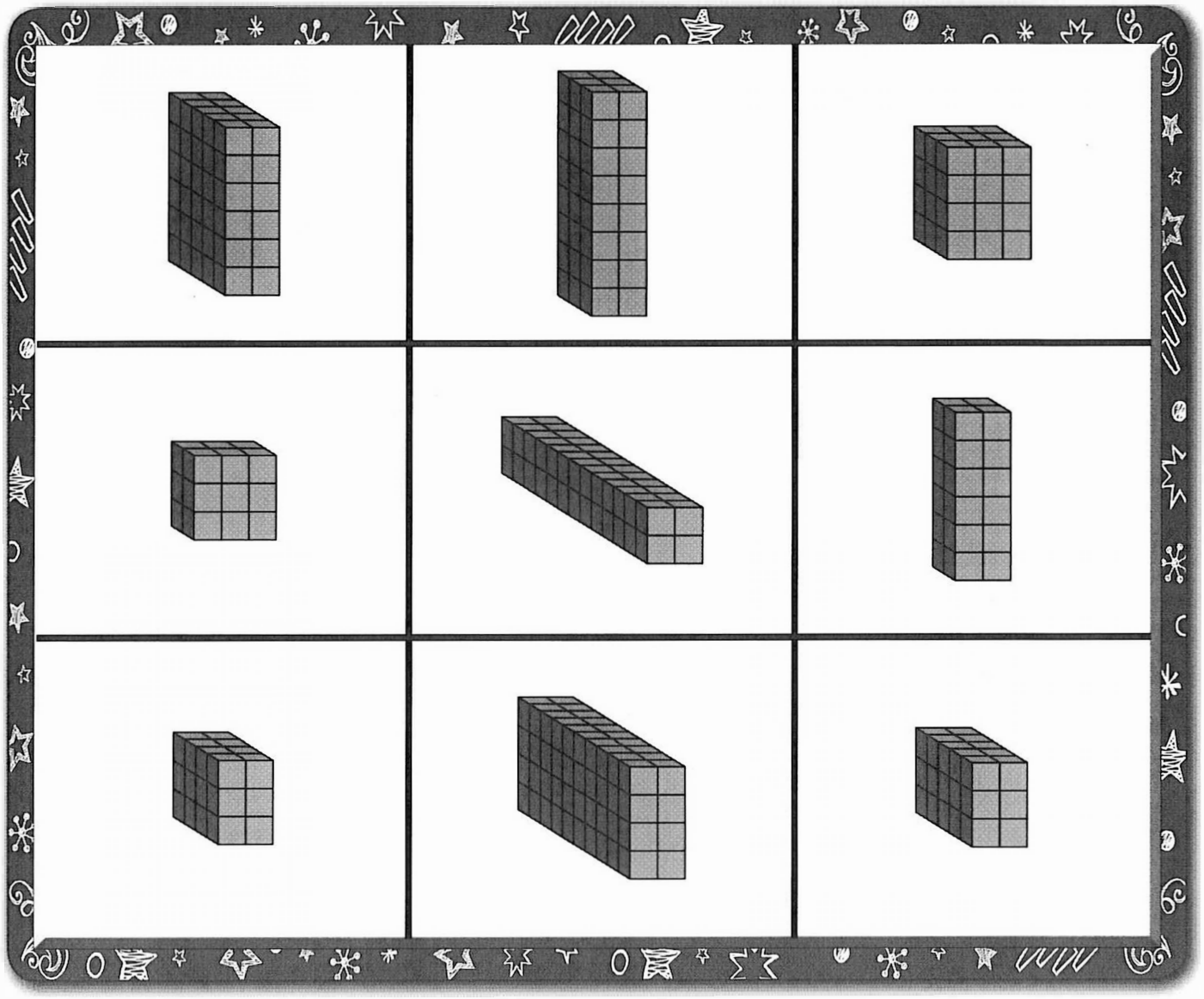
Find the prism on the **Game Board** that is not covered with a game marker. Use unit cubes to build the prism. If each unit cube represents 1 cubic centimeter, what is the volume of the prism? Write two different expressions that show how to find that volume.

***Ready*® Center Activity 5.42 ★★ Game Board**

Partner A _____

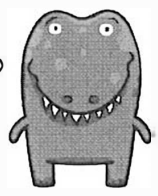
Partner B _____

Find the Prism



Think! Does the expression represent:

- adding the number of cubes in each layer?
- multiplying the number of rows by cubes per row by number of layers?
- multiplying the number of cubes per layer by the number of layers?



Name: _____

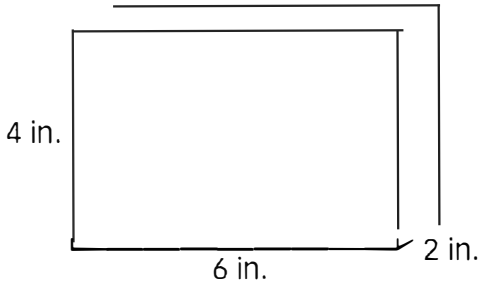
Find the Volume of a Rectangular Prism

Day 15

Study the example problem showing how to use layers to find the volume of a rectangular prism. Then solve problems 1–7.

Example

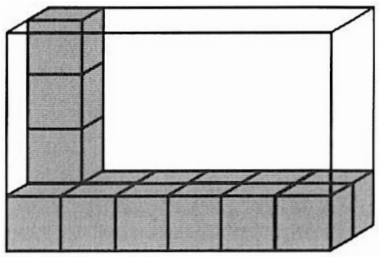
Keith uses this box to store his colored markers. What is the volume of the box?



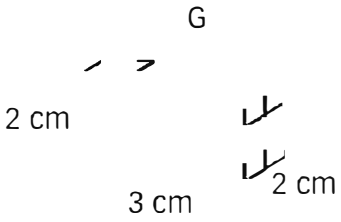
Think about filling the box with 1-inch cubes. One layer has 2 rows of 6 cubes, or 12 cubes. There are 4 layers of cubes.

$12 + 12 + 12 + 12 = 48$ or $12 \times 4 = 48$

The volume of the box is 48 cubic inches.



1 Look at prism G.

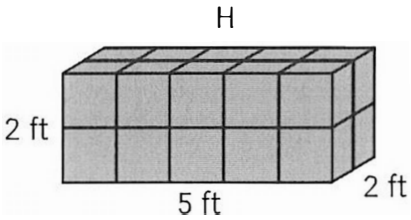


There are _____ layers with _____ cubes in each layer.

_____ cubes + _____ cubes = _____ cubes.

The volume is _____ cubic centimeters.

2 Look at prism H.



There are _____ layers with _____ cubes in each layer.

_____ layers × _____ cubes = _____ cubes.

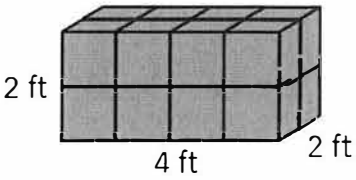
The volume is _____ cubic feet.

Day 15

Solve.

3 What is the volume of this rectangular prism?

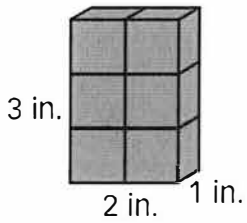
Show your work.



Solution: _____

4 Mia has a box that she filled with the cubes at the right. What is the volume of Mia's box?

Show your work.



Solution: _____

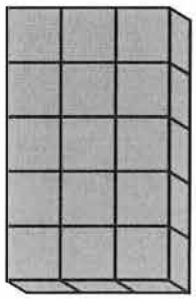
5 A box is 2 inches long, 1 inch wide, and 6 inches tall. What is the relationship between the volume of this box and the one in problem 4? Tell how you know.

_____

_____

_____

6 Which has a greater volume, box D or box E? Explain.


D

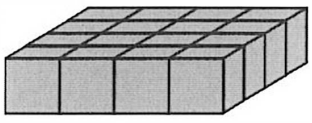
_____

_____

_____

_____

7 Add a layer to box D and compare the volumes of the new box D and box E.


E

_____

_____

_____

_____

Name: _____

Find Volume Using Unit Cubes

Day 15

Solve the problems.

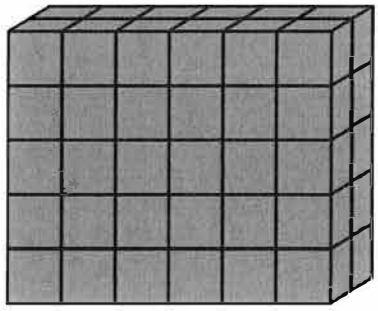
1 What is the volume of this rectangular prism?

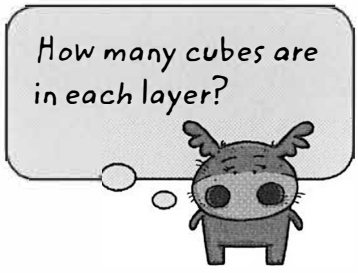
A 12 cubic units

B 13 cubic units

C 30 cubic units

D 60 cubic units





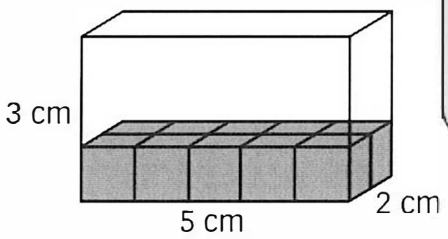
2 What is the volume of this box?

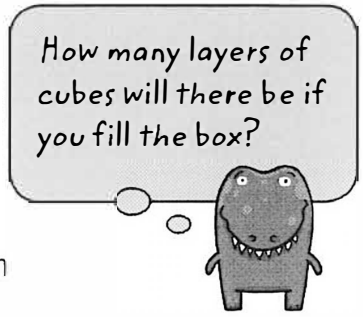
A 6 cubic centimeters

B 10 cubic centimeters

C 15 cubic centimeters

D 30 cubic centimeters





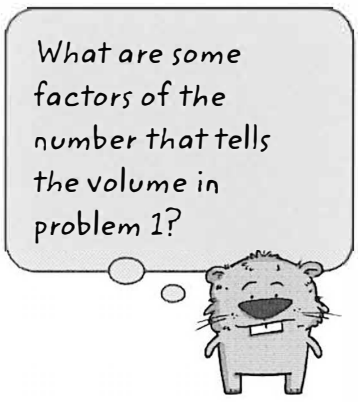
Cindy chose **B** as the correct answer. How did she get that answer?

_____

_____

_____

3 Draw or describe a different rectangular prism that has the same volume as the prism in problem 1.



Solve.

4 Which expressions can be used to find the volume of this rectangular prism? Circle the letter of all that apply.

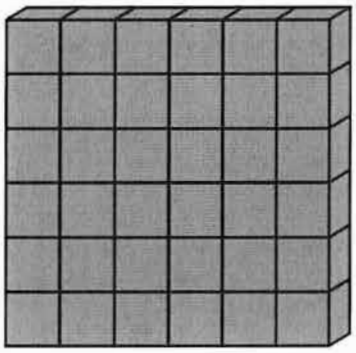
A $6 + 4 + 1$

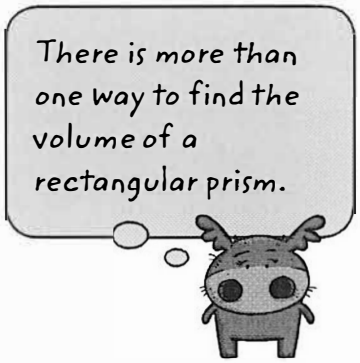
B $6 + 6 + 6 + 6 + 6 + 6$

C 6×1

D $6 + 6 + 1$

E $6 \times 6 \times 1$

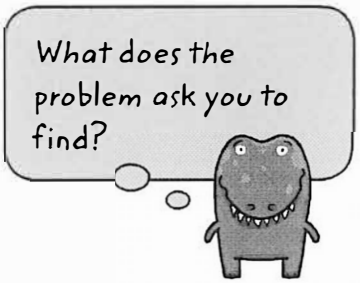




5 If you add 2 layers to the rectangular prism in problem 4, how much greater is the volume?

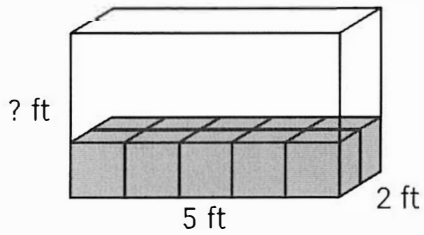
Show your work.

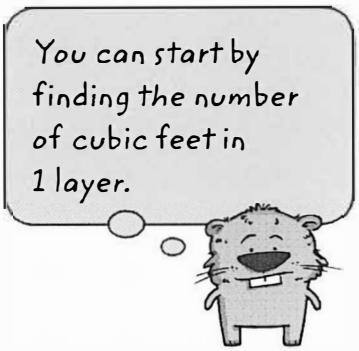
Solution: _____



6 Mr. Carlo is building a storage box in his workshop. The space where he plans to put the box is 5 feet long and 2 feet wide. He wants the volume of the box to be at least 36 cubic feet, but no more than 56 cubic feet. How tall should Mr. Carlo make the box? Explain.

Show your work.





Solution: _____

_____

_____

5th Science- Force and Motion Choice Board

You have spent time this year learning about many different topics of interest Force and Motion. Now, you will demonstrate your knowledge by choosing ***three*** activities from the choice menu below to complete.

Articles to support the learning:

Amusement Park Motion

How Soccer Can Help Us Understand Physics

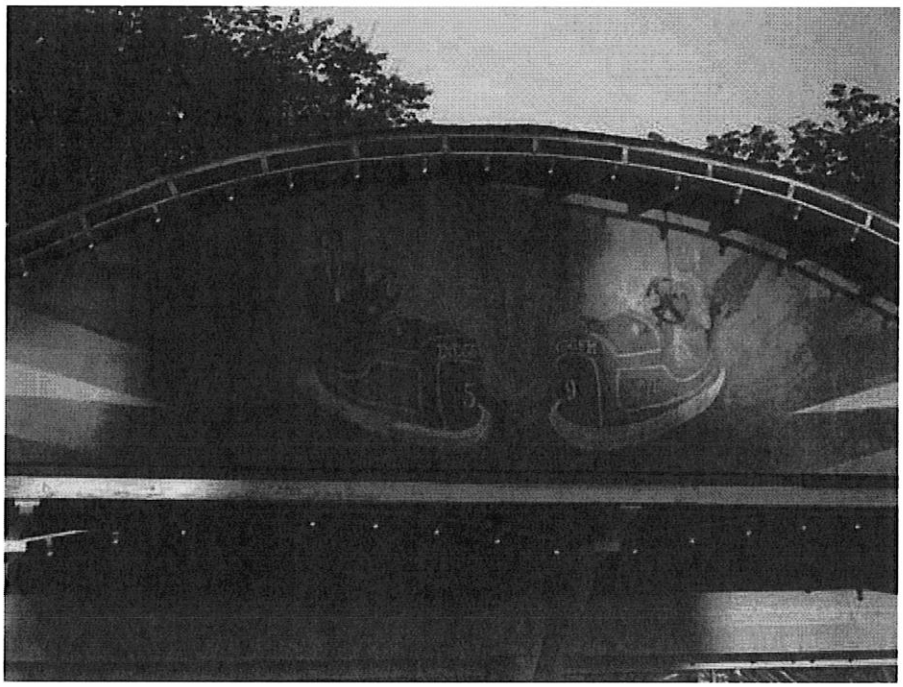
Our Amazing Universe

Week 2

Force Collage • Include the different forces: gravity, friction, and inertia • You may draw pictures, clip from magazines or print off pictures • Cut and glue the pictures on a sheet of paper • Try to include at least 8 pictures or more	**Google or Powerpoint Slide Show** • Compare and contrast Newton's Three Laws of Motion. • Each law needs to include a written explanation and a visual representation. • Each slide show should include a minimum of a title slide, one slide for each law, and a references slide that lists resources	**Force and Motion Graph** Track your movement for an hour. Keep track of when you're not moving, walking, running, etc. Then, create a line graph in which one axis represents the distance traveled and the other represents the period of time traveled. Finally, write a brief explanation of how your graph demonstrates your understanding of the relationship between distance and time.
Ramp Experiment Collect various moveable objects around your house (marble, toy car, ball, etc). Using stacks of books and cardboard, create a ramp. Measure how long it takes each object to travel down the ramp on the kitchen floor. Then, redo the experiment on a different surface throughout your house. Explain why the times vary with the different objects and the different surfaces using as many force and motion vocabulary words as possible.	**Design a Skatepark** Pretend you are an engineer tasked with creating a new skatepark. Sketch what it might look like and justify your reasoning for your design in writing. Include as many force and motion words in your written explanation as possible.	**Acrostic Poem** Create an acrostic poem for the word: ACCELERATION. Each word you select should represent the definition as clearly as possible.

Amusement Park Motion

by Samantha Gross



Whiz! Bing! Thump! Ding ding ding ding ding!

When they're jumbled up together, the sounds at an amusement park can become a roar. At the arcade, there is booming music and the sound of quarters clinking into slots. Two girls jump in unison as they compete in a dance game. Underneath it all, there is the rustling of prize tickets being folded up and jammed into pockets.

At the amusement park, there is noise everywhere. And where there is noise, there is motion.

On a hot summer day, some children hide out from the sun inside the cool, dark bumper car arena. One grinning boy is behind the wheel of a bright blue car with a thick, black bumper. He's too young to drive a real car, but here, he can speed around the track.

The boy sets his sights on a long-haired girl in a green car. She's sitting still, caught in something of a bumper car traffic jam. Then he slams his car into hers. The collision stops his car in its tracks, but it sends her car sailing away from his. In the crash, his car's momentum shifts to her car. They both laugh.

Elsewhere on the track, two other cars careen toward each other. When they crash, both bumper cars reverse course. They bounce backward, away from the point of impact. One driver's head is knocked sideways, but these mini crashes are all fun. No one is hurt and no one is crying.

In the arcade nearby, something similar is happening at the pool table. One player slams her stick into the

white cue ball. This sends the cue ball rolling quickly to the other end of the table, where it hits a striped ball. In an instant, the cue ball stops moving. The striped ball takes on its momentum and sails into the pocket.

Her opponent isn't having much luck at the pool table. He strikes the cue ball with the stick, but aims badly. The white ball bounces off three edges of the pool table until it finally slows and comes to a stop.

At the air hockey table, the action of the game is happening almost too quickly to follow. One player moves to protect her goal, but she's not holding onto her air hockey pusher tightly, and it goes flying out of her hand when the puck hits it.

In the next room two boys are playing ping pong. One boy is new to the game and is losing. Every time he hits the ball, he swings the paddle with too much force. The tiny ball has very little mass, but the boy's fast swing sends it off the table entirely. In this case, the boy is giving the ball too much momentum. Momentum, the quantity of motion in a moving object, is determined by an object's mass and its velocity.

Most of the time, it's against the rules to hit things. But at amusement parks, certain kinds of hitting are part of the fun. The boy losing at ping pong doesn't mind, because he's enjoying hitting the ball as hard as he can. At the batting cage, a girl wearing a helmet hits a baseball with so much force that it makes a loud "crack!"

In the arcade, a man has paid two quarters to see how many small plastic animals he can whack with a rubber mallet. When he hits them, their heads sink back inside the machine. His daughter is sitting in front of another game. She's shooting small balls at stuffed monsters. If she hits one straight on, it falls over and she wins tickets.

At another game, players pay a dollar for the chance to hit some milk bottles with a ball. If they knock all the bottles over, they win a huge stuffed animal. This game is very hard to win even if players throw the ball with a lot of force, because some of the bottles are very heavy. Often, the heavy bottle wobbles but doesn't fall over.

One boy doesn't want to leave the amusement park, but he is exhausted. The batting cage, ping pong, and the milk bottle game have left him with a very tired right arm. All the speed and crashes in the bumper car were fun, but they tired him out as well. There's only so much motion most people can enjoy in a day. Eventually, even the most energetic children run out of momentum. It's time for them to climb into bed and be still.

Name: _____ **Date:** _____

1. Where does this passage take place?

A. arcade at a shopping mall

B. sports center

C. amusement park

D. bumper car factory

2. The author provides a list of what?

A. amusement park concessions

B. ways momentum is used at an amusement park

C. amusement park rides

D. prizes won at an amusement park

3. When the boy crashes his bumper car into the girl's bumper car, the momentum from his car is transferred to hers. What evidence from the text supports this statement?

A. "She's sitting still, caught in something of a bumper car traffic jam."

B. "Then he slams his car into hers."

C. "The boy sets his sights on a long-haired girl in a green car."

D. "The collision stops his car in its tracks, but it sends her car sailing away from his."

4. Read the following sentences: "Her opponent isn't having much luck at the pool table. He strikes the cue ball with the stick, but aims badly. The white ball bounces off three edges of the pool table until it finally slows and comes to a stop."

What conclusion can you draw about the cue ball?

A. It gradually lost its momentum.

B. It hit three different balls.

C. It was very heavy.

D. It was moving slowly.

5. What is this passage mostly about?

A. different kinds of arcades

B. examples of motion and momentum

C. knocking over milk bottles

D. why bumper cars are fun

6. Why does the author explain momentum by using different examples at an amusement park?

A. to make the reader feel as though he or she is at an amusement park

B. to illustrate what momentum is in a confusing way that the reader cannot understand

C. to illustrate what momentum is with examples that are most likely familiar to the reader

D. to illustrate what momentum is with examples that are most likely unfamiliar to the reader

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

_____ children are too young to drive real cars, they are allowed to drive bumper cars at amusement parks.

A. Therefore

B. Obviously

C. Initially

D. Although

8. How is the momentum of an object determined?

9. What happens every time one of the boys playing ping pong hits the ball?

10. How could the boy playing ping pong keep from hitting the ball off the table?

How Soccer Can Help Us Understand Physics

by ReadWorks

Sports provide a great way to understand some concepts in physics. Physics, after all, is the study of matter, motion, force, and energy. And since sports like soccer, swimming and cycling involve bodies moving through space, they can help us understand how the principles of physics work.

Imagine that you're looking at a soccer ball on a grassy field. If you do nothing to the ball, it will stay motionless on the grass. If you kick the ball, it will roll along the grass before coming to rest again. Pretty simple, right?

For thousands of years, though, people thought that objects like this soccer ball come to rest because they have a natural tendency to stop. It took a famous physicist by the name of Sir Isaac Newton, who lived in the 1600s, to prove that this was not exactly correct.

Newton suggested that objects like the soccer ball have a natural tendency to keep moving. The only reason they stop, he believed, is because an unbalanced force acts on them. By an unbalanced force, Newton meant the force applied to the soccer ball by its environment. When kicked, the surface of the ball travels over the grass, creating friction. The taller the grass, and the rougher the surface of the ball, the more friction is created. And the more friction that exists between the ball and the grass, the less it will travel after being kicked.

Now, imagine that there is no grass. Instead, the ball is resting on a frozen lake. When you kick the ball on the ice, the ball will go much farther than it would have on the grass. This is because ice provides a lot less friction than the grass.

Even so, ice does cause some friction. The ball's interaction with the frozen water crystals on the surface of the lake eventually causes it to come to rest again. But now imagine that instead of ice, the ball is in a place where there's no friction at all. The ball is floating in a vacuum. If you remove friction

entirely, kicking the soccer ball would cause it to keep going and going at the same speed, until some force caused it to slow down and stop.

To paraphrase Sir Isaac Newton, a soccer ball on the grass will stay where it is unless acted on by a force. Similarly, once you kick the ball, it will remain in motion unless acted on by force. This, in so many words, is known as Newton's First Law of Motion.

The same principles apply for other sports. Take swimming. Olympic swimmers are in a constant battle with the force of water. Water slows them down. To increase their speed, swimmers often shave their entire bodies, reducing the amount of friction caused by hair. Since a swimming contest can be won or lost by a tenth of a second, anything they can do to remove friction will help-even if it means ridding their bodies of hair.

Recently, Olympic swimmers took to wearing full-body suits in the water, which made swimmers sleeker and reduced underwater friction. Swimmers wearing these suits began to break world records. They started winning all the races. Soon enough, Olympic officials, realizing that these suits posed an unfair advantage, banned the use of suits in Olympic competition. Swimmers had to fall back on their own, hairless skin.

The situation for professional cyclists is slightly different. Unlike the swimmer, who battles the water, the cyclist is confronted with forces from other sources that seek to slow him or her down: the force of the road and the force of the air. Like professional swimmers, pro cyclists are known to shave their body hair, to reduce the amount of friction caused by the wind. But the loss of body hair represents only a tiny reduction in surface friction compared to, say, wearing spandex shorts instead of baggy shorts with pockets that fill up with air as you ride.

To reduce friction and increase speed, cyclists adopt all kinds of techniques. They wear aerodynamic helmets. They crouch low over their bikes. They wear shirts and shorts that cling closely to their skin, preventing air from slipping inside and slowing them down. However, little can be done about the tires' interaction with the pavement. As in the case of the soccer ball, a bicycle wheel will eventually stop spinning if no force acts upon it to keep it moving. The rougher the road, the sooner that bike wheels will come to a stop.

For this reason, cyclists tend to have large, bulging thigh muscles. These muscles allow the cyclist to continue exerting force on the bicycle pedals, which cause the wheels to keep spinning despite their constant interaction with the road. Of course, other factors come into play, too. The heavier you are, the more work you have to do to keep the bike moving-that is, unless you're moving down a hill, in which case the gravitational force of your weight acts to your advantage.

Also, your ability to keep your legs pushing the pedals depends on how fit you are, not just how strong your legs are. Many people who are out of shape would run out of breath before they complete a mile-long bike ride, whereas a person who is fit and has a lot of stamina could travel two miles without much difficulty.

Whether you are in shape or not, what really matters when trying to kick a ball, swim a lap, or bicycle a 5 mile race are the forces of physics. Without them, every time you kicked a soccer ball, the ball would keep going, forever.

Name: _____ **Date:** _____

1. Once it is in motion, what does an object like a soccer ball have a natural tendency to do?

A. It has a natural tendency to keep moving.

B. It has a natural tendency to stop.

C. It has a natural tendency to change direction.

D. It has a natural tendency to slow down.

2. What does the author explain in this passage?

A. The author explains the force of friction, using different kinds of music as examples.

B. The author explains the sport of soccer, using examples of current teams and players.

C. The author explains the idea of motion, using different sports as examples.

D. The author explains the importance of bike safety, using helmets as an example.

3. Swimmers wearing full-body suits that reduced underwater friction were able to swim faster than other swimmers.

What evidence from the passage supports this statement?

A. Some swimmers shaved their entire bodies to reduce friction caused by hair and increase their speed.

B. After losing contests by a tenth of a second, some swimmers started ridding their bodies of hair to reduce friction.

C. Swimmers wearing full-body suits swam at the same speed as swimmers wearing shirts and shorts that clung closely to their skin.

D. Swimmers wearing full-body suits began to break world records and started winning all the races.

4. Based on the information in the passage, how can friction be described?

A. Friction can be described as a force that acts on an object in motion and can cause the object to stop.

B. Friction can be described as a force that acts on an object in motion and can cause the object to speed up.

C. Friction can be described as the path an object takes after a force acts on it and causes it to move.

D. Friction can be described as the path an object takes when a force acts on it inside a vacuum.

5. What is the passage mainly about?

A. why swimmers and cyclists move at different speeds

B. the motion of bodies and objects

C. the movement of an object inside a vacuum

D. the scientific discoveries of Sir Isaac Newton

6. Read the following sentence: "Newton suggested that objects like the soccer ball have a natural **tendency** to keep moving. The only reason they stop, he believed, is because an unbalanced force acts on them."

What does the word **tendency** mean?

A. a very small chance of something happening

B. a fifty-fifty chance of something happening

C. the fear of doing something or acting in a certain way

D. the way something normally behaves or acts

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

Newton suggested that a ball has a natural tendency to keep moving _____ others believed that a ball has a natural tendency to stop.

A. although

B. because

C. before

D. later on

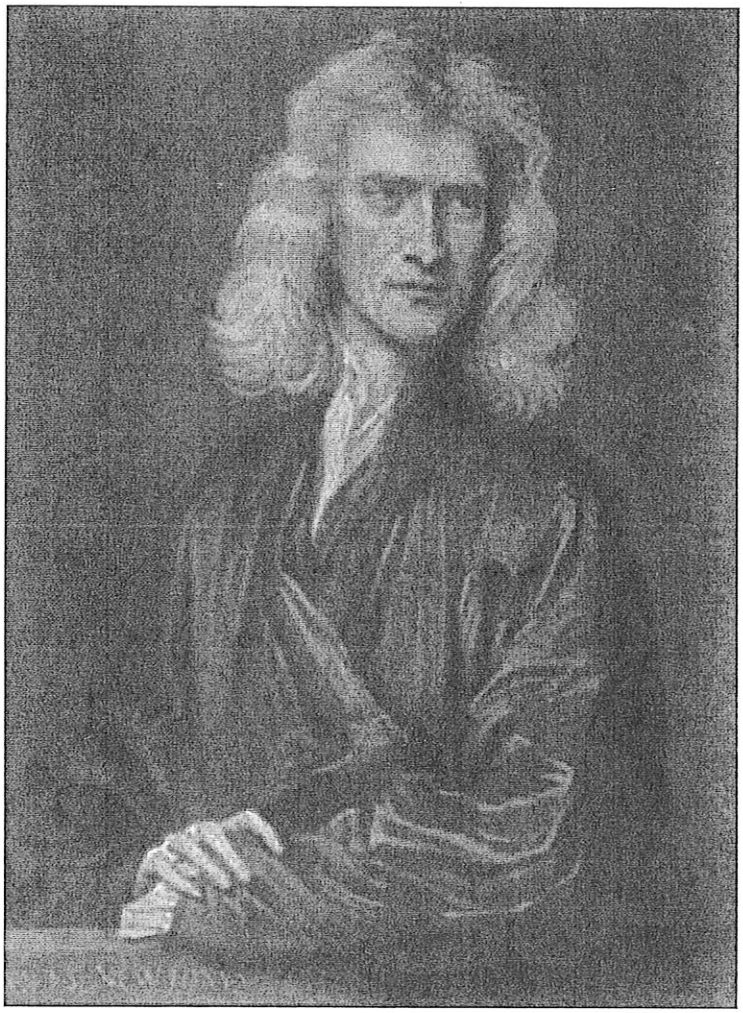
8. What are some things cyclists do to reduce friction?

9. According to Newton's First Law of Motion, what will happen to a soccer ball that is kicked?

10. The end of the passage states that without the forces of physics, every time you kicked a soccer ball or jumped on a bike, the ball and the bike would keep going, forever. Explain why the ball and bike would keep going, using evidence from the passage.

This Is How Orbits Work!

The text and image are from NASA Space Place.



Sir Isaac Newton

Isaac Newton was a great scientist and mathematician who lived more than 300 years ago. He understood and wrote about many of the laws of motion that we see at work every day. To explain how one body can orbit another, he asked his readers to imagine a cannon on top of a very, VERY tall mountain. (Our cannon is on a very tall, imaginary lifter that goes up and down, but it is the same idea.)

The cannon is loaded with gunpowder and fired. The cannonball follows a curve, falling faster and faster as a result of Earth's gravity, and hits the Earth at some distance away.

What if we use more gunpowder? Here's what might happen: (Note that these amounts of gunpowder are just imaginary, not meant to be precise! Also, we are ignoring the fact that the air would cause drag on the cannonball and slow it down.)

Amount of Gunpowder	What Happens
2 bags of gunpowder:	Cannonball goes faster and gets farther before gravity pulls it back to Earth.
3 bags of gunpowder:	Cannonball is going so fast that it falls all the way around the world. It is in orbit!
4 bags of gunpowder:	Cannonball orbits Earth again, but goes even higher at the peak of its arc.
5 bags of gunpowder:	Cannonball is going so fast it completely escapes Earth's gravity and heads out into space, maybe to an asteroid or Mars or Jupiter!

The same thing happens when the Space Shuttle or a satellite is launched into orbit. The rocket boosts the spacecraft up to the height of a "very tall mountain" and also gives the spacecraft its forward speed, like the gunpowder gives the cannonball. So the spacecraft just falls all the way around the Earth, never hitting the surface. The curve of the spacecraft's path is about the same as the curve of Earth's surface. So astronauts orbiting Earth aren't really weightless, they are just falling . . . and falling, and falling!

How orbits work depends on basic laws of physics, as Newton described them.

Name: _____ **Date:** _____

1. What is a meaning of the word **orbit**?

A. the science of matter

B. the uniform of a chef

C. a sphere of influence

2. What is another meaning of the word **orbit**?

A. a feeling of self-respect and personal worth

B. the path of a moon, planet, or space capsule

C. buying or selling securities or commodities

Please use each answer choice only once. Choose the one word that best completes the sentence.

3. The _____ itself looked like a stubby airplane.

A. orbited

B. orbits

C. orbit

D. orbiter

E. orbiting

4. Many thought that the Sun and all the planets _____, or move around, Earth.

A. orbited

B. orbits

C. orbit

D. orbiter

E. orbiting

5. Many comets have _____ that are tilted.

A. orbited
B. orbits
C. orbit
D. orbiter
E. orbiting

6. They _____ the earth, passing over most of its countries in turn.

A. orbited
B. orbits
C. orbit
D. orbiter
E. orbiting

7. Traveling around an object in space is called _____.

A. orbited
B. orbits
C. orbit
D. orbiter
E. orbiting

8. Please write your own sentence using the word **orbit**.

9. What would you like to remember about the meaning of the word **orbit** so that you can use it when you write or speak?

Name: _____ **Date:** _____

1. What is a meaning of the word **gravity**?

A. the difference in electrostatic potential between two points in space

B. the force of attraction between all masses in the universe

C. the act of preparing something (as food) by the application of heat

2. What is another meaning of the word **gravity**?

A. a group of people who work together

B. a particular way of phrasing an idea

C. a manner that is serious and solemn

Please use each answer choice only once. Choose the one word that best completes the sentence.

3. _____ is a mutually attractive force between objects that have mass.

A. gravitational

B. gravitation

C. gravitate

D. gravity

E. gravitas

4. _____ force affects objects on Earth as well as stars, planets, and all other objects in the universe.

A. gravitational

B. gravitation

C. gravitate

D. gravity

E. gravitas

5. The Moon and other objects have _____, too.

A. gravitational
B. gravitation
C. gravitate
D. gravity
E. gravitas

6. The earnestness evident in Cicero's advice provides another clue to the Roman character, for a trait which Romans admired was "_____".

A. gravitational
B. gravitation
C. gravitate
D. gravity
E. gravitas

7. You _____ here just the way you used to go to Indian Rock.

A. gravitational
B. gravitation
C. gravitate
D. gravity
E. gravitas

8. Please write your own sentence using the word **gravity**.

9. What would you like to remember about the meaning of the word **gravity** so that you can use it when you write or speak?