5th Grade- Mrs. Bishop & Mr. Goreham
Week 4

Weekday Contact Hours

Mrs. Bishop: 1:30-3:30
Contact: **cbishop@tusd.net** and Class Dojo

Mr. Goreham: 11:00-1:00
Contact: **dgoreham@tusd.net**

ASSIGNMENTS:

MATH: Estimation and Multiplication
Solve word problems involving (+/-) of fractions
M: L8 Est. Products 125, 129, 130
T: L9 X 1-Digit #s 131, 135, 136
W: L10 X 2-Digit #s 137, 141, 142
Th: Review Multiplication

READING: Daily Reading & Summary
Understands 5th literature/informational text
Text: Pick books you enjoy ☺
Please read 30 minutes M-Th and write a summary of what you've read.

WRITING: Opinion
Writing:
Text: "Words to Save the World" (in packet)
□ Write a response using text evidence.

Comprehension Skill/Strategy with Science:
Text: "The Father of Earth Day"
Answer Questions

Vocabulary Skill: Write sentences

Vocabulary Strategy: Synonyms and Antonyms

Grammar: Adverbs that Compare
□ Combining Sentences

Spelling:
Complete the spelling page.
Complete the spelling activities:
□ Number Prefixes.
□ Write spelling sentences or a story.

Science: "What is Matter?"

Social Studies: " The Two Harriets, Heroines of Abolition"

Essential Question: What impact do our actions have on the world?

Unit 6 Week 4

Story
Planting the Trees of Kenya
Genre
Biography

Story
"The Park Project"
Genre
Expository Text

Story
"Words to Save the World"
Genre
Biography

Comprehension Strategy
ask and answer questions

Comprehension Skill
text structure: problem and solution

Vocabulary Strategy
synonyms and antonyms

Writing Traits
ideas-focus on a topic

Grammar
sentence combining

Other Skills
fluency: expression and phrasing

Genre
Biography

SPELLING/PHONICS
prefixes
uni-, bi-, tri-, cent-

tripod
triplet
unicorn
uniform
unison
biweekly
triple
bicycle
tricycle
unicycle
triangle
bisect
trio
unify
centipede
centimeter
century
binoculars
universe
university

Vocabulary

export- the act or process of sending goods to another country to be sold or traded

glistening- shining or sparkling with reflected light

influence- to change or affect the thought or behavior of; persuade

landscape- the stretch of land that can be seen from a place; a region's landforms

native- belonging to a place by birth

plantations- large estates or farms that grow one crop

restore- to bring back to a former or original state or condition

urged- tried to convince or persuade

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Estimate Products

Lesson 8

ESSENTIAL QUESTION
What strategies can be used to multiply whole numbers?

When a problem asks for *about* how many, you can use estimation, rounding, and/or compatible numbers. **Compatible numbers** are numbers in a problem that are easy to compute mentally.

Math in My World

Watch   Tutor

Example 1

A pet store has 12 gecko lizards for sale. Each gecko lizard costs $92. About how much money would the store make if it sells all 12 gecko lizards?

Estimate the product of 92 and 12.

One Way Round one factor.

THINK It is easier to compute 92×10 than 90×12.

$$92 \longrightarrow 9 \quad 2$$
$$\times 12 \longrightarrow \times 1 \square$$

Round 12 to the nearest ten.

Find 92×10 mentally.

By rounding one factor, the estimate is _____.

Another Way Round both factors.

$$92 \longrightarrow 9 \square$$
$$\times 12 \longrightarrow \times 1 \square$$

Round 92 to the nearest ten.

Round 12 to the nearest ten.

Find 90×10 mentally.

By rounding both factors, the estimate is _____.

$92

MY Homework

Lesson 8
Estimate Products

Homework Helper

Need help? connectED.mcgraw-hill.com

Mountain View Elementary is sending 21 boxes of magazines to a school in Uruguay. There are 154 magazines in each box. About how many magazines are they sending?

South America
Uruguay

Estimate the product of 21 and 154.

One Way Round each factor to the nearest ten.

$$\begin{array}{r} 154 \\ \times\ 21 \end{array} \longrightarrow \begin{array}{r} 150 \\ \times\ 20 \\ \hline 3,000 \end{array}$$

Round 154 to the nearest ten.
Round 21 to the nearest ten.
Find 150 × 20 mentally.

By rounding both factors to the nearest ten, the estimate is about

3,000 magazines.

Another Way Use compatible numbers.

$$\begin{array}{r} 154 \\ \times\ 21 \end{array} \longrightarrow \begin{array}{r} 200 \\ \times\ 20 \\ \hline 4,000 \end{array}$$

Use numbers that are easy to multiply mentally such as 200 and 20.
Find 200 × 20 mentally.

By using compatible numbers, the estimate is about

4,000 magazines.

Practice

Estimate by rounding or using compatible numbers. Show how you estimated.

1.
$$\begin{array}{r} 4 \\ \times\ 24 \end{array}$$

2.
$$\begin{array}{r} 76 \\ \times\ 78 \end{array}$$

3.
$$\begin{array}{r} 508 \\ \times\ 27 \end{array}$$

Problem Solving

4. For a school assembly, students sit in chairs that are arranged in 53 rows. There are 12 chairs in each row. About how many students can be seated? Show how you estimated.

_____

5. Klara bought a dozen bags of bird food for $27. Use compatible numbers to find the approximate cost of six dozen bags of bird food. Show how you estimated.

_____

CHEAP! CHEAP!

6. **Mathematical PRACTICE 3** **Find the Error** Rico is estimating 139 × 18. Find his mistake and correct it.

100 × 10 = 1,000

_____

_____

Vocabulary Check

Fill in the blank with the correct term or number to complete the sentence.

7. Compatible numbers are numbers in a problem that are easy to

compute _____ .

Test Practice

8. On a cross-country vacation, Maria filled her 14-gallon gas tank eleven times. Which is the best estimate of how many gallons of gas she put in the tank altogether?

Ⓐ 75 gallons   Ⓒ 200 gallons

Ⓑ 150 gallons   Ⓓ 225 gallons

Need more practice? Download Extra Practice at ⊘**connectED.mcgraw-hill.com**

Name _____

Multiply by One-Digit Numbers

Lesson 9

ESSENTIAL QUESTION
What strategies can be used to multiply whole numbers?

Math in My World

Tools **Watch** **Tutor**

Example 1

Grace and her three friends each paid $38 for an admission ticket to an amusement park. The total paid can be found by multiplying 4 and 38.

Find 38 × 4.

HUGE FUN!

1 **Multiply the ones.**

8 ones × 4 = 32 ones

Regroup 32 ones as 3 tens and 2 ones.

2 **Multiply the tens.**

3 tens × 4 = 12 tens

Add any new tens.

12 tens + 3 tens = 15 tens

$$
\begin{array}{r}
\square \\
3\ 8 \\
\times \quad 4 \\
\hline
\square\ \square\ \square
\end{array}
$$

So, the total amount paid for admission to

an amusement park is _____.

Check You can use an area model to check your answer.

	30	+	8
4 {	120		32

MY Homework

Homework Helper

Need help? connectED.mcgraw-hill.com

The world's largest cactus is 5 times as tall as the cactus shown. How tall is the world's largest cactus?

Find 15×5.

Estimate $20 \times 5 = 100$

1 **Multiply the ones.**

5 ones $\times$ 5 = 25 ones

Regroup 25 ones as 2 tens and 5 ones.

2 **Multiply the tens.**

1 ten $\times$ 5 = 5 tens

Add any new tens.

5 tens + 2 tens = 7 tens

$$\begin{array}{r} 2 \\ 15 \\ \times\ 5 \\ \hline 75 \end{array}$$

15 ft

So, the world's largest cactus is 75 feet tall.

Check Compare to the estimate. $75 \approx 100$

Practice

Estimate. Then multiply. Use your estimate to check your answer.

1. $\begin{array}{r} 18 \\ \times\ 8 \\ \hline \end{array}$

2. $\begin{array}{r} 72 \\ \times\ 4 \\ \hline \end{array}$

3. $\begin{array}{r} 341 \\ \times\ 4 \\ \hline \end{array}$

![Real World icon] **Problem Solving**

Mathematical
PRACTICE ➌ **Check for Reasonableness** Malcolm ran
the 440-yard dash and the 220-yard dash at a track meet.
There are 3 feet in one yard. How many total feet did
Malcolm run? Estimate first. Then check for reasonableness.

_____

5. Each student in Mrs. Henderson's science class brought in
   3 books for the book donation. If there are 25 students in
   the class, how many total books did they collect?

_____

6. Karen and Anthony are setting up rows for the piano recital.
   They set up 24 rows with 6 chairs in each row. How
   many total people will the rows seat?

_____

7. Veronica brought her turtle out of its aquarium for 15 minutes
   every night for 7 days. How many total minutes did she bring
   her turtle out of its aquarium?

_____

Test Practice

8. A restaurant has 36 tables. If each table can sit five people,
   how many people can be seated at the restaurant?

   Ⓐ 216 people

   Ⓑ 180 people

   Ⓒ 150 people

   Ⓓ 41 people

Name

Multiply by Two-Digit Numbers

Lesson 10

ESSENTIAL QUESTION
What strategies can be used to multiply whole numbers?

Math in My World

Watch Tutor

Example 1

Domestic cats can run up to 44 feet per second on land. At this rate, how many feet could a cat run in 12 seconds?

Find 44×12.

Estimate $44 \times 10 = $ _____

1 **Multiply the ones.**

$44 \times 2 = 88$

$$
\begin{array}{r}
4\ 4 \\
\times\ 1\ 2 \\
\hline
\square\ \square \\
+\ \square\ \square\ 0 \\
\hline
\square\ \square\ \square
\end{array}
$$

2 **Multiply the tens.**

$44 \times 10 = 440$

Helpful Hint
By estimating first, you can determine if your answer is reasonable.

3 **Add.**

$88 + 440 = 528$

So, a domestic cat can run _____ feet in 12 seconds.

Check Compare to the estimate. _____ $\approx$ _____

MY Homework

Lesson 10

Multiply by Two-Digit Numbers

Homework Helper

Need help? connectED.mcgraw-hill.com

Alicia lives in Nashville, Tennessee. Last year her family drove to Atlanta, Georgia, each month to visit her grandmother. Find the total distance they drove to visit her grandmother for the year.

Destination City From Nashville	Round-Trip Distance (mi)
Atlanta	498
Raleigh	1,080

Find 498×12.

Estimate $500 \times 10 = 5,000$

1 **Multiply the ones.**

$498 \times 2 = 996$

2 **Multiply the tens.**

$498 \times 10 = 4,980$

$$\begin{array}{r} 498 \\ \times \quad 12 \\ \hline 996 \\ + \ 4,980 \\ \hline 5,976 \end{array}$$

3 **Add.**

$996 + 4,980 = 5,976$

So, they drove a total of 5,976 miles for the year.

Check Compare to the estimate. $5,976 \approx 5,000$

Practice

Estimate. Then multiply. Use your estimate to check your answer.

1. $\begin{array}{r} 19 \\ \times \ 15 \\ \hline \end{array}$

2. $\begin{array}{r} 43 \\ \times \ 65 \\ \hline \end{array}$

3. $470 \times 56 =$ _____

Problem Solving

4. Ms. Jenkins was arranging chairs for a school awards assembly. Each row contained 15 chairs. If there were 21 rows, how many chairs had to be arranged?

_____

5. Leon earns $14 an hour. How much does he earn in 4 weeks if he works 12 hours each week?

_____

6. **Mathematical PRACTICE** **5** **Use Math Tools** Without actually calculating, how much greater is the product of 98 × 50 than the product of 97 × 50?

_____

7. The table shows Katrina's prices for dog walking. If she walks 5 medium-sized dogs and 8 large-sized dogs for 12 weeks, how much will she earn?

Dog Type	Cost Per Week ($)
Small	10
Medium	12
Large	14

_____

Test Practice

8. Each day there are 12 tours at the glass factory. Twenty-eight people can go on a tour. How many people can tour the glass factory each day?

Ⓐ 236 people   Ⓒ 336 people

Ⓑ 280 people   Ⓓ 436 people

Review

Estimate. Then multiply. Use your estimate to check your answer.

16. 72
   × 36

17. 23
   × 84

18. 321
   × 64

Find each product mentally using the Distributive Property.
Show the steps that you used.

19. 8 × 71 = _____
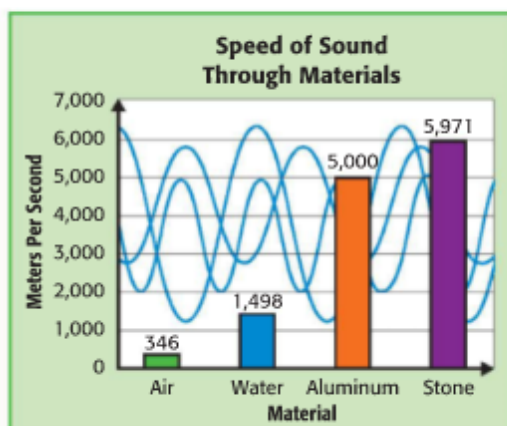
20. 6 × 83 = _____

Name _____

Problem Solving

For Exercises 21–23, use the following
information. Then estimate to find
the distance sound travels through
each material in each given time.

Sound travels through different materials
at different speeds. For example, the
graph shows that in one second, sound
travels 5,971 meters through stone.
However, it travels only 346 meters
through air in one second.

Speed of Sound Through Materials

Meters Per Second — 7,000 / 6,000 / 5,000 / 4,000 / 3,000 / 2,000 / 1,000 / 0
Air 346, Water 1,498, Aluminum 5,000, Stone 5,971
Material

21. air, 20 seconds

_____

22. stone, 12 seconds

_____

23. Estimate how much farther sound travels through stone
in 17 seconds than through aluminum in the same time.

_____

24. Sylvia is saving to buy a new terrarium for her iguana.
She saves $2 the first week, $4 the second week, $8 the
third week, and so on. How much total money will she
save in 5 weeks? Solve by completing the table.

Week	1	2	3	4	5
Amount Saved ($)	2	4	8		

I want a new home.

Shared Read   **Genre • Biography**

Words to Save the World

The Work of Rachel Carson

Essential Question

What impact do our actions have on our world?

Read about how the biologist Rachel Carson used the power of writing to change the world.

424

Sometimes, the quietest voice can spark the most clamorous outrage. Combining her love of nature with a belief in scientific accuracy, the soft-spoken writer Rachel Carson raised awareness about environmental issues. As a result, the U.S. government strengthened the rules and regulations regarding the use of chemical pesticides. Many people consider Rachel's book *Silent Spring* the foundation of today's environmental movement.

Early Influences

Rachel was born in Springdale, Pennsylvania, in 1907. Throughout her childhood, her mother encouraged her to explore the landscape surrounding the family's farm. Often equipped with binoculars, Rachel developed a love of nature that affected many of her decisions. For example, she first chose to study English literature and writing when she went to college. However, she later decided to study biology. While studying at a marine

◀ **Rachel preferred working alone as she gathered information.**

laboratory, she became fascinated by the glistening and shimmering seascape.

From an early age, Rachel had loved to write. These writing skills proved useful to her career. She began by creating radio programs for the U.S. Bureau of Fisheries. She then became an editor and librarian for the agency. While she was working, she submitted her own articles to newspapers and magazines. Rachel eventually published three books about the ocean and its native plants and animals. This trilogy included *Under the Sea-Wind, The Sea Around Us,* and *The Edge of the Sea.*

Rachel supported her ideas with well-researched facts.

(l) Alfred Eisenstaedt/Time Life Pictures/Getty Images; (r) Alfred Eisenstaedt/Time & Life Pictures/Getty Images
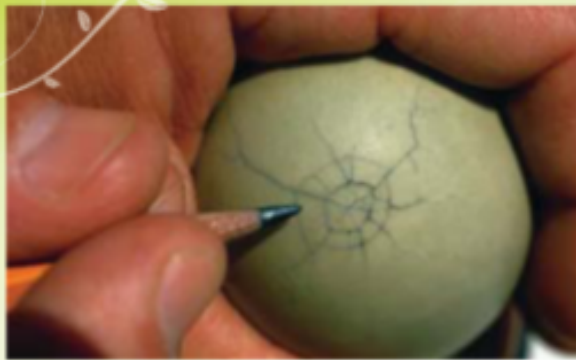
Rachel Carson's research revealed that DDT caused damage to birds and eggs.

A Call to Action

The success of Rachel's books allowed her to devote more time to her own projects. She built a cottage close to the sea on the coast of Maine. Soon, however, a letter arrived from some old friends, Olga and Stuart Huckins. They described problems resulting from the spraying of DDT on their private wildlife sanctuary. Chemical companies had developed DDT as an effective solution to crop-eating insects on farms and **plantations**. At the Huckins's sanctuary, however, the chemical also seemed to be harming birds.

In response, Rachel hired assistants to help research the Huckins's claim. Worried by the slow pace of their work, she decided to continue alone. By publishing her findings, she hoped

to warn about the dangers of these new chemicals. In order to dramatize the situation, she **urged** readers to imagine a world without songbirds. The book's title, *Silent Spring*, describes this possible result of pesticide abuse.

Silent Spring prompted readers to raise their voices in unison against the chemical corporations. They demanded an investigation into pesticides and implored the government to restrict their use. In response, President John Kennedy created a Congressional committee to study the matter. Rachel testified before this group and provided facts and information to **influence** its decisions.

Though a pesticide may target insects, animals can also feel its effects.

Sample Food Chains

TROPHIC LEVEL	GRASSLAND BIOME	OCEAN BIOME
Primary Producer	grass	phytoplankton
Primary Consumer	grasshopper	zooplankton
Secondary Consumer	rat	fish
Tertiary Consumer	snake	seal

A Strong Reaction

Meanwhile, the chemical companies struggled to counter Rachel's claims. Despite her reasonable approach to the problem, they tried to depict her accusations as irrational. They published articles and reports that mocked her writing style and belittled her ideas. Advertisements on television proclaimed the safety of their products. When these ads did not change public opinion, they pulled financial support from programs that featured Rachel.

Rachel worried that once pesticides poisoned an area, it might be impossible to **restore** the environment to its original state. "Man's attitude toward nature is today critically important simply because we have now acquired a fateful power to alter and destroy nature," she said in an interview. Her testimony led to restrictions on certain pesticides in the United States. Even so, chemical companies continued to produce them for **export** to other countries.

Rachel Carson died shortly after *Silent Spring* was published, but her voice survives within her books. Her love of nature endures, along with her quiet desire to preserve and protect the natural world.

Carson understood the power her words had to educate others, especially children.
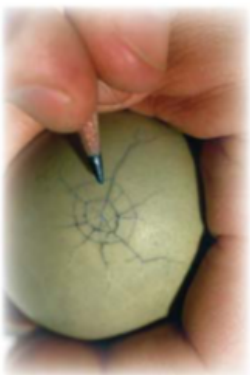
Make Connections

What impact did the publication of *Silent Spring* have on the makers of pesticides such as DDT? ESSENTIAL QUESTION

Think about a time when you wrote or spoke about something that needed to change. What impact did your words have? TEXT TO SELF

Write About the Text

Yasmine

I answered the question: *In your opinion, does the author show any bias about the use of pesticides? Use text evidence.*

Pages 424–427

Student Model: *Opinion*

I don't think the author shows any bias about the use of pesticides. The author tells how Rachel Carson worked to warn people about the effects of pesticides on nature. The author never states that pesticides are bad. Instead, the author tells how Rachel researched the damage pesticides could cause. Then the author describes how Rachel issued a call to action by writing a book, asking people to think about a life without birds, and speaking before Congress. The government, not the author, decided to restrict or ban some pesticides in the United States. If these chemicals weren't harmful, the government wouldn't have done this.

Strong Opening
My paragraph begins by clearly stating my opinion in response to the question.

Transitions
I connected my opinion to relevant evidence.

Grammar
This **prepositional phrase** begins with the **preposition** *without* and ends with the noun *birds*.
Grammar Handbook
See page 472.

Focus on a Topic
I provided logical reasons to support my opinion.

Your Turn

In your opinion, should all pesticides be banned? Use text evidence.

Go Digital!
Write your response online. Use your editing checklist.

W.5.1a, W.5.1c See the California Standards section.

W.5.1b See the California Standards section.

SerrNovik/iStock/360/Getty Images

James P. Blair/National Geographic/Getty Images

WRITING:

Use the writing page before this, titled "Write About the Text" as a guide to answer the following question.

In your opinion, does the author have any bias towards the use of pesticides? Explain your answer using text evidence.

Name _____

Read the passage. Use the ask and answer questions strategy to guide your reading.

The Father of Earth Day

12	Imagine a world where black clouds of pollution blanketed the sky and rivers ran orange from toxic waste. What would the world be like if the
26	soil was too poisoned to grow food and bald eagles had been hunted to
40	extinction? That world might exist today, if not for the actions of Senator
53	Gaylord Nelson.

A Commitment to Conservation

55	
59	Gaylord Nelson developed an affection for nature growing up in the
70	woods of northern Wisconsin. As an adult, he brought his love of the
83	land to his political career. When he became governor of Wisconsin in
95	1959, he worked hard to protect and care for his state's natural resources.
108	His Outdoor Recreation Acquisition Program preserved thousands of
116	acres of unspoiled land. The program bought private lands and turned
127	them into wildlife habitats and public parks. Nelson also created a
138	Youth Conservation Corps. The Corps taught young people about the
148	environment while giving them jobs cleaning and caring for the state's
159	natural areas.
161	In 1962 Nelson was elected to the U.S. Senate. He hoped to do
174	for the country what he had done for the state of Wisconsin: protect
187	the environment. He found that few of his fellow senators shared his
199	concerns. Nelson hoped President John F. Kennedy could generate support
209	for environmental issues. In 1963 the senator helped plan a national
220	conservation tour for the president, but the tour did not create the support
233	for environmental issues that Nelson hoped it would.

Name _____

Taking It to the People

Senator Nelson decided to find another way to show Congress that it was important to care for the environment. In 1969, after visiting the site of an oil spill, he read about college students protesting against the Vietnam War. Why not plan a protest against pollution?

At the time, pollution was a big problem. There were no laws about clean air or clean water. Nelson wanted Congress to pass such laws, but he needed to show that people supported the legislation. He hoped a nationwide protest would do that.

Nelson called for pro-environment demonstrations around the country. The protests were held on April 22, 1970, the day Nelson called Earth Day. About 20 million people across the country took part.

Earth Day's message helped make changes that better protect our environment.

Congress heard the message. It created the Environmental Protection Agency. During the next few years, Congress passed some of the country's most important environmental legislation. These laws included the Clean Water Act, the Clean Air Act, and the Endangered Species Act.

Gaylord Nelson left the Senate and politics in 1981, but he did not stop his conservation work. He took a job with the Wilderness Society, an organization that works to protect public wild lands. In 1995, President Bill Clinton gave Nelson the Presidential Medal of Honor for his environmental work.

Nelson's Legacy

Gaylord Nelson died in 2005, but Earth Day lived on. Every year since 1970, people around the world have gathered on April 22 to celebrate the environment. The message of the demonstrations, however, has changed over the years. Instead of calling for political action, Earth Day protests now focus on what private individuals can do to help the environment. As Gaylord Nelson showed, one person can do quite a lot.

Name _____

A. Reread the passage and answer the questions.

1. What problem did Gaylord Nelson encounter in the U.S. Senate when he tried to get support for environmental issues?

   _____

   _____

   _____

2. What gave Senator Nelson an idea for a solution?

   _____

   _____

   _____

3. In what way did Senator Nelson's call for demonstrations on Earth Day help the environment?

   _____

   _____

   _____

   _____

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

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

Vocabulary SKILL:

Your Turn Practice Workbook

Name _____

export	glistening	influence	landscape
native	plantations	restore	urged

Write a complete sentence to answer each question below. In your answer, use the vocabulary word in bold.

1. Where would be a good place to photograph a **landscape**? _____

   _____

2. How would you make a **glistening** decoration? _____

   _____

3. What might **influence** you to buy something? _____

   _____

4. Where are fruit **plantations** likely to be located? _____

   _____

5. What is something that is found in your **native** country? _____

   _____

6. When has someone **urged** you to do something? _____

   _____

7. How could someone **restore** an old desk? _____

   _____

8. Why might a company decide to **export** a particular product? _____

   _____

Name _____

Read each passage and underline the word that is either a synonym or an antonym for the word in bold. Use the synonym or antonym to write a definition of the word in bold.

1. Gaylord Nelson developed an **affection** for nature growing up in the woods of northern Wisconsin. As an adult, he brought his love of the land to his political career.

   _____

2. When he became governor of Wisconsin in 1959, he worked hard to protect and care for his state's natural resources. His Outdoor Recreation Acquisition Program **preserved** thousands of acres of unspoiled land.

   _____

3. The program purchased **private** lands and converted them into wildlife habitats and public parks.

   _____

4. Nelson hoped President John F. Kennedy could **generate** support for environmental issues. In 1963 the senator helped plan a national conservation tour for the president, but the tour did not produce the amount of support for environmental issues that Nelson hoped it would.

   _____

5. Nelson wanted Congress to pass such laws, but he needed to show that people supported the **legislation**.

   _____

6. Nelson called for pro-environment **demonstrations** around the country. The protests were held on April 22, 1970, the day Nelson called Earth Day.

   _____

Name _____

unison	triplet	unicorn	tripod
biweekly	bicycle	tricycle	unicycle
triangle	bisect	trio	uniform
centimeter	century	binoculars	universe

Read each definition below. Use clues in the definition, such as numbers and root words, to write the word from the box that matches the definition.

1. a shape with three angles   _____

2. one hundredth of a meter   _____

3. to separate into two sections   _____

4. a cycle with three wheels   _____

5. a mythical animal with one horn   _____

6. a piece of clothing for one purpose   _____

7. happening every two weeks   _____

8. a stand with three legs   _____

9. a period of one hundred years   _____

10. an optical device with two sets of lenses _____

11. a cycle with only one wheel   _____

12. a group of three people   _____

Name _____

tripod	unison	tricycle	trio	century
triplet	biweekly	unicycle	unify	binoculars
unicorn	triple	triangle	centipede	universe
uniform	bicycle	bisect	centimeter	university

A. Add the prefix to form a spelling word. Write the spelling word on the line.

1. uni + verse = _____

2. tri + angle = _____

3. bi + noculars = _____

4. cent + imeter = _____

5. tri + ple = _____

6. uni + corn = _____

7. bi + weekly = _____

8. uni + versity = _____

9. tri + pod = _____

10. tri + o = _____

11. cent + ipede = _____

12. uni + form = _____

13. bi + sect = _____

14. tri + plet = _____

15. uni + son = _____

B. Write these spelling words on the lines in reverse alphabetical order:
tricycle, unicycle, century, unify, bicycle.

16. _____   18. _____   20. _____

17. _____   19. _____

Name _____

tripod	unison	tricycle	trio	century
triplet	biweekly	unicycle	unify	binoculars
unicorn	triple	triangle	centipede	universe
uniform	bicycle	bisect	centimeter	university

A. Write the spelling words that begin with each prefix.

uni-

1. _____

2. _____

3. _____

4. _____

5. _____

6. _____

7. _____

bi-

8. _____

9. _____

10. _____

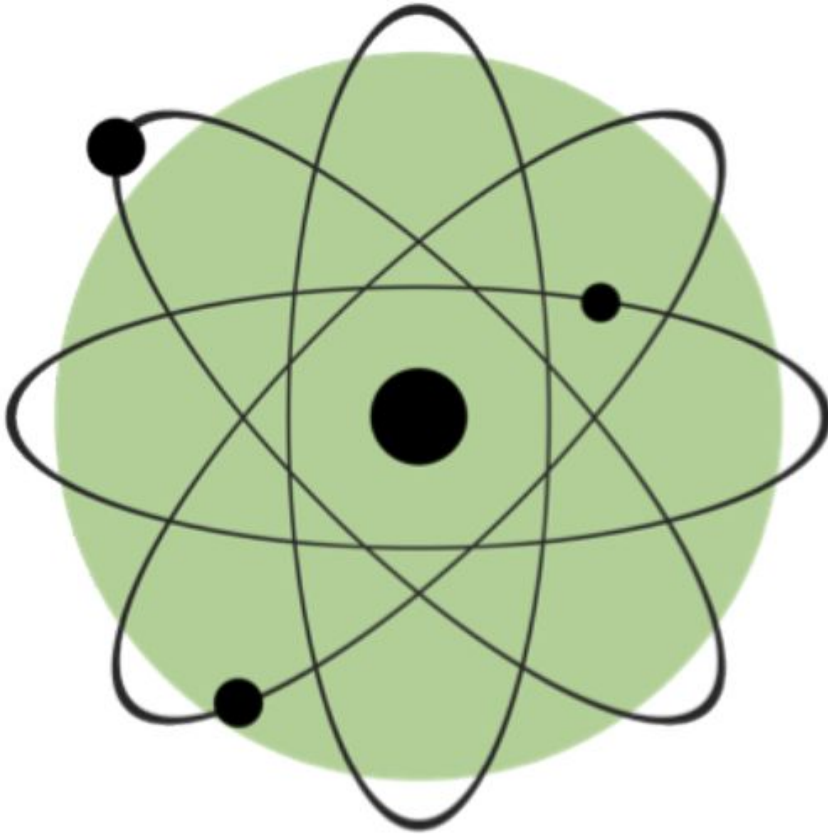11. _____

tri-

12. _____

13. _____

14. _____

15. _____

16. _____

17. _____

cent-

18. _____

19. _____

20. _____

B. Compare the words *tricycle* and *unicycle*. How are they alike? How are they different?

_____

_____

_____

What is matter?

Everything around us is made of matter—your clothes, the trees, even the water you drink! We divide matter into four major categories, which are called the four states of matter: liquid, gaseous, solid, and plasma. However, we will focus on the first three. Whatever the state of matter may be, all matter is made of tiny particles called atoms. These particles are too tiny to see with the naked eye; they're even too small to see with a regular microscope. If you line up a million atoms next to each other, they will be as thick as a single piece of human hair. So, we can only look at atoms through very powerful tools, one of them being the "scanning tunneling" microscope.

How Do We Know?

We can easily see liquids and solids around us, but most gases aren't visible. We can't see the air around us, but it is still made of atoms that constantly move around freely in space. How can we tell?

Take a balloon, for example. When we pump air into a balloon, it visibly inflates. That means that gaseous matter is filling the balloon and taking up space. The more air we blow into the balloon, the bigger it gets. Therefore, we can observe the way gas moves around space. In the same way, inflatable pool toys also fill with air so that they can float on water. When we fill the plastic shells with air, the toys take shape. Since air is lighter than water, the pool toys can rest on the water without sinking. And then we can enjoy a sunny day while floating in a pool!

Moving Atoms

Atoms are constantly moving. However, atoms move at different speeds within different states of matter. Atoms move more slowly when they are more densely packed. Atoms in solids are usually tightly packed and have less space to move around freely. This means that atoms in most solids move more slowly than atoms in most liquids.The atoms in gas usually move the fastest. Since the atoms usually move more freely in liquids and gases, they can undergo a process called diffusion. (Solids can diffuse as well, although it's a much longer process.) Diffusion is the movement of particles from a higher concentration to a lower concentration. That's why, when you spray perfume in a corner of a room, you will eventually smell it on the other side of the room. The atoms from the perfume diffuse through the air. Because of this diffusion, the perfume scent is spread.

Identification

We can identify materials according to a variety of properties. Scientists have determined several different measurements to help label materials. Some examples are temperature, hardness, color and length. Usually, these are used to measure solids, like rocks and minerals. However, temperature can be used to measure liquids as well. When geologists study rocks, they often use the Mohs scale of mineral hardness. This scale allows us to characterize the scratch resistance of various minerals. A diamond is described as hard because it is extremely difficult to scratch. Scientists can measure hardness with the Mohs scale and compare minerals to other minerals.

Scientists always use various methods to group materials together—that way, it's easier to study and compare them. That's another reason why we differentiate between liquids, gases, solids and plasmas!

Name: _____ Date: _____

1. Everything around us is made of

    A. liquids

    B. matter

    C. plasma

    D. gas

2. Why does the author describe the balloon and inflatable pool toys filling up with air?

    A. in order to explain that it is impossible to observe the way gas moves around space

    B. in order to explain that air is not made of atoms that take up space

    C. in order to explain that air is made of atoms that take up space even though air is invisible

    D. in order to prove that these are fun objects to inflate

3. Usually, atoms move slower in solids than they do in liquids. Which evidence from the passage best supports this statement?

    A. Solids, liquids, and gases can all undergo the process of diffusion.

    B. Diffusion is the movement of particles from a higher concentration to a lower concentration.

    C. The atoms in gas move the fastest.

    D. Atoms in solids are often more tightly packed than atoms in liquids, and have less space to move around freely.

4. Based on the passage, the corner where a perfume is initially sprayed has

    A. has no concentration of perfume particles

    B. has the same concentration of perfume particles as the rest of the room

    C. a lower concentration of perfume particles than the other corners of the room

    D. a higher concentration of perfume particles than the other corners of the room

5. What is this passage mainly about?

    A. matter and the properties it has in certain states

    B. the process of diffusion

    C. the different measurement scientists use to label materials

    D. the inflation of balloons and pool toys

6. Read the following sentences from the passage: "Whatever the state of matter may be, all matter is made of tiny particles called atoms. These particles are too tiny to see with the naked eye; they're even too small to see with a regular microscope. If you line up a million atoms next to each other, they will be as thick as **a single piece of human hair**."

The author uses the example of **"a single piece of human hair"** to illustrate

    A. how atoms can be seen with a regular microscope

    B. how tiny atoms actually are

    C. how hairy atoms actually are

    D. how much they look like hair

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

Scientists group materials together _____ it is easier to compare and study them that way.

    A. however

    B. but

    C. although

    D. because

The Two Harriets, Heroines of Abolition

Harriet Beecher Stowe

Harriet Tubman

Many people fought against slavery in the United States. They were called abolitionists because they wanted to abolish (get rid of) slavery. Two of the best-known abolitionists were both named Harriet: Harriet Beecher Stowe and Harriet Tubman.

Harriet Beecher Stowe was the sixth of 11 children born to a minister and his wife. She was just five years old when her mother died. At age 13, she started going to a school founded by her sister, where she learned to be a teacher and started writing. She wrote her first book at age 22.

In 1852, her novel *Uncle Tom's Cabin* was published. It quickly became a bestseller. Indeed, it was the most popular book in America. Although the book was fiction, it was based on the lives of real people. The novel tells the story of several slaves, but its main character is Tom, a man with a wife and children. Tom is separated from his family and sold to one plantation owner after another. The last of his owners is a cruel man named Simon Legree. Legree orders Tom to beat the other slaves on his plantation. Tom refuses, so Legree beats Tom. Legree orders his hired hands, called overseers, to kill Tom. While Tom dies, several of the other characters in the book escape from slavery by traveling north to Canada via what was called the Underground Railroad. The Underground Railroad was not an actual railroad, but a network of people who helped shelter and guide slaves to their freedom.

Stowe's novel moved many readers and inspired them to speak out against slavery. Many plays were performed based on the novel's characters. But her book angered people in the South, and historians believe it helped lead the Southern states to break away from the North a decade later, which marked the beginning of the Civil War. *Uncle Tom's Cabin* was so influential that when President Abraham Lincoln met Stowe in 1862, he is supposed to have said: "So you're the little woman who wrote the book that started this great war."

Like Harriet Beecher Stowe, Harriet Tubman was one of 11 children. Both of Harriet Tubman's parents were slaves on a plantation in Maryland. Tubman began working at six years old, rented out by her "master" as a weaver. As a teenager, she began working in the fields of the plantation. She suffered many beatings at the hands of the plantation's overseers, which caused permanent damage. Learning that the plantation owner planned to sell her and her brothers, she decided to escape. Guided only by the North Star in the sky, she made her way to Pennsylvania, frequently on foot.

But Tubman was not content simply to live in freedom. She became active in the Underground Railroad Harriet Beecher Stowe had written about.

Just one year after her own escape, she returned to the South to rescue her sister and her sister's two children. Then she returned once again for one of her brothers. Sometime later, she returned yet again to rescue her parents. It was not just her family she helped to become free. She wanted to help other slaves to escape. She returned to the South 19 times. The exact number of slaves that Tubman led to freedom is unknown; a 19th century biography stated that she rescued 300 slaves, while modern historians estimate the total was closer to 70.

During the Civil War, Tubman worked for the Union Army as a nurse and a cook. She also became a spy. In one daring mission, she learned the position of the Confederate Army along the Combahee River in South Carolina and traveled on a gunboat with hundreds of Union Army soldiers as they freed about 750 slaves.

Both Harriets lived fruitful lives long past the Civil War. Harriet Beecher Stowe continued to write, publishing more than 30 books. In her 80s, Harriet Tubman opened a nursing home in her adopted hometown of Auburn, NY for older African Americans. Both spoke out for women's rights. But Harriet Tubman and Harriet Beecher Stowe are now recognized for their different but important roles in ending slavery in the United States of America.

1. What is an abolitionist?

    A. someone who was in favor of slavery

    B. someone who was well-educated

    C. someone who wanted to get rid of slavery

    D. someone who has escaped from slavery

2. How does the author compare Harriet Tubman and Harriet Beecher Stowe?

    A. They were both abolitionists.

    B. They were both African-Americans.

    C. They were both famous authors.

    D. They both worked for the Union Army.

3. Harriet Tubman's work to improve the lives of African-Americans continued after the Civil War. What evidence from the passage supports this conclusion?

    A. "But Tubman was not content simply to live in freedom. She became active in the Underground Railroad Harriet Beecher Stowe had written about."

    B. "In her 80s, Harriet Tubman opened a nursing home in her adopted hometown of Auburn NY for older African-Americans."

    C. "Just one year after her own escape, she returned to the South to rescue her sister and her sister's two children. Then she returned once again for one of her brothers."

    D. "During the Civil War, Tubman worked for the Union Army as a nurse and a cook. She also became a spy."