AMI PACKETS

#41 - #45

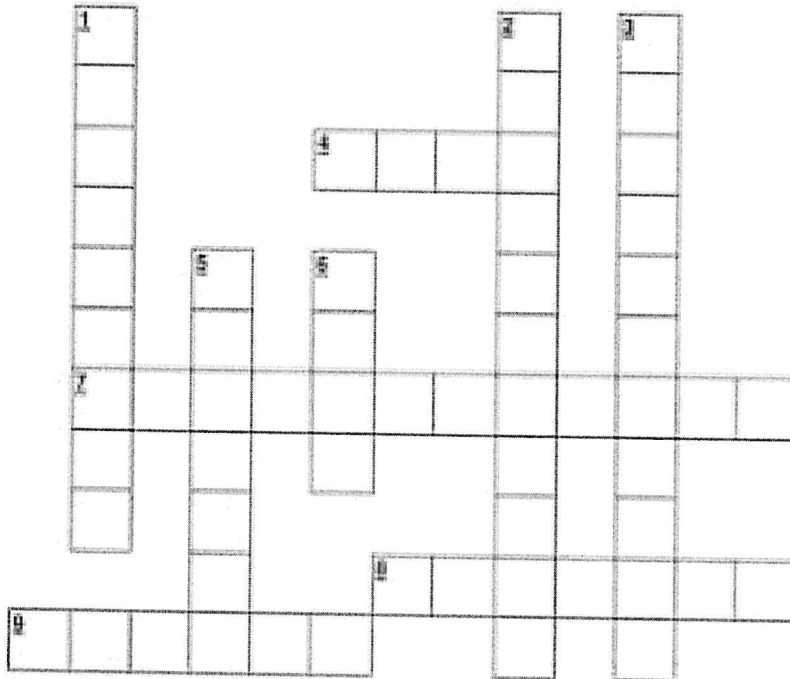# FOR THE WEEK OF

MAY 18TH – MAY 22nd

Day #41

Complete the following crossword puzzle by identifying the correct parts of speech.

The Parts of Speech

ACROSS

4 Names a person, place, or thing. (boy, town, ball)

7 A short exclamation. (Hi!, Uh, Ah!)

8 Substitutes a noun or a noun phrase to show another name for a person, place, or thing. (he, whom)

9 The part of speech that changes a verb, adjective, or adverb. (very, rapidly)

DOWN

1 Describes a noun. (cold, wet)

2 A word the joins two parts of a sentence. (but, and, or)

3 A word that connects a noun or pronoun to another word in the sentence. (before, into)

5 A word that is put next to a noun. (the, a, an)

6 An action word. (run, clap)

WORD BANK: Adjective, adverb, article, conjunction, interjection, noun, preposition, pronoun, verb.

Day #42

Review the examples of figurative language on the following chart.

Complete the chart on the next page with your own examples.

Figurative Language

Alliteration
Repeating the same beginning sound in more than two words.

Seven snakes slithered silently.
Crazy kangaroos kissed quietly.

Your own example:

Hyperbole
An obvious exaggeration.

The books were stacked to the sky.
I have told you a million times.

Your own example:

Metaphor
A comparison between two unlike things *without* using "like", "as" or "than".

Laughter is music of the soul.
His face was stone when she said she loved him.

Your own example:

Onomatopoeia
Words that sound like the object or actions they refer to.

The bells clanged and jingled.
Whoosh... the wind blew in and slammed the door.

Your own example:

Personification
Giving non-human objects human qualities.

The sun smiled on the angry clouds.
The t.v. talked all night.

Your own example:

Simile
A comparison of two unlike things using "like", "as" or "than".

The water was as smooth as glass.
Tim and his brother fought like cats and dogs.

Your own example:
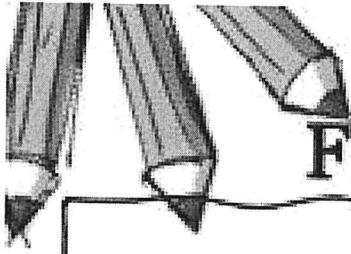
Figurative Language

Day #43

Complete the following spring word search.

Name_____

Date_____ Class_____

SPRING WORD SEARCH

```
J W K N V P E F B A R M E L M D I U A V
R K E J M P B N B M M N I I K V J C M L
U A R Z H U C I R S S E N L F X H A R X
E Z I A D C M Y L I Q L N Q N A R S E B
L T X N G M Y G R F C X P Y N C P U C O
C I A G C N Z C Y F K N G H I M B P R
T V W R I K Z G X A I H E R E W O L F N
E A I D B T S Y S M A K P U U L S T P Q
K C P D E B X G D Z O M I Q A S G W W
I J N H O M L N K U T I C J G I O U F A
H E Z Z S I E D I X H U O S F L O C K
B G J D Z R R V C T A F H T B L B W M F
E E X C P L V U I J N S R T U O O H A N
M L D S L I R P A W Y P N I N W G Y W A
B V I V V F B Y U R A L E I E O H N A U
N J N D N L E T G V U A D C J N M N K E
B L O O M W E X B J B I R C L D D U E N
D E N W E L C C M A B K A R T E U S N J
Z S G N Z R E F R E S H G C T L A S U O
C L E Z X D M Z Y T O K A L A X P N S Y
I I I P L A Y E O U D M E S W O M F D N
S R L D Y P G G Q Y P M J W R E L V Z P
D R I O R A N E O J P R X D A R I Q I R
V S H H R U X V W O R G N R D O X O I T
I L J T K F S W E E T F H U P D R B Y M
X F I W E H N E T F C T M Z F J R V P M
L H K Z Q R H G G C S K T U J Q V M N J
```

35 WORDS

April
Awaken
Bask
Bloom
Blossom
Born
Bud
Camp
Celebrate
Change
Clean
Drizzle
Drops
Enjoy
Flow
Flower
Friends
Frolic
Fun
Garden
Grow
Heat
Hike
March
May
Melt
Month
Mow
New
Play
Rain
Refresh
Spring
Sunny
Sweet

Day #44

Think about one of your favorite characters from a short story, book or movie. Imagine who they would be friends with, what they like to do and what they might post on their social media pages. Next, create a Facebook profile, using the template below, for your fictional character.

Name: _____ Date: _____ Hour: _____

fakebook

| Timeline | About | Photos 433 | Friends 729 | More |

About
- Works at
- Lives in
- In a relationship with
- From

Friends

Likes

Status Photo Place Life Event

Post

5 minutes ago near

Like   Comment   Share

2 minutes via mobile

4 minutes ago near

11 hours ago near

Like   Comment   Share

Day #45

Find these common English terms in the puzzle below.

```
C C G E I E C N A N O S S A E D A U S R E P
A C O G L U P R Y I B G N I K A E P S L D X
U R S N N I E A A A E U M Y D E S C R I B E
A E C Y T I M V B D S O D O R O H P A T E M
R A Q O S R T I I S U S P E N S E F D F B Y
G T Q U T T O I S T E R E O I O R E V J R Q
U I U Q A N I L R D C Q H P T T L K K T E Y
E V E O N E Y H L W U E W Y P A R O E H V R
D E S L Z M R A P E L R J E M T M O G F D E
S E T I A B D N L R D A R D R E P O H U A G
B M I L C M U J O P H S C A A C X A N S E A
T O O S A R D R U O Y G I R A N L T O B M
N T N S T J O O E N N E T E R O T L L I D I
E I Y F O N S G I P D N G H I O E I R M T S
M V L U R E A F R Y A N L S M M T T K M H L
S E R D Y U I O U N A D U V E R S E P K E E
S O F V G C P I O H R L Z H I J E R H T A W
E X N N A H B S F C L Q T A M Y Q A Q R T O
S R A T E R N F V A O M R O F N I T D I R V
S L I C E O I F O R E S H A D O W I T I E C
A O Y V C L W G N I N E T S I L N O C D N L
N U E F C C O N T R A S T C E Y M N C G Y G
```

ADJECTIVE	IMAGERY	RHYME
ADVERB	INFORM	RHYTHM
ALLITERATION	LANGUAGE	SHORT
ALLUSION	LISTENING	SIMILE
ARGUE	METAPHOR	SOLILOQUOY
ASSESSMENT	MONOLOGUE	SPEAKING
ASSONANCE	NOUN	STANZA
CLIFFHANGER	ONOMATOPOEIA	STORY
CONSONANT	PERSONIFICATION	SUSPENSE
CONTRAST	PERSUADE	THEATRE
CONTROLLED	PLAY	THEME
CREATIVE	POETRY	TRAGEDY
DESCRIBE	PROPHECY	VERB
EMOTIVE	PROSE	VERSE
ENJAMBMENT	QUESTION	VOWEL
ESSAY	READING	WRITING
FORESHADOW	RHETORICAL	

What Do You Call Two Railroad Trains After a Head-on Collision?

First, SIMPLIFY each expression below. Then EVALUATE the expression if

$$a = 3, b = -2, \text{ and } c = -6$$

Find the simplified expression in the answer column and notice the letter next to it. Find the value of the expression at the bottom of the page and write this letter above it.

(1) $9a + 3 - 2a$

(2) $8 - 5b - 1$

(3) $-4b - 6 + 20b - 3$

(4) $2 - (-8c) + 24 - 7c$

(5) $5a - 9b + a - 6b$

(6) $3b + 11c - 4b - c$

(7) $9a - 1 + 8c - 8a + c$

(8) $12c + 5a + 7 + (-13c) + 4a$

(9) $-15 - 6c + 3b - 6c + 9 - 2b$

(10) $3a + 7b + 2c - a - 4b$

(11) $-8a - b - (-6c) - 2a - b - 5c$

(12) $b - 4c + 3a - c - 9b - 4a$

(13) $-3c + 7a + 5 + 17b + 2c + b + (-7a)$

(14) $2 - a - (-b) + c + (-a) - b - (-c)$

(B) $16b - 3c + 5$

(L) $c + 26$

(E) $7a + 3$

(N) $18b - c + 5$

(T) $b - 12c - 6$

(A) $-5b + 7$

(A) $-b + 10c$

(W) $16b - 9$

(E) $9a - c + 7$

(K) $-a - 8b - 5c$

(R) $-2a + 2c + 2$

(E) $6a - 15b$

(S) $b - 10c + 6$

(C) $2a + 3b + 2c$

(D) $a + 9c - 1$

(H) $-a - 10b - 8c$

(G) $-10a - 2b + c$

−58	−41	−16	24	−12	43	48	−52	64	17	−25	−32	20	40

OBJECTIVE 3–b: To simplify and then evaluate expressions.

What Happened to Ray Floob After He Fell Off the Empire State Building?

Simplify each expression below. Circle the letter of each answer. Then rearrange the circled letters in each section to make a word. Write the words in order in the boxes at the bottom of the page. You will find the answer to the title question.
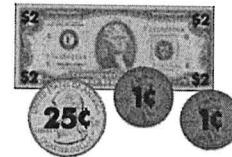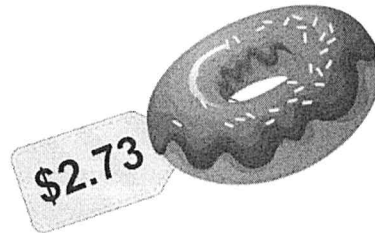
#	Expression				
①	$3x + 2(5x - 7)$	S $20x - 3$	Y $20x - 18$
②	$9 - 3(2x - 4)$	E $13x - 14$	N $5x + 11$
③	$8x - 6(3 - 2x)$	T $5x + 15$	H $-6x + 21$
④	$-5 + 5(x + 4)$		

⑤	$4(6n + 9) - 10n$	O $14n + 36$	S $19n + 36$
⑥	$14 - 3(4n - 1)$	E $-12n + 13$	N $-12n + 17$
⑦	$-8n - 8(-4 - 2n)$	W $8n + 32$	T $8n - 1$

⑧	$7k - 2(3k + 1) - 9$	L $2k + 7$	C $-13k + 34$
⑨	$-6 + 5(8 - k) - 8k$	A $-7k + 37$	I $-7k + 30$
⑩	$k + 1 - 4(2k - 9)$	K $2k - 4$	L $k - 11$
⑪	$-10k - 3 + 2(5 + 6k)$		

⑫	$8 + 9x + 4(11 - 2x)$	A $14x + 30$	R $6x + 52$
⑬	$-4(-2x - 7) + 6x - 7$	H $3x + 21$	M $x + 52$
⑭	$9 - 3(-4 + 3x) + 12x$	T $3x + 6$	I $14x + 21$

⑮	$5(2y - 4) + 2(y + 9)$	A $12y - 4$	X $12y - 2$

⑯	$-4(3u - 1) + 7(3 - 2u)$	W $-42u + 9$	Y $-42u + 42$
⑰	$6(-5u + 1) - 3(4u - 12)$	S $13u - 12$	D $-5u + 25$
⑱	$3(-u - 5) + 8(2u + 1)$	R $13u - 7$	A $-26u + 25$

[row of empty answer boxes]

ALGEBRA WITH PIZZAZZ!
© Creative Publications

OBJECTIVE 3–c: To simplify expressions containing parentheses.

Name:_____

Mary has this much money, and she wants to buy this donut.

$2.27

$2.73

_____
How much change is left?

John has this much money, and he wants to buy a hot dog.

$1.17

_____
How much change is left?

Linda has this much money, and she wants to buy a pencil.

13¢

_____
How much change is left?

Michael has this much money, and he wants to buy this balloon.

$1.68

_____
How much change is left?

DadsWorksheets.com

Name:_____

What operation makes the number sentence correct?

49 **+** 15 = 64	22 ___ 96 = -74	7 ___ 54 = -47
47 ___ 98 = 145	27 ___ 9 = 18	44 ___ 66 = 110
33 ___ 20 = 13	83 ___ 63 = 20	56 ___ 19 = 37
17 ___ 24 = -7	86 ___ 33 = 53	21 ___ 22 = -1
47 ___ 70 = 117	89 ___ 36 = 53	90 ___ 62 = 28
61 ___ 98 = -37	50 ___ 23 = 27	85 ___ 19 = 104
3 ___ 48 = 51	53 ___ 82 = -29	2 ___ 97 = 99
24 ___ 55 = 79	41 ___ 45 = 86	42 ___ 74 = 116
57 ___ 15 = 42	2 ___ 20 = -18	19 ___ 5 = 14
48 ___ 58 = -10	21 ___ 91 = -70	4 ___ 50 = 54

DadsWorksheets.com

Name : _____   Score : _____

Teacher : _____   Date : _____

Find the Missing Number

1) N + 15 = 43   N = _____   2) N + 27 = 54   N = _____

3) N - 10 = 2   N = _____   4) N x 16 = 576   N = _____

5) N ÷ 35 = 40   N = _____   6) N - 32 = 5   N = _____

7) N + 36 = 47   N = _____   8) N + 28 = 42   N = _____

9) 352 ÷ N = 16   N = _____   10) N ÷ 35 = 18   N = _____

11) 1295 ÷ N = 37   N = _____   12) N x 30 = 1020   N = _____

13) N x 38 = 912   N = _____   14) N + 33 = 65   N = _____

15) 36 x N = 972   N = _____   16) 30 x N = 420   N = _____

17) 1092 ÷ N = 39   N = _____   18) N + 29 = 44   N = _____

19) N - 14 = 24   N = _____   20) 32 x N = 544   N = _____

21) 1026 ÷ N = 27   N = _____   22) N - 23 = 13   N = _____

23) 37 - N = 8   N = _____   24) 29 - N = 2   N = _____

Math-Aids.Com

Day 41:

2. Use these statistics from June 6, 1944—D-Day—to fill in and label the percentages of each country's military force in Normandy on the pie chart. Then answer the questions below.

D-Day Combatants

Country	Number of Soldiers on D-Day	Percentage
*United States	95,000	34%
*Great Britain	60,000	21%
*Canada	20,000	7%
Germany	105,000	38%

*Allies
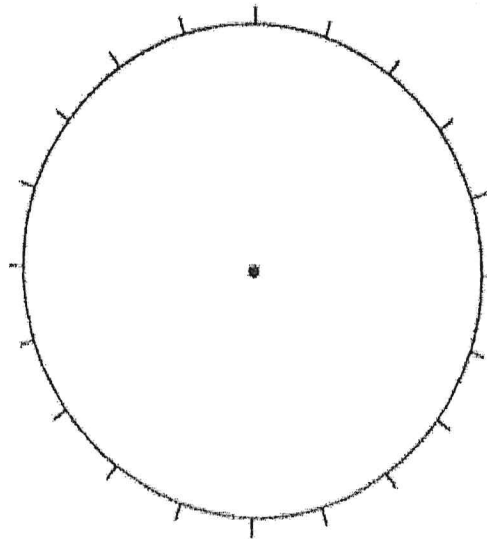
A. What country had the most troops in Normandy on D-Day?

B. What percentage of the troops at D-Day were Allied troops?

C. Why did the Allied commanders think it was necessary to attack with such a large number of soldiers?

This page intentionally left blank

Day 42:

1935

May 19

Lawrence of Arabia dies

T.E. Lawrence, known to the world as Lawrence of Arabia, dies as a retired Royal Air Force mechanic living under an assumed name. The legendary war hero, author, and archaeological scholar succumbed to injuries suffered in a motorcycle accident six days before.

Thomas Edward Lawrence was born in Tremadoc, Wales, in 1888. In 1896, his family moved to Oxford. Lawrence studied architecture and archaeology, for which he made a trip to Ottoman (Turkish)-controlled Syria and Palestine in 1909. In 1911, he won a fellowship to join an expedition excavating an ancient Hittite settlement on the Euphrates River. He worked there for three years and in his free time traveled and learned Arabic. In 1914, he explored the Sinai, near the frontier of Ottoman-controlled Arabia and British-controlled Egypt. The maps Lawrence and his associates made had immediate strategic value upon the outbreak of war between Britain and the Ottoman Empire in October 1914.

Lawrence enlisted in the war and because of his expertise in Arab affairs was assigned to Cairo as an intelligence officer. He spent more than a year in Egypt, processing intelligence information and in 1916 accompanied a British diplomat to Arabia, where Hussein ibn Ali, the emir of Mecca, had proclaimed a revolt against Turkish rule. Lawrence convinced his superiors to aid Hussein's rebellion, and he was sent to join the Arabian army of Hussein's son Faisal as a liaison officer.

Under Lawrence's guidance, the Arabians launched an effective guerrilla war against the Turkish lines. He proved a gifted military strategist and was greatly admired by the Bedouin people of Arabia. In July 1917, Arabian forces captured Aqaba near the Sinai and joined the British march on Jerusalem. Lawrence was promoted to the rank of lieutenant colonel. In November, he was captured by the Turks while reconnoitering behind enemy lines in Arab dress and was tortured and sexually abused before escaping. He rejoined his army, which slowly worked its way north to Damascus, which fell in October 1918.

Arabia was liberated, but Lawrence's hope that the peninsula would be united as a single nation was dashed when Arabian factionalism came to the fore after Damascus. Lawrence, exhausted and disillusioned, left for England. Feeling that Britain had exacerbated the rivalries between the Arabian groups, he appeared before King George V and politely refused the medals offered to him.

After the war, he lobbied hard for independence for Arab countries and appeared at the Paris peace conference in Arab robes. He became something of a legendary figure in his own lifetime, and in 1922 he gave up higher-paying appointments to enlist in the Royal Air Force (RAF) under an assumed name, John Hume Ross. He had just completed writing his monumental war memoir, *The Seven Pillars of Wisdom,* and he hoped to escape his fame and acquire material for a new book. Found out by the press, he was discharged, but in 1923 he managed to enlist as a private in the Royal Tanks

Corps under another assumed name, T.E. Shaw, a reference to his friend, Irish writer George Bernard Shaw. In 1925, Lawrence rejoined the RAF and two years later legally changed his last name to Shaw.

In 1927, an abridged version of his memoir was published and generated tremendous publicity, but the press was unable to locate Lawrence (he was posted to a base in India). In 1929, he returned to England and spent the next six years writing and working as an RAF mechanic. In 1932, his English translation of Homer's *Odyssey* was published under the name of T.E. Shaw. *The Mint,* a fictionalized account of Royal Air Force recruit training, was not published until 1955 because of its explicitness.

In February 1935, Lawrence was discharged from the RAF and returned to his simple cottage at Clouds Hill, Dorset. On May 13, he was critically injured while driving his motorcycle through the Dorset countryside. He had swerved to avoid two boys on bicycles. On May 19, he died at the hospital of his former RAF camp. All of Britain mourned his passing.

1. What was Lawrence of Arabia's birth name?

2. How did he get the name Lawrence of Arabia?

3. How did he die?

4. What kind of education did Lawrence of Arabia have? Where and what did he study?

Day 43:

3. Use the following statistics of WWII deaths to complete a bar graph. Label both axes. Use one bar per country and be sure to separate the number of military and civilian deaths for each country, as shown below. Answer the questions that follow.

Casualties of World War II

Country	Total Deaths	% of Pre-war Population	Military Deaths	Civilian Deaths
USSR	24,000,000	13.88%	8,800,000-10,700,000	13,300,000-15,200,000
Germany	6,600,000 - 8,800,000	8-10.5%	5,533,000	1,067,000-3,267,000
France	567,600	1.35%	217,600	350,000
United States	418,500	0.32%	416,800	1,700
Great Britain	450,700	0.94%	383,600	67,100

Number of Casualties

| Soviet Union | Germany | France | United States | Great Britain |
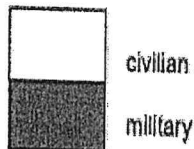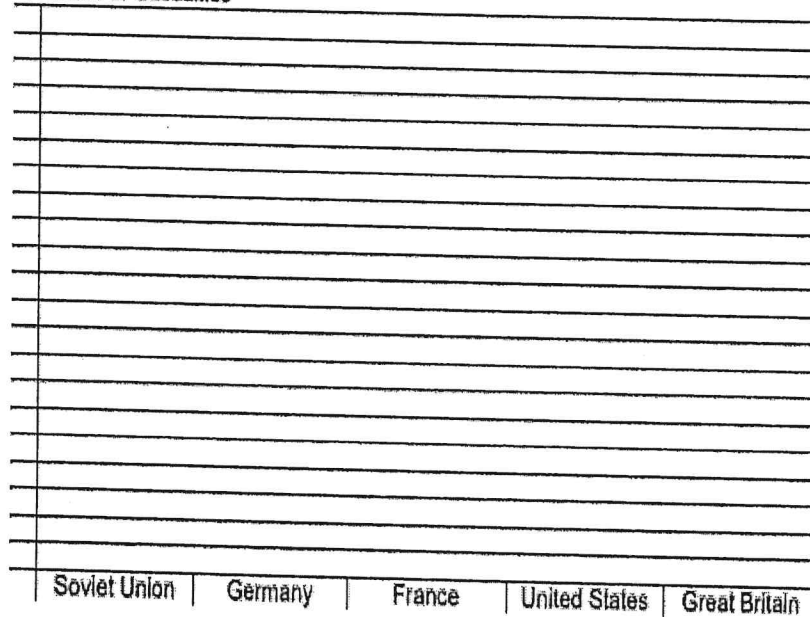
☐ civilian

▨ military

A. Which countries had more civilian deaths than military deaths?

B. What does this chart tell you about the consequences of war and the decisions by leaders to go to war?

This page intentionally left blank

Day 44:

When World War I and Pandemic Influenced the 1920 Presidential Election

Bettmann Archive/Getty Images
Lashed by a squall of historical events over four harrowing years, exhausted Americans longed to catch their collective breath as Election Day approached.

The four years leading up to the presidential election of 1920 had delivered a ghastly confluence of war, pestilence, terrorism and unemployment. As soon as World War I finished taking the lives of 100,000 Americans, a global influenza pandemic stole another 650,000 more. Race riots, labor strikes and a string of anarchist bombings—including one that slaughtered 38 people on Wall Street—rocked American cities following the war. The American economy was far from roaring in 1920 as unemployment soared and stock prices plummeted. Americans bitterly divided over whether to join the League of Nations, and fears of the spread of communism after the Russian Revolution sparked the Red Scare and Palmer Raids. A cheating scandal had tainted the national pastime with accusations that the "Black Sox" had conspired with gamblers to fix the 1919 World Series. Even the heavens appeared to offer little salvation as a cluster of nearly 40 tornadoes struck from Georgia to Wisconsin on Palm Sunday in 1920, leaving more than 380 dead.

Against this turbulent backdrop, the Republican Party gathered in Chicago in June 1920 to select its nominee to succeed President Woodrow Wilson, who had suffered a debilitating stroke months earlier. Seeking to regain the White House, Republicans settled on a dark-horse candidate, Senator Warren G. Harding of Ohio, on the tenth ballot. "There ain't any first-raters this year," declared Connecticut Senator Frank Brandegee. "We got a lot of second-raters, and Warren Harding is the best of the second-raters." A small-town newspaper publisher from a swing state in the American heartland who bridged the party's progressive and conservative wings, Harding was a safe choice who could deliver just the sort of political comfort Americans craved.

Harding promised nerve-wracked voters anything but radical change. In a May 1920 speech in Boston, he declared, "America's present need is not heroics, but healing; not nostrums, but normalcy; not revolution, but restoration; not agitation, but adjustment; not surgery, but serenity; not the dramatic, but the dispassionate; not experiment, but equipoise; not submergence in internationality, but sustainment in triumphant nationality."

When he returned from the Senate to his home town of Marion, Ohio, in July, Harding proclaimed to his neighbors, "Normal men and back to normalcy will steady a civilization which has been fevered by the supreme upheaval of all the world." "Back to normalcy" and "return to normalcy" were quickly adopted as Harding campaign slogans (along with another one, "America First.")

Harding's mention of "normalcy" sparked not just a political debate, but a grammatical one as well. Critics of the Republican nominee claimed the word was a malaprop uttered by Harding when he actually meant to say "normality." The candidate pressed back. "I have noticed that word caused considerable newspaper editors to change it to 'normality,'" Harding told the press. "I have looked for 'normality' in my dictionary, and I do not find it there. 'Normalcy,' however, I find, and it is a good word." Indeed, the term appeared in newspapers of the day, and Merriam-Webster traces its origins back to at least 1855.

Harding insisted his desire for "normalcy" was not a longing to turn back the clock. "By 'normalcy' I do not mean the old order, but a regular, steady order of things," he said. "I mean normal procedure, the natural way, without excess. I don't believe the old order can or should come back, but we must have normal order, or, as I have said, 'normalcy.'"

1. Suppose a candidate ran for President in 2020 on the platform of "Normalcy". What might he or she mean?

Day 45:
The 'front porch campaign'

Harding addressing a crowd of well-wishers outside his home in Marion, Ohio.

Bettmann Archive/Getty Images

Echoing his promise of a return to simpler, less chaotic times, Harding ran a campaign straight out of the 1890s, a time before the progressivism of <u>Theodore Roosevelt</u>, the idealism of Wilson and the turmoil of populism. While his Democratic opponent, Ohio Governor James M. Cox, travelled 22,000 miles around the country to hold campaign rallies, Harding rarely ventured further than his doorstep and emulated <u>William McKinley's</u> path to the White House with a "Front Porch Campaign." Pilgrims came by the thousands to Harding's house just off Main Street in Marion and gathered on the front lawn around the verandah to hear the candidate orate from the top step. Foreshadowing selfie lines a century later, voters waited their turns to have photographs taken with Harding and his wife, Florence, that were sent to their hometown newspapers.

Harding's milquetoast personality and small-town appeal spoke to the times: He won by a landslide in both the <u>Electoral College</u> and the popular vote to become the 29th president of the United States. He carried 37 of 48 states, including every state outside the South. The Republican ticket captured more than 16 million votes, nearly double those tallied by Cox and his vice-presidential running mate, <u>Franklin D. Roosevelt</u>. The Republican Party also won sizable majorities in the U.S. House of Representatives and Senate "Our supreme task is the resumption of our onward, normal way," <u>Harding declared in his inaugural address</u>.

But while America emerged from under the clouds of recession, pandemic and war in the ensuing years, the Harding presidency generated its own turbulence. Prohibition saw a rise in gang violence and organized crime. Harding's cabinet was plagued by corruption such as the Teapot Dome Scandal, in which oil men bribed Secretary of the Interior Albert Fall for drilling rights on federal land.

Harding would not finish his four-year term. He died in 1923 at the age of 57 in a San Francisco hotel room while on a cross-country tour of the United States.
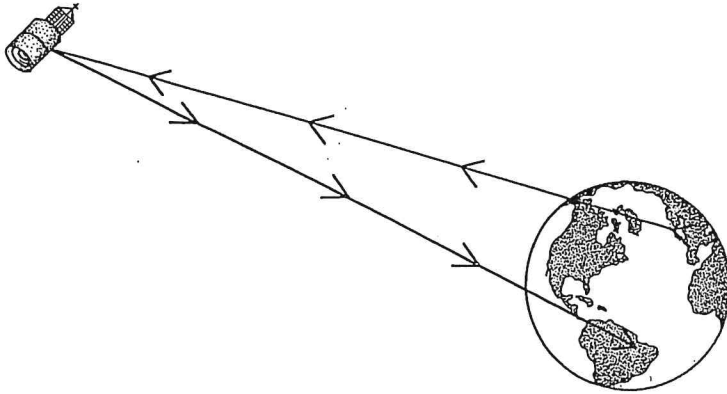
Back to 'normalcy'
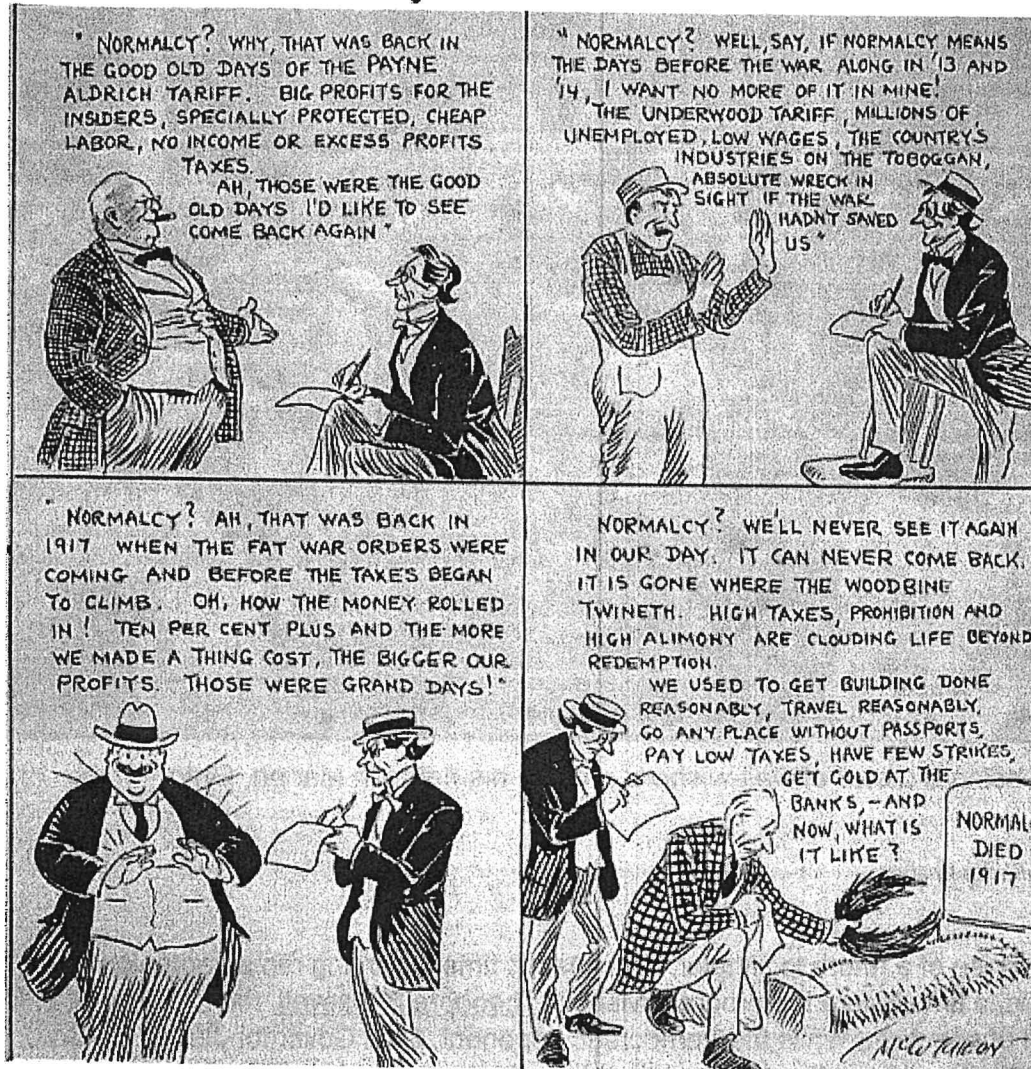
A 1921 cartoon on normalcy, by John Tinney.

1. What is cartoonist John Tinney trying to say in the above cartoon?

2. What does normalcy mean to you?

SCIENCE AMI PACKET # 41

Communications

Communications Satellite

Communication is the sending and receiving of information. Whenever you talk to someone, you are communicating. Whenever you write a letter, or send a picture to a friend, you are communicating. Today, people can communicate with others all over the world.

Technology makes <u>modern</u> communications possible. Technology is the use of science to <u>develop</u> new machines. Today, people use telephones, radio, television, computers, and fax machines to communicate. Fax machines are used for sending printed information or photos over a long distance. Computers can share information with other computers in different places.

Communications <u>satellites</u> send signals long distances. A satellite is an object that <u>orbits</u>, or moves around, Earth. The moon is a natural satellite. Communications satellites are made by people and sent into space. Signals are sent from Earth to a satellite. The satellite makes the signals stronger. Then it sends them to other satellites or to a new place on Earth.

Signal towers make cellular phones work. As the phone changes location, the signals are sent to different towers. The towers make the signals stronger and pass them on.

1 of 2

SCIENCE AMI PACKET # 41

A. Use the words below to complete the sentences.

communicating	photos	share
information	satellites	signals

1. Communication is the sending and receiving of _____.

2. Whenever you talk to someone, you are _____.

3. Communications _____ send signals long distances.

4. Fax machines are used for sending printed information or _____ over a long distance.

5. Computers can _____ information with other computers in different places.

6. A satellite makes _____ stronger.

B. Answer **True** or **False.**

1. Today people can communicate with others all over the world. _____

2. Computers cannot share information with other computers in different places. _____

3. A satellite is an object that orbits Earth. _____

4. A satellite makes the signals sent to it weaker. _____

5. As a cellular phone changes location, signals are sent to only one signal tower. _____

6. Signal towers make signals from cellular phones stronger and then pass on the signals. _____

C. List five machines that are used for communication. _____
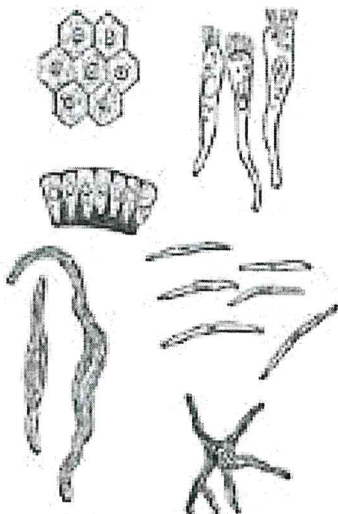_____

Science #42

How Many Cells?

```
G L E L L E C M L L E C E L C
L Y C E N T R I O L E H A L Y
L S M I C R O T U B U L E E T
E O N U C L E O L U S O B C O
C S U C E L L C E L R R L H P
H O C E L L T H C G M O L T L
R M L G L E A O A O P P E M A
O E E I O C S N T L R L C E S
M M U T E L E D A I O A O M M
A B S L A L G R L P P S S B I
T A L C L P H I H A H T M R T
I N T E R P H A S E A A O A O
N E S L C E S A R D S H S N S
C E L L C E L L S L E C I E I
H S R I B O S O M E L Y S C S
```

ANAPHASE	MICROTUBULE
CENTRIOLE	MITOCHONDRIA
CHLOROPLAST	MITOSIS
CHROMATIN	NUCLEOLUS
CYTOPLASM	NUCLEUS
GOLGI	ORGANELLES
INTERPHASE	OSMOSIS
LYSOSOME	PROPHASE
MEMBRANE	RIBOSOME
METAPHASE	TELOPHASE

Extinction

Name: **Class:**
**Teacher:**   **Date:**

Introduction: *Extinction* means that organisms are lost forever. *Endangered* means that an organism will become extinct if it is not protected. *Threatened* means that a species is at risk for becoming endangered. Before we can take action to save organisms, we need to understand the major causes to extinction.

Directions: Read the paragraphs below and answer the questions. When completed, write a few sentences that summarize the reasons for extinction described here. Can you think of any animals that are endangered or threatened now?
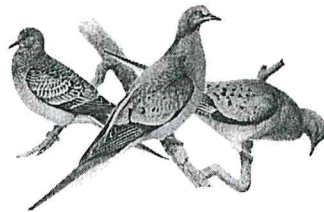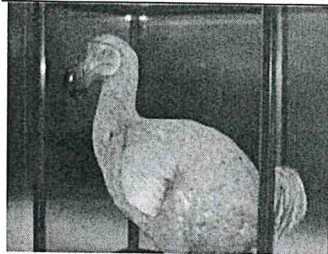
The Dodo

17th-century sailing logs describe a strange bird that lived on the island of Mauritius in the Indian Ocean. It was bigger than a turkey and had short yellow legs. It could not swim or fly and it dragged its plump belly on the ground when it jogged. Easy prey, most of the world's dodos were eaten by sailors and settlers and the new animals they introduced to the island, including pigs, monkeys, dogs and rats. A few were brought back alive to Europe and presented to royalty. Some of them were even kept as pets. But no one thought of trying to breed them, and the captive birds died off without hatching a single chick. The last dodo died in 1681, driven to extinction in just 174 years.

1. What was the main cause of extinction?
2. How do you think it could have been prevented?

The Passenger Pigeon

In the 1800's, this was the most abundant bird on Earth and almost 40% of the entire bird population of North America. It was estimated that there were between 1 and 2 billion passenger pigeons at that time. As human populations increased, forests were cut down, and their breeding habitats were destroyed. But it was hunting that wiped them out in only 50 years. People killed pigeons in flight by shooting into the dense flocks as they passed overhead. Sometimes they even knocked them out of the air with oars, poles, shingles and other weapons. They were killed for sport and for food. In 1914, the last passenger pigeon died in the Cincinnati Zoo.

1. What was the main cause of extinction?
2. How do you think it could have been prevented?

The *Quagga*

This animal used to live in South Africa. Its head and shoulders were striped like a zebra, while its hindquarters were reddish brown and its legs were white. For almost 200 years, the Boers, Dutch settlers to South Africa, fed their African slaves quagga meat and used the hides for shoes and for grain sacks. Quaggas were rounded up by the thousands and killed. In 1870, the last one to be seen in the wild was shot.

1. What was the main cause of extinction?
2. How do you think it could have been prevented?

Cells

Science #44

Name: **Class:**
Teacher: **Date:**

Directions:
Read the passage below then answer the questions that accompany it using complete sentences and proper grammar.

Looking at yourself and other organisms, you can see hair, skin, and limbs. What you do not see is a vast array of tiny particles that make all of these things up. The name of the tiny parts that make these up are called cells.

Cells are the basic unit of structure and function in all living things. The smallest thing that is alive is one cell in size. Because they are generally too small to see with the eye, scientists use microscopes to study them.

Cells come in many shapes, size, and with different functions. In humans, the shape of a cell can tell a little about its function. A nerve cell is long and thin to allow transmission of impulses while skin cells are flat to protect the body.

Regardless of the type of cell, all cells have some specialized parts (called organelles) in common. The first is the presence of a single nucleus. The nucleus of the cell is the control center. It is surrounded by the nuclear membrane and contains the hereditary material, controlling cell reproduction and gene expression.

The cell membrane surrounds the cell. This selectively permeable membrane is vital to keeping the cell alive because it regulates what can go into or come out of the cell. Some things are able to flow into and out of the cell through the process of passive transport (like water), while other substances (such as glucose) rely on active transport to move in and out.

Mitochondria are another important cell organelle. It is the power house of the cell, creating energy through a process called cellular respiration. There can be many mitochondria in a single cell. This is dependent on the function of the cell and the amount of energy it needs to perform its function.

There are other organelles of the cell that are necessary as well. Some of these are the lysosomes, golgi bodies, vacuoles, and ribosomes. They are just as vital to the life of the cell as those mentioned even though their functions may not seem so.

Cells

Questions:

1. Are all cells the same? Explain your answer.

   _____

   _____

   _____

2. What does the term selectively permeable mean? How does this relate to the function of the cell membrane?

   _____

   _____

   _____

3. Why is the nucleus so important to the cell?

   _____

   _____

   _____

4. What would happen if the mitochondria in the cell all died?

   _____

   _____

   _____

5. CHALLENGE: ON YOUR OWN
   Give the function of the following organelles:
   Lysosome: _____

   Golgi Body: _____

   Vacuole: _____

   Ribosome: _____

USA TEST PREP

Your Classroom Partner

Calculating Mean and Median

Name: Class:
Teacher: Date:

The mean and median are two kinds of averages. They are also called measures of central tendency. Think "middle" when you think central tendency. The mean" is the average. You add up all the numbers in your data set and then divide by that number.

The mean- 13, 12, 13, 14, 15, 15, 18 =

$(13 + 12 + 13 + 14 + 15 + 15 + 18) \div 7$

The mean or average = 14.28 or 14.3

The median is the middle value in the list of numbers. To find the median, your numbers have to be listed in numerical order, so you may have to rewrite your list first.

12, 13, 13, 14, 15, 15, 18

There are 7 numbers, so the middle number is $(7+1) \div 2$ or the 4th number.

12, 13, 13, 14, 15, 15, 18

Solve the following problems for mean and median.

1. What is the mean and median of the numbers 20, 22, 24, 28, 31, 31, 40

2. Consider the amount of time Sally spends on homework during the week. What is the average number of minutes per day of Sally spends doing homework?

Time Spent on Homework

Day	Time (minutes)
Monday	62
Tuesday	37
Wednesday	58
Thursday	24

3. Juan and his friends ran in the school's track meet. Their running times for their event are listed in the data table. What is the mean and the median of the data?

Runner	Time
A	6.7 mins
B	8.2 mins
C	8.9 mins
D	7.0 mins
E	11.1 mins
F	8.8 mins