

AMI PACKETS

#26 - #30

FOR THE WEEK OF

APRIL 27TH – MAY 1ST

English AMI Days 26-30

Find a good movie to watch for this assignment. Complete the activities for days 26-30 based upon the film that you have chosen. If you can't think of a movie to watch send an email to Mrs. Randall or Mrs. Maze and we will help you brainstorm ideas.

Day #26

Snuggle up and watch the movie you have chosen today. Take some notes as you are completing this activity. Who are the main characters, what is the plot of this story, and why is the setting important?

Day #27

Story's Title ★

Write the story's title here

Climax ★
The most suspenseful moment

Name _____
Period _____

Event #3

Event #1

Event #2

Event #1

Event #2

Rising Action ★
What events make the conflict worse?

Falling Action ★
How do the characters start to fix the conflict?

Conflict ★
What is the main problem?

Exposition ★

Characters (who / background) Setting (where/when)

Resolution ★
How is the main conflict resolved?

© CREATED FOR LEARNING - A TEACHERS PAY TEACHERS ACTIVITY

Day #28

Focusing on the CHARACTERS			
Name:		Character Type:	
Physical Description:		How other characters see them:	
Personality:			
Key Quotations:		How are they important to the plot?	
Name:		Name:	
Character Type:		Character Type:	
Personality:		Physical Description:	
How other characters see them:		Personality:	
Key Quotations:		How are they important to the plot?	

Day #29

Conflict

Internal conflict faced by protagonist: _____



External conflict faced by protagonist: _____

Result of the conflict: _____

Theme

Main Theme: _____

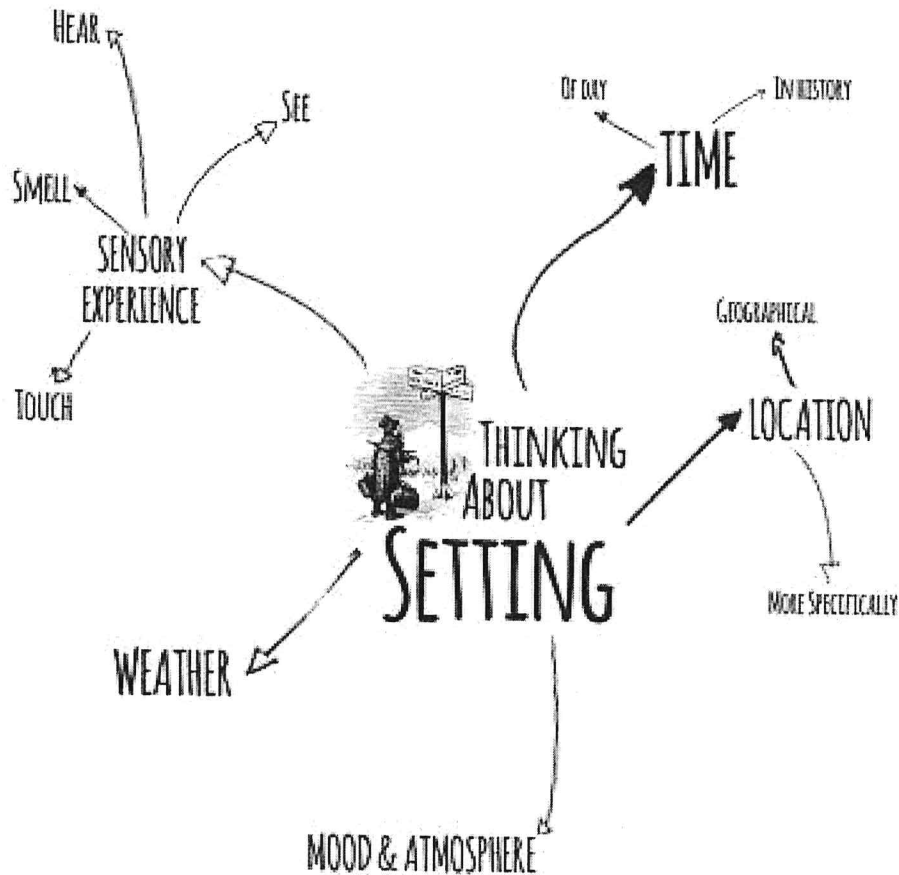
How is this theme conveyed? _____

Any motifs/symbols: _____

Day #30

Write examples of each item on the graphic organizer below. For example, if a character describes the smell of a basement as “damp and moldy” you could write those descriptive words near SMELL on the graphic organizer below. If something doesn’t apply, then you can leave it blank.

TITLE: _____ GENRE: _____



COMMENT ON WHY THE SETTING IS IMPORTANT: _____

Why Are Handcuffs Like Souvenirs?

Use the distributive property to complete each statement below. Find your answer in the corresponding answer column.
 Write the letter of that exercise in the box that contains the number of the answer.

Answers:

- (A) $7(a + b) = 7a + \underline{\hspace{1cm}}$ (18) **ax**
 (R) $4(5 + x) = 20 + \underline{\hspace{1cm}}$ (17) **4a**
 (Y) $3(2x + 9) = 6x + \underline{\hspace{1cm}}$ (9) **7b**
 (S) $8(3x + 1) = \underline{\hspace{1cm}} + 8$ (1) **5**
 (O) $a(4 + b) = \underline{\hspace{1cm}} + \underline{\hspace{1cm}}$ (14) **4x**
 (E) $x(y + 10) = \underline{\hspace{1cm}} + 10x$ (23) **24x**
 (I) $2(7x + 4y) = 14x + \underline{\hspace{1cm}}$ (10) **30x**
 (D) $6(9 + 5x) = 54 + \underline{\hspace{1cm}}$ (6) **6y**
 (W) $x(a + 3b) = \underline{\hspace{1cm}} + 3bx$ (3) **xy**
 (E) $a(8x + 2y) = 8ax + \underline{\hspace{1cm}}$ (4) **27**
 (T) $\frac{1}{2}(4a + 10) = 2a + \underline{\hspace{1cm}}$ (7) **2ay**
 (R) $\frac{2}{3}(12 + 9y) = 8 + \underline{\hspace{1cm}}$ (20) **8y**

Answers:

- (O) $5x + 5y = 5(x + \underline{\hspace{1cm}})$ (16) **4**
 (T) $9a + 9b = 9(\underline{\hspace{1cm}} + b)$ (5) **u**
 (W) $4m + 4n = \underline{\hspace{1cm}}(m + n)$ (22) **a**
 (H) $ab + 3a = a(b + \underline{\hspace{1cm}})$ (11) **x**
 (E) $xy + 15x = \underline{\hspace{1cm}}(y + 15)$ (21) **2y**
 (A) $bu + uv = \underline{\hspace{1cm}}(b + v)$ (13) **y**
 (F) $\frac{2}{5}m + \frac{2}{5}n = \frac{2}{5}(\underline{\hspace{1cm}} + n)$ (19) **3a**
 (M) $\frac{3}{4}a + \frac{3}{4}b + \frac{3}{4}c = \underline{\hspace{1cm}}(a + b + c)$ (2) **3**
 (S) $7ax + 2ay = a(7x + \underline{\hspace{1cm}})$ (12) **m**
 (T) $4kx + 11ky = \underline{\hspace{1cm}}(4x + 11y)$ (15) **k**
 (R) $3ay + 8by = y(\underline{\hspace{1cm}} + 8b)$ (8) **$\frac{3}{4}$**

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
---	---	---	---	---	---	---	---	---	----	----	----	----	----	----	----	----	----	----	----	----	----	----

What Did the Spanish Farmer Say to His Chicken?



Simplify each expression below. Find your answer at the bottom of the page. Cross out the letter above it. When you finish, the answer to the title question will remain.

- ① $3(4x + 6) + 7x$
- ② $7(2 + 3x) + 8$
- ③ $9 + 5(4x + 4)$
- ④ $12 + 3(8 + x)$
- ⑤ $(7x + 2)3 + 8x$
- ⑥ $6(4x + 7) + x$
- ⑦ $3x + (2x + 6)5$
- ⑧ $4 + 6(7x + 7)$
- ⑨ $8 + 5(9 + 4x)$

- ⑩ $6m + 3(2m + 5) + 7$
- ⑪ $5(m + 9) + 4 + 8m$
- ⑫ $3m + 2(5 + m) + 5m$
- ⑬ $6m + 14 + 3(3m + 7)$
- ⑭ $4(2m + 6) + 3(3 + 5m)$
- ⑮ $5(8 + m) + 2(7 + 7m)$
- ⑯ $(2m + 1)9 + 5(5m + 3)$
- ⑰ $7(7 + 5m) + (m + 6)4$
- ⑱ $2(9m + 5) + 8(6m + 1)$

L	$13m + 49$	S	$66m + 18$	T	$43m + 24$	O	$38m + 70$	E	$15m + 35$	N	$19x + 18$	H	$19x + 20$	L	$64m + 29$	B	$42x + 46$	R	$19m + 54$	T	$12m + 22$	D	$20x + 29$	A	$24x + 20$	E	$23m + 33$	G	$29x + 6$	G	$13x + 30$	M	$20x + 53$	I	$39m + 73$	V	$10m + 10$	K	$3x + 36$	Y	$45m + 25$	T	$21x + 22$	E	$25x + 42$
---	------------	---	------------	---	------------	---	------------	---	------------	---	------------	---	------------	---	------------	---	------------	---	------------	---	------------	---	------------	---	------------	---	------------	---	-----------	---	------------	---	------------	---	------------	---	------------	---	-----------	---	------------	---	------------	---	------------

Name _____

Date _____



COLUMN ADDITION MONEY 3 DIGITS SHEET 3

1)	\$5.78	2)	\$7.09	3)	\$1.94	4)	\$8.56
	+ \$2.65		+ \$6.42		+ \$8.39		+ \$8.17
	\$ _____		\$ _____		\$ _____		\$ _____

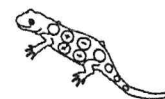
5)	\$9.67	6)	\$6.19	7)	\$3.48	8)	\$9.79
	+ \$5.32		+ \$8.77		+ \$6.62		+ \$0.46
	\$ _____		\$ _____		\$ _____		\$ _____

9)	\$5.88	10)	\$7.99	11)	\$9.45	12)	\$8.64
	+ \$4.62		+ \$5.63		+ \$6.89		+ \$5.96
	\$ _____		\$ _____		\$ _____		\$ _____

13)	\$2.68	14)	\$7.59	15)	\$6.28	16)	\$8.48
	\$5.09		\$2.32		\$4.50		\$0.82
	+ \$1.65		+ \$0.79		+ \$1.65		+ \$4.43
	\$ _____		\$ _____		\$ _____		\$ _____

17)	\$3.72	18)	\$4.56	19)	\$7.79	20)	\$5.43
	\$9.05		\$8.21		\$8.72		\$6.88
	+ \$2.49		+ \$3.24		+ \$4.63		+ \$7.95
	\$ _____		\$ _____		\$ _____		\$ _____

21)	\$2.56	22)	\$3.80	23)	\$4.35	24)	\$5.43
	\$6.37		\$4.68		\$5.29		\$6.88
	+ \$4.05		+ \$1.76		+ \$3.63		+ \$7.95
	\$ _____		\$ _____		\$ _____		\$ _____





Identifying Coins

Name: _____

Count the number of quarters (25¢), dimes (10¢), nickels (5¢) and pennies (1¢).

Ex)



Answers

Ex. 3 1 1 4

1)



1. _____

2)



2. _____

3)



3. _____

4)



4. _____

5)



5. _____

6)



6. _____

7)



7. _____

8)



8. _____

9)



9. _____

10)



10. _____

Day 26:

Directions: Read the article, then answer the question on the back of the page.

Sputnik and the Dawn of the Space Age:

History changed on October 4, 1957, when the Soviet Union successfully launched Sputnik I. The world's first artificial satellite was about the size of a beach ball (58 cm. or 22.8 inches in diameter), weighed only 83.6 kg. or 183.9 pounds, and took about 98 minutes to orbit the Earth on its elliptical path. That launch ushered in new political, military, technological, and scientific developments. While the Sputnik launch was a single event, it marked the start of the space age and the U.S.-U.S.S.R space race.

The story begins in 1952, when the International Council of Scientific Unions decided to establish July 1, 1957, to December 31, 1958, as the International Geophysical Year (IGY) because the scientists knew that the cycles of solar activity would be at a high point then. In October 1954, the council adopted a resolution calling for artificial satellites to be launched during the IGY to map the Earth's surface.

In July 1955, the White House announced plans to launch an Earth-orbiting satellite for the IGY and solicited proposals from various Government research agencies to undertake development. In September 1955, the Naval Research Laboratory's Vanguard proposal was chosen to represent the U.S. during the IGY.

The Sputnik launch changed everything. As a technical achievement, Sputnik caught the world's attention and the American public off-guard. Its size was more impressive than Vanguard's intended 3.5-pound payload. In addition, the public feared that the Soviets' ability to launch satellites also translated into the capability to launch ballistic missiles that could carry nuclear weapons from Europe to the U.S. Then the Soviets struck again; on November 3, Sputnik II was launched, carrying a much heavier payload, including a dog named Laika.

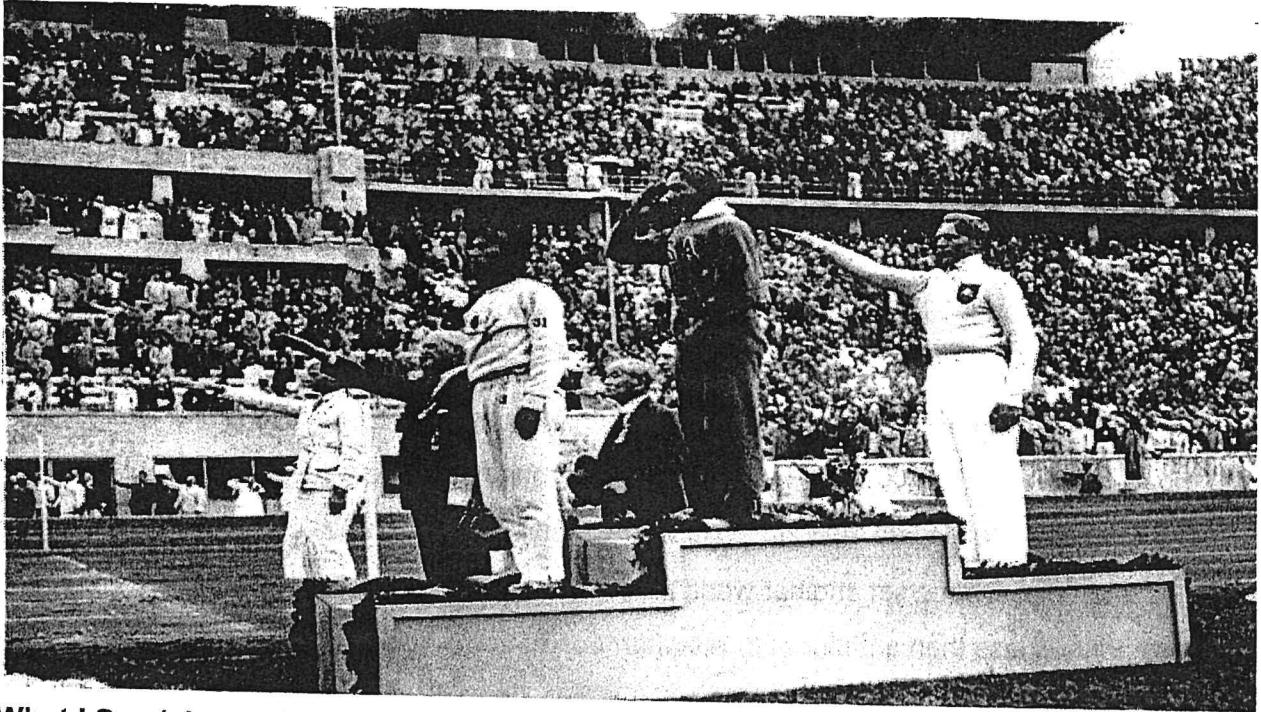
Immediately after the Sputnik I launch in October, the U.S. Defense Department responded to the political furor by approving funding for another U.S. satellite project. As a simultaneous alternative to Vanguard, Wernher von Braun and his Army Redstone Arsenal team began work on the Explorer project.

On January 31, 1958, the tide changed, when the United States successfully launched Explorer I. This satellite carried a small scientific payload that eventually discovered the magnetic radiation belts around the Earth, named after principal investigator James Van Allen. The Explorer program continued as a successful ongoing series of lightweight, scientifically useful spacecraft.

The Sputnik launch also led directly to the creation of National Aeronautics and Space Administration (NASA). In July 1958, Congress passed the National Aeronautics and Space Act (commonly called the "Space Act"), which created NASA as of October 1, 1958 from the National Advisory Committee for Aeronautics (NACA) and other government agencies.

In 5-8 sentences, summarize the article you just read. Remember, summaries are shortened retellings of the major points in an article. Do not write so much that you are simply re-writing.

Day 27: THE MORE YOU LOOK, THE MORE YOU SEE PHOTO ANALYSIS



What I See (observe) Describe exactly what you see in the photo. *What people and objects are shown? How are they arranged? What is the physical setting? What other details can you see?*

What I Infer (deduction) Summarize what you already know about the situation and time period shown and people and objects that appear. *I see ____ and I think ____*

Interpretation Write what you conclude from what you see. *What is going on in the picture? Who are the people and what are they doing? What might be the function of the objects? What can we conclude about the time period?*

Why do you believe the photo was taken?

Why do you believe this photo was saved?

What I Need to Investigate What are three questions you have about the photo?

1.

2.

3.

1936

August 04

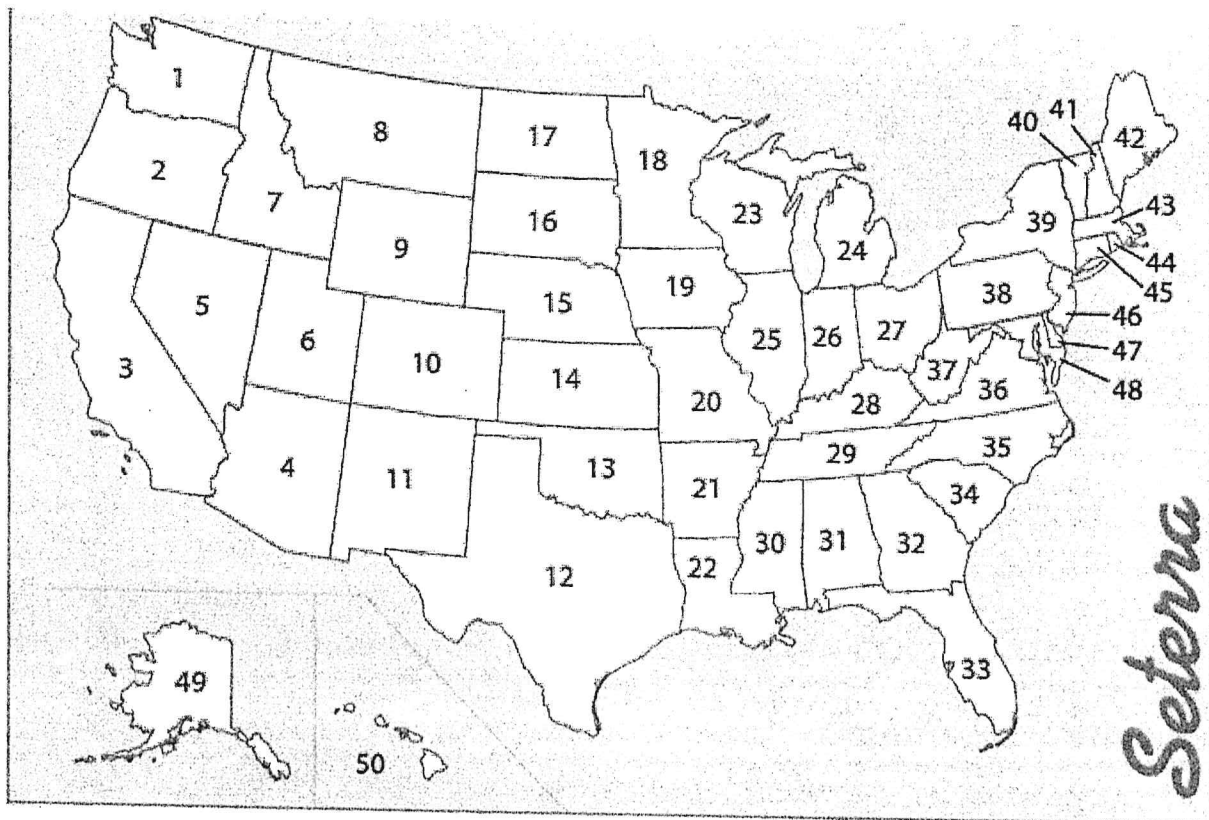
Jesse Owens wins long jump—and respect—in Germany

On this day in 1936, American Jesse Owens wins gold in the long jump at the Summer Olympics in Berlin, Germany. It was the second of four gold medals Owens won in Berlin, as he firmly dispelled German Fuhrer Adolf Hitler's notion of the superiority of an Aryan "master race," for all the world to see.

Jesse Owens first made his mark on the international stage at just 21 years old on May 25, 1935, while an undergrad at Ohio State University, by setting three world records and tying another at the Big Ten Championships in Ann Arbor, Michigan. "The Buckeye Bullet" started his afternoon by running the 100-yard dash in just 9.4 seconds to tie the world record. Just 10 minutes later, Owens jumped 26'8 1/4", setting a world record he would hold until 1951. And, ten minutes after that, Owens set another world record in the 220-yard dash with a time of 20.3 seconds. Finally, less than an hour after his afternoon of competition started, Owens ran the 220-yard hurdles in 22.6 seconds for his third outright world record of the day. Owens' impressive performance caused a sensation across the United States, and the track world looked forward to following his progress at the upcoming 1936 Olympics.

Owens would win his third gold medal and set his second Olympic record of the games in the 200 meters the next day. On August 9, he followed that up by helping his team set a new world record—39.8 seconds—in the 4 x 100 meter relay. Owens and Metcalfe replaced two American Jews, Marty Glickman and Sam Stoller, originally scheduled to run the relay that day. Later, the U.S. team was criticized for the move, which was thought to be an appeasement of Hitler and the Nazi party, who would likely have been even angrier to see Jews, already a frequent target of Nazi hate and harassment, bring home a medal.

Day 28:



1	11	21	31	41
2	12	22	32	42
3	13	23	33	43
4	14	24	34	44
5	15	25	35	45
6	16	26	36	46
7	17	27	37	47
8	18	28	38	48
9	19	29	39	49
10	20	30	40	50

Visit our site online [seterra.com/en](http://www.seterra.com/en) for more map quizzes.

This page intentionally left blank

Day 29:

Directions: Read the article and then list similarities and differences of Command Economies and Mixed Economies

Command and mixed economies are two different economic systems. In a command economy, the system is controlled by the government. A mixed economy is partly run by the government and partly as a free market economy, which is an economic system that includes no government intervention and is mainly driven by the law of supply and demand.

Command Economy

A command economy is an economic system where the government has control over the production and pricing of goods and services. Sometimes called a planned economy, in a command economy, the government decides which goods and services to produce, the production and distribution method, and the prices of goods and services. The government is the central planner.

Because the government sets and controls all aspects of business in a command economy, there is no competition. Monopolies, which are owned by the government, are common. These may include financial services, utilities, or even companies within the transportation sector.

Command economies often make too much of one product and not enough of another because it is difficult for one entity (i.e., the government) to realize the needs of everyone in the country. So, a command economy often means large surpluses or shortages of products and services.

A shadow or black economy may develop to fulfill the needs not met by the government. The black economy violates a country's rules and regulations because the economic activities take place illegally and participants avoid taxes. A shadow economy arises when governments make transactions illegal or by making a good or service unaffordable. People in the economy search for ways to get around government restrictions.

The command economy is unlike a free-market or capitalist economy. In a free-market economic system, manufacturing and production are based on the powers of supply and demand with little or no government intervention. Examples of command economies today include North Korea, Iran, Libya, and Cuba. China was a command economy before turning to a mixed economy with both communist and capitalist ideals.

Mixed Economy

A mixed economic system has features of both a command and a free-market system. because it is partly controlled by the government and partly based on the forces of supply and demand. Most of the main economies in the world are now mixed economies, which operate under a combination of socialism and capitalism, and governments in most mixed economies use fiscal or monetary policies to stimulate growth during economic slowdowns. This may come in the form of corporate bailouts, changes in interest rates, or other stimulus packages.

Generally, a mixed economic system includes a public and private sector. There is limited government regulation in a mixed economy, while there is heavy government regulation and control in a command economy. In the mixed economy, governments allow corporations to profit, but levels of profit might be limited by taxation or by imposing tariffs.

Suppose ABC, a toy manufacturer, is in a mixed economic system. The prices and production levels are subject to the discretion of the company and driven by the law of supply and demand. However, company ABC has been using too many of the natural resources in the state where it is located. The government is able to intervene because excesses use of vital resources goes against the good of the public. On the other hand, in a command economy, there is no company producing toys—the government would control the production and pricing of the toys.

Unlike the case of the command economy, a mixed economy may not have large surpluses or shortages. That's because manufacturing and production is largely driven by supply and demand, so the distribution of goods and services happens where and when needed. Prices also are dictated by supply and demand rather than by the government, as in the command economy. The profitability of producers and innovation are also key elements of the mixed economic system.

Compare and Contrast Below. Use a T-Chart or Venn-Diagram to show the similarities and differences.

Day 30:

Directions: Read the article and then list similarities and differences of Martin Luther King Jr. and Malcolm X

Martin Luther King

On January 15, 1929, Martin Luther King, Jr. is born in Atlanta, Georgia, the son of a Baptist minister. King received a doctorate degree in theology and in 1955 helped organize the first major protest of the African-American civil rights movement: the successful Montgomery Bus Boycott. Influenced by Mohandas Gandhi, he advocated civil disobedience and nonviolent resistance to segregation in the South. The peaceful protests he led throughout the American South were often met with violence, but King and his followers persisted, and the movement gained momentum.

A powerful orator, King appealed to Christian and American ideals and won growing support from the federal government and Northern whites. In 1963, Bayard Rustin and A. Philip Randolph led the massive March on Washington for Jobs and Freedom; the event's grand finale was King's famous "I Have a Dream" speech. Two hundred and fifty thousand people gathered outside the Lincoln Memorial to hear the stirring speech.

In 1964, the civil rights movement achieved two of its greatest successes: the ratification of the 24th Amendment, which abolished the poll tax, and the Civil Rights Act of 1964, which prohibited racial discrimination in employment and education and outlawed racial segregation in public facilities. Later that year, King became the youngest person to win the Nobel Peace Prize (in 2014 Malala Yousafzai became the youngest to receive the prize at age 17). In the late 1960s, King openly criticized U.S. involvement in Vietnam and turned his efforts to winning economic rights for poor Americans. He was assassinated in Memphis, Tennessee, on April 4, 1968.

Malcolm X

Malcolm X was born Malcolm Little in 1925, in Omaha, Nebraska. His father was a Baptist preacher and follower of Marcus Garvey. The family moved to Lansing, Michigan after the Ku Klux Klan made threats against them, though the family continued to face threats in their new home. In 1931, Malcolm's father was allegedly murdered by a white supremacist group called the Black Legionaries, though the authorities claimed his death was an accident. Mrs. Little and her children were denied her husband's death benefits.

Though highly intelligent and a good student, he dropped out of school following eighth grade. At 21, he went to prison for larceny. It was in jail that Malcolm X first encountered the teachings of Elijah Muhammad, head of the Lost-Found Nation of Islam, or Black Muslims, a black nationalist group that identified white people as the devil. Soon after, Malcolm adopted the last name "X" to represent his rejection of his "slave" name.

His advocacy of achieving "by any means necessary" put him at the opposite end of the spectrum from Martin Luther King, Jr.'s nonviolent approach to gaining ground in the growing civil rights movement. After Martin Luther King's "I Have a Dream" speech at the 1963 March on Washington, Malcolm remarked: "Who ever heard of angry revolutionists all harmonizing 'We Shall Overcome' ... while tripping and swaying along arm-in-arm with the very people they were supposed to be angrily revolting against?"

Disenchanted with corruption in the nation of Islam, which suspended him in December 1963 after he claimed that President John F. Kennedy's assassination was "the chickens coming home to roost," Malcolm X left the organization for good. A few months later, he traveled to Mecca, where he underwent a spiritual transformation: "The true brotherhood I had seen had influenced me to recognize that anger can blind human vision," he wrote. Malcolm X returned to America with a new name: El-Hajj Malik El-Shabazz.

In June 1964, he founded the Organization of Afro-American Unity, which identified racism, and not the white race, as the enemy of justice. His more moderate philosophy became influential, especially among members of the Student Non-Violent Coordinating Committee (SNCC)

Malcolm X was assassinated by a Black Muslim at an Organization of Afro-American Unity rally in the Audubon Ballroom in New York City on February 21, 1965.

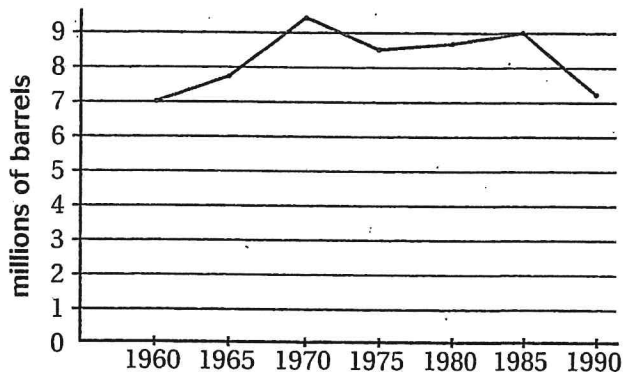
Compare and Contrast Below. Use a T-Chart or Venn-Diagram to show the similarities and differences.

SCIENCE AMI PACKET # 26

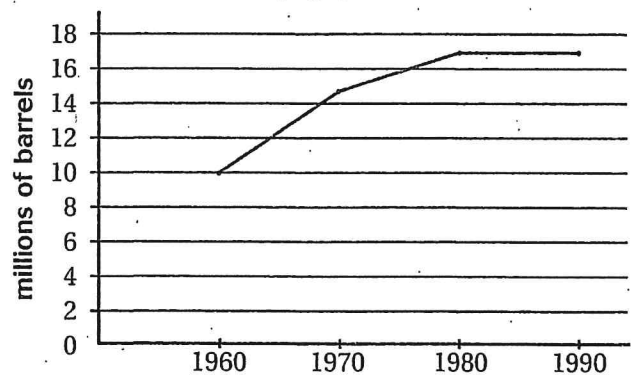
Comparing Line Graphs

The line graphs below show how much oil was produced and how much was used in the United States per day from 1960 to 1990.

United States Oil Production, 1960–1990



United States Oil Usage, 1960–1990



 Study the graphs. Then write complete sentences to answer the questions.

- About how many millions of barrels of oil did the United States produce per day in 1960? _____
- About how many millions of barrels of oil did the United States produce per day in 1990? _____
- How did the United States oil production change between 1960 and 1990?

- About how many millions of barrels of oil did the United States use per day in 1960?

- About how many millions of barrels of oil did the United States use per day in 1990?

- What was the trend in United States oil usage between 1960 and 1990?

- Look at your answers to questions 3 and 6. Were the United States oil production and oil usage in balance? What conclusion can you draw?

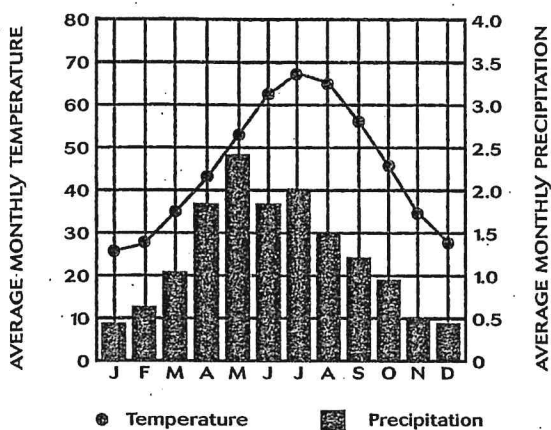
SCIENCE AMI PACKET # 26

Reading a Climograph

The climograph below combines a bar graph and a line graph to give climate information about Cheyenne, Wyoming. Study the graph carefully to see what kind of information is presented.

Use the graph to answer the questions. Darken the circle by the best answer.

Climograph for Cheyenne, Wyoming



- During which month does Cheyenne receive the most precipitation?
 (A) April (B) May (C) June (D) July
- During which month does Cheyenne receive the least precipitation?
 (A) January (B) February (C) October (D) November
- During which month does Cheyenne have the hottest average temperature?
 (A) June (B) July (C) August (D) September
- During which month does Cheyenne have the coolest average temperature?
 (A) January (B) February (C) March (D) December
- During which of these two months does Cheyenne receive the same amount of precipitation?
 (A) March and October (B) February and November (C) May and July (D) April and June
- What is the average monthly precipitation in Cheyenne in March?
 (A) 0.5 inch (B) 1 inch (C) 1.5 inches (D) 2.0 inches
- What is the average monthly precipitation in Cheyenne in September?
 (A) 1.0 inch (B) 1.2 inches (C) 1.5 inches (D) 1.7 inches
- What is the average monthly temperature in Cheyenne in November?
 (A) 1.75 degrees (B) 25 degrees (C) 30 degrees (D) 35 degrees

Write a complete sentence to answer the question.

- Using precipitation as a guide, what kind of climate do you think Cheyenne might have?

SCIENCE AMI PACKET # 27

Worldwide Loss of Bees a Growing Concern

by Alissa Fleck



When we think of bees, we think of pesky, buzzing insects that sting us and ruin outdoor gatherings. We might wonder: how badly can we possibly need bees? The truth is, bees are an incredibly important part of our ecosystem on Earth-no matter how annoying they may be to humans. Unfortunately, bees have been disappearing around the world for some time now, and their mass disappearance continues to present new problems around the planet.

According to Reuters news source, scientific researchers have been trying desperately for the past 15 years to understand why honeybees around the world are dying off at frighteningly high rates. Over 1 million bee colonies disappear every year, never to return, Reuters reporters noted in 2012.

Kevin Hackett, the national program leader for the bee and pollination program at the U.S. Department of Agriculture (USDA), called the massive honeybee disappearance "the biggest general threat to our food supply."

How could something so small be so important to us as humans? Bees are used to pollinate many crops, for instance a large portion of California's almond crop, which relies heavily on bee pollination. Bees are also essential for the pollination of apple and citrus fruit crops. Without the pollination by bees, these plants are unable to reproduce and may die off.

The mass deaths of honeybees have been linked to something known as Colony Collapse Disorder (CCD)-a mysterious loss of bee colonies with many potential causes-as well as a variety of pesticides, parasites and disease, all of which hurt bee populations. Other possible causes include land development and changes in agricultural practices around the world.

There are numerous kinds and species of bees, and honeybees are not the only ones disappearing in large quantities. Bumblebees can be added to the list of pollinators whose widespread disappearance worries scientists. While the dangers of losing bees, such as the damage to our food supplies, have long been known, researchers are uncovering even more distressing information about the loss of these ecologically crucial insects.

According to researchers who published their findings in the Proceedings of the National Academy of Sciences in 2013, the disappearance of bumblebees offers new cause for concern: certain plants are having difficulties reproducing with the loss of their bumblebee pollinators, and are at higher risk for extinction.

Two scientists, who conducted research on the impact of bumblebee loss on plant reproduction, found that when a particular species of bumblebee was removed from the pool of pollinators, other bees did not completely take over the pollinating duties. Instead, with less competition from the bees which had been removed from the pool, the remaining bumblebees flew between many different plants and were less likely to be faithful to one kind of plant.

The researchers noted this experiment had damaging effects. For instance, the larkspur, a purple wildflower, requires pollination from its own species-other larkspurs-to survive. The researchers found with fewer bumblebees, the remaining bees were "less faithful" to a particular plant, meaning the larkspur was unable to survive as it would have before the loss of bumblebees.

This particular study highlights the importance of bees to the continuation of, not just our food supply, but also all biodiversity, as the effects of this study do not end with the larkspur plant alone, but point to a much larger issue. The larkspur is just one example of this issue.

In 2012, the USDA and Environmental Protection Agency (EPA) released a joint statement discussing the issue of bee loss, and the search for a solution to the cycle of problems caused by bees dying off.

The organizations concluded: "No single silver bullet will solve the problems affecting honey bees and other pollinators."

In terms of solutions, the organizations proposed: "Habitat enhancement...targeted pesticide use, improved colony management techniques and improved disease and pest resistant stocks of bees are collectively needed to improve the health of honey bee colonies."

"It is imperative that we increase honey bee survival both to make beekeeping profitable," the statement noted, "but more importantly to meet the demands of U.S. agriculture for pollination and thus ensure of [sic] food security."

Worldwide Loss of Bees a Growing Concern - Comprehension Questions

- _____ 1. What problem does this article mainly discuss?
- A. Bees can sting us.
 - B. Bees can ruin outdoor gatherings.
 - C. Bees are disappearing around the world.
 - D. Bees are annoying to humans.
- _____ 2. Experts think that pesticides, parasites and diseases, as well as land development and changes in agricultural practices around the world, are some possible causes of bee death. According to this article, what is the most important effect of this new bee shortage?
- A. Researchers are publishing new findings.
 - B. Many crops will be unable to survive without pollination.
 - C. Scientists are studying bees.
 - D. Gardeners are having a harder time growing larkspurs.
- _____ 3. In the article, Kevin Hackett, the national program leader for the bee and pollination program at the U.S. Department of Agriculture (USDA), calls the massive honeybee disappearance "the biggest general threat to our food supply." What evidence from the article supports his claim?
- A. Honeybees are not the only ones disappearing in large quantities.
 - B. Bees are used to pollinate many food plants, such as California's almond crops, apple crops and citrus fruit crops.
 - C. The larkspur, a purple wildflower, requires pollination from its own species-other larkspurs-to survive.
 - D. Over 1 million bee colonies disappear every year, never to return.
- _____ 4. Leaders from the U.S. Department of Agriculture (USDA), researchers from the National Academy of Sciences, and the USDA and Environmental Protection Agency (EPA) are all reported to be working hard to understand and solve the problem of the disappearance of honeybees. Based on this evidence, what can be concluded about the organizations trying to solve this problem?
- A. The organizations do not play an important role in keeping humans and the environment safe.
 - B. The organizations play an important role in keeping humans and the environment safe.
 - C. The organizations are dealing with a problem that is not relevant to their focus.
 - D. The organizations are being forced to deal with a problem they do not care about.
- _____ 5. What is this article mostly about?
- A. threats to bees' health from human development
 - B. the origins of the crops we eat
 - C. the science of bee pollination
 - D. the causes and effects of bee death around the world
- _____ 6. Read the following:
- "In 2012, the USDA and Environmental Protection Agency (EPA) released a joint statement discussing the issue of bee loss, and the search for a solution to the cycle of problems caused by bees dying off.
- "The organizations concluded: 'No single silver bullet will solve the problems affecting honey bees and other pollinators.'
- "In terms of solutions, the organizations proposed: 'Habitat enhancement...targeted pesticide use, improved colony management techniques and improved disease and pest resistant stocks of bees are collectively needed to improve the health of honey bee colonies.'"
- As used in the passage, what does the phrase "silver bullet" mean?
- A. a complex solution
 - B. an easy solution
 - C. a pollinating bee
 - D. a dangerous pesticide
- _____ 7. Choose the answer that best completes the sentences. Bees are an incredibly important part of our ecosystem on Earth-no matter how annoying they may be to humans. _____, bees have been disappearing around the world for some time now, and their mass disappearance continues to present new problems around the planet.
- A. Instead
 - B. First
 - C. However
 - D. Finally
8. What has the mass deaths of honeybees been linked to? _____
9. List two reasons why the USDA and Environmental Protection Agency (EPA) believe that "it is imperative that we increase honey bee survival." _____
10. Explain the impact honeybees and humans have on each other. Use evidence from the text to support your answer.
- _____
- _____
- _____

SCIENCE AMI PACKET # 28

Read a Food Label

The skill of observation is important when deciding what foods to eat. Food labels contain important information about the nutritional value of foods. To find out if a food is healthy for you, you should read its label carefully.

Read the cereal box label. Use it to answer the questions below.

- How many calories are in one serving of this cereal without milk? With milk?

- Does this cereal contain more carbohydrates or more fats?

- Does this cereal contain more starch or more sugar?

- What does *RDA* mean?

- How much of the U.S. RDA of vitamin A is in $\frac{1}{4}$ cup of cereal?

- What vitamins are in this cereal?

- Which do you think are the five main ingredients in this cereal?

- According to the cereal box, how could you increase the amount of protein in this cereal?

Each serving contains 4 g dietary fiber, including 1 g (2.6% by weight) non-nutritive crude fiber.

NUTRITION INFORMATION PER SERVING

Serving Size: $\frac{1}{4}$ cup Raisin Bran (1 ounce bran flakes with $\frac{1}{3}$ ounce raisins) alone, and in combination with $\frac{1}{2}$ cup Vitamin D fortified whole milk.
Servings Per Container: 15

	Raisin Bran	
	1 oz. Cereal & $\frac{1}{3}$ oz. raisins	with $\frac{1}{2}$ cup whole milk
Calories	120	190
Protein	3 g	7 g
Carbohydrate	29 g	35 g
Fat	1 g	5 g

PERCENTAGE OF U.S. RECOMMENDED DAILY ALLOWANCE (U.S. RDA)

	Raisin Bran	
	1 oz. Cereal & $\frac{1}{3}$ oz. raisins	with $\frac{1}{2}$ cup whole milk
Protein	4	15
Vitamin A	25	30
Vitamin C	*	2
Thiamin	25	30
Riboflavin	25	35
Niacin	25	25
Calcium	*	15
Iron	25	25
Vitamin D	10	25
Vitamin B4	25	25
Folic Acid	25	25
Vitamin B12	25	30
Phosphorus	15	25
Magnesium	15	20
Zinc	25	30
Copper	6	6

*Contains less than 2% of the U.S. RDA of these nutrients.

INGREDIENTS: Wheat Bran with other parts of wheat; Raisins; Sugar; Salt; Malt Flavoring; Partially Hydrogenated Vegetable Oil (One or More of: Coconut, Soybean, and Palm); Invert Syrup; Vitamin A Palmitate; Reduced Iron; Zinc Oxide; Nicotinamide; Pyridoxine Hydrochloride (B6); Thiamin Hydrochloride (B1); Riboflavin (B2); Folic Acid; Vitamin B12; and Vitamin D2.

CARBOHYDRATE INFORMATION

	Raisin Bran	
	1 oz. Cereal & $\frac{1}{3}$ oz. raisins	with $\frac{1}{2}$ cup whole milk
Starch and Related Carbohydrates	12 g	12 g
Sucrose and Other Sugars	13 g	19 g
Dietary Fiber	4 g	4 g
Total Carbohydrates	29 g	35 g

Values by Formulation and Analysis.

SCIENCE AMI PACKET # 28

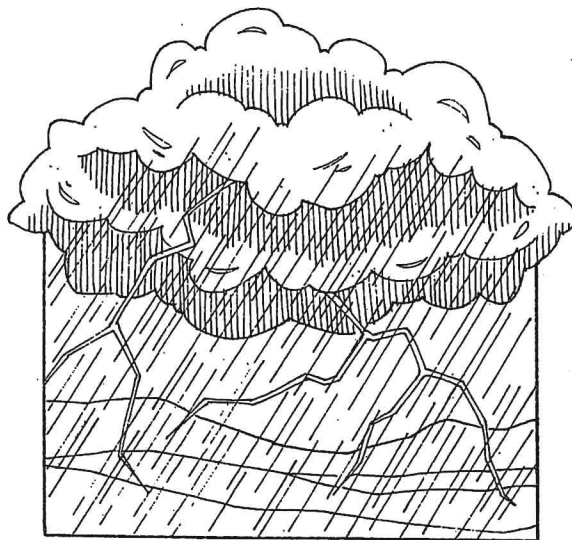
Stormy Weather

As warm, moist air rises, it almost always produces storms with dark clouds, high winds, and heavy precipitation. Some storms become severe, with thunder and lightning, a huge electric spark that travels from cloud to cloud or from clouds to the ground. Lightning can be dangerous if a person or an object is in its path. In some thunderstorms, hail forms as rain freezes in the clouds and forms ice. If the precipitation is heavy enough or lasts long enough, flooding can occur.

A line of violent thunderstorms, called a **squall line**, sometimes accompanies the passage of a cold front. Warm air rises rapidly in front of the advancing cold air, producing an area of very low pressure. Air rushes into the low-pressure area from all sides, resulting in a twisting, funnel-shaped storm called a tornado. The extremely high winds of a tornado can destroy almost everything in their path.

Over tropical oceans in summer months, conditions sometimes cause very warm, moist air to rise rapidly, forming a large, intense storm called a hurricane. A fully developed hurricane has bands of clouds spinning around a calm eye. As a hurricane nears land, strong winds, large waves, high tides, and **torrential** rains can cause **extensive** damage.

When cold air from the poles meets warm air from the tropics, a large spinning storm forms. In winter, these storms sometimes combine heavy snow and strong winds to produce a blizzard. Deep, drifting snow and bitter-cold temperatures make blizzards very dangerous.



Darken the circle by the answer that best completes each sentence.

1. Where warm and cold air masses meet, _____.
Ⓐ it never rains
Ⓑ a squall line may form
Ⓒ a hurricane may form
Ⓓ a lake forms
2. A line of violent thunderstorms is called a _____.
Ⓐ rainbow
Ⓑ vortex
Ⓒ front
Ⓓ squall line
3. A hurricane may develop in _____.
Ⓐ a cold polar ocean
Ⓑ a warm tropical ocean
Ⓒ any ocean
Ⓓ a tornado
4. A blizzard may develop where _____.
Ⓐ a polar air mass meets a cold, moist air mass
Ⓑ two warm air masses meet
Ⓒ a polar air mass meets a warm, moist air mass
Ⓓ two tornadoes meet

SCIENCE AMI PACKET # 29

The Most Expensive House in the Universe

by ReadWorks

Do you know where the most expensive house in the universe is located? Some might guess Hollywood, where some of the richest and most famous movie stars have their homes. Others might think of New York City, where a one-bedroom apartment in Manhattan can cost more than a mansion in the suburbs. But they would all be wrong, because this is a trick question. The most expensive house isn't even properly located on Earth. It's the International Space Station (ISS), which is circling in orbit above us right now. The cost to build this engineering marvel, which is roughly the size of a football field, is around 150 billion dollars.

Many different governments cooperated in order to plan and build the ISS, including the USA, Russia, Japan, Canada, and Europe. These entities decided to work together on the project only after developing plans independently for related space projects. By combining forces, they reasoned, they could split the cost of constructing a space station and also share resources while onboard the station.

The countries envisioned three important purposes for their joint project: to support scientific research, to help astronauts continue to explore space, and to educate the public. Thus, the engineering criteria for the space station had to include facilities to support each of these important missions.

Construction began in 1998, after the countries decided to band together and merge their space missions to create the ISS. Many countries used their spacecraft to deliver the parts for the ISS, little by little, into space. First came the operating systems and hardware. Then, two years later, a Russian rocket delivered the living quarters (complete with beds, toilets, and a kitchen) that would make the ISS habitable for humans. The first "residents" of the ISS—two Russian astronauts and one American—arrived on Expedition 1 in 2000. Over time, more space missions to the ISS added new parts to the space station, such as "docks" for incoming spacecraft that would make it easier for astronauts to come in and out of the station.

Throughout the construction of the ISS, which is partially solar-powered, engineers had to think constantly about the best way to keep the ISS running. They had to build and position the station's parts so that the space station could be powered by light from the sun. They also had to think about ways to protect it from meteoroids (including installing strong shutters on its seven windows). They installed robotic "arms" for the space station that could grab and hold both ships and astronauts securely while docking. And they had to install features that would make it easier to live for long stretches of time in space, such as exercise machines for the astronauts.

Astronauts can come and go on the ISS. They come to perform many of the experiments for which the station was designed, involving biology, physics, astronomy, and meteorology. Others test equipment to be used in missions to the moon and Mars. In a Japanese-built laboratory aboard the ISS called Kibo (which means "hope"), they can even grow plants and raise fish. However, most of the astronauts' space food is still delivered in sealed bags, and there isn't much variety. Thus, the crew aboard the ISS often looks forward to visiting shuttles that bring the astronauts fresh, different fruit to eat.

Life aboard the ISS has become relatively more comfortable thanks to technological improvements developed by engineers; however, it has not always been easy for the engineers back home to work on the space station. Space travel and construction of spacecraft are two of the most expensive projects a country can take on, and as the economies around the world shift, some countries have a harder time contributing financially. Sometimes, engineers from different countries will disagree about the best way to build something. And while some people on the space station project think it's a good idea to charge money to space "tourists" in order to provide more funds for the project or to charge companies a lot of money to advertise their business on the rockets that fly to the ISS, others think that these ideas do not align with the original purposes of the ISS. But the fact is, no country or individual can afford the giant price tag for this important space "house" alone, so they must keep working together. And the results—whether they include important new scientific discoveries, easier and more frequent missions to Mars, or better cultural relations between our countries—are sure to benefit us.

The Most Expensive House in the Universe - Comprehension Questions

_____ 1. According to the passage, where is "the most expensive house" located?

- A. on the surface of Mars
- B. Hollywood, CA
- C. circling above Earth
- D. New York City

- _____ 2. Which of the following sequences shows the construction of the ISS in the correct order?
- A. Operating systems and hardware were built, then living quarters were delivered, then the first residents arrived, then docks for incoming spacecraft were added.
 - B. Operating systems and hardware were built, then docks for incoming spacecraft were added, then living quarters were delivered, then the first residents arrived.
 - C. Living quarters were built, then operating systems and hardware were delivered, then docks for incoming spacecraft were added, then the first residents arrived.
 - D. Docks for incoming spacecraft were built, then living quarters were delivered, then operating systems and hardware were delivered, then the first residents arrived.
- _____ 3. The countries that worked together to build the ISS did not originally plan to build a shared space station. What evidence from the passage best supports this conclusion?
- A. "Many different governments cooperated in order to plan and build the ISS, including the USA, Russia, Japan, Canada, and Europe."
 - B. "By combining forces, they reasoned, they could split the cost of constructing a space station, and also share resources while onboard the station."
 - C. "Many countries used their spacecraft to deliver the parts for the ISS, little by little, into space."
 - D. "These entities decided to work together on the project only after developing plans independently for related space projects."
- _____ 4. What has helped make the ISS mission successful so far?
- A. money collected from space tourists
 - B. people from many countries working together
 - C. competition between the United States and Russia
 - D. money donated by America to pay for the ISS
- _____ 5. What is this passage mostly about?
- A. the construction and mission of the ISS
 - B. the most expensive houses in the world
 - C. how astronauts can live on this ISS
 - D. the financial cost of building the ISS
- _____ 6. Read the following sentences: "Then, two years later, a Russian rocket delivered the living quarters (complete with beds, toilets, and a kitchen) that would make the ISS habitable for humans. The first 'residents' of the ISS—two Russian astronauts and one American—arrived on Expedition 1 in 2000." As used in this sentence, what does the word "habitable" mean?
- A. dangerous
 - B. suitable to live in
 - C. warm and cozy
 - D. following the rules
- _____ 7. Choose the answer that best completes the sentence. No individual nation could afford to keep the ISS running properly. _____, multiple nations have to work together to fund the ISS.
- A. Meanwhile
 - B. For instance
 - C. As a result
 - D. On the other hand
8. What are the three missions of the ISS? _____
- _____
9. Why did various governments decide to work together to build the ISS? _____
- _____

SCIENCE AMI PACKET # 30

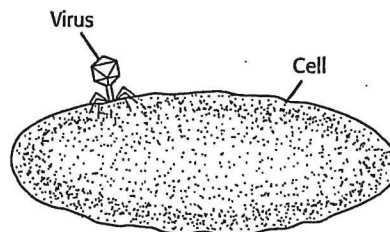
Diseases Caused by Viruses

Almost everyone has had a cold or the flu. These diseases are caused by **viruses**. Viruses are not cells. They are very tiny **particles**. Some viruses are a hundred times smaller than bacteria.

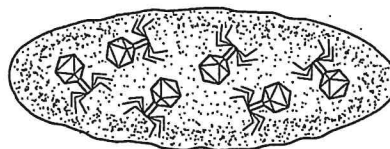
There are many kinds of viruses. All of them cause disease. A virus causes a disease by getting inside a body cell. The virus takes over the cell. It changes the way the cell works. It uses the cell's food. The virus can reproduce inside the cell. Many virus particles are made. Soon the cell bursts open, and all the virus particles pour out. Then they take over other healthy cells.

Besides colds and the flu, viruses can cause other diseases. Measles, chicken pox, and mumps are three other diseases caused by viruses.

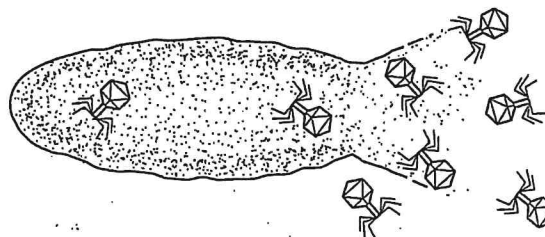
Diseases caused by viruses can be spread from one person to another. When a person with a cold or the flu coughs or sneezes, virus particles go into the air. People can breathe the air carrying the virus particles. Then they can get sick, too. Measles and chicken pox can also be spread in this way. You can also get measles by using the towels, dishes, or other objects used by an **infected** person. Chicken pox can be spread in this way, too.



1. A virus enters a cell.



2. A virus reproduces inside the cell.



3. Many virus particles burst out of the cell.

Comprehension and Vocabulary Review

Darken the circle by the best answer.

1. Colds and flu are caused by ____.

(A) bacteria

(B) snow

(C) viruses

(D) airplanes

3. Viruses reproduce inside ____.

(A) body cells

(B) cell phones

(C) balloons

(D) explosions

2. Viruses are ____.

(A) bacteria

(B) tiny particles

(C) small cells

(D) little bombs

4. *Infected* means ____.

(A) inside a cell

(B) entered a fence

(C) not washed

(D) has a disease

SCIENCE AMI PACKET # 30

Find the Details

Details are small bits of information that answer the questions who, what, when, where, how much, or how many. Details support the main idea of a selection.

 Read each selection. Darken the circle by the answer that best completes each sentence.

A muscle is made of fine threads called fibers. The fibers are held together by a fine, web-like connecting tissue. The muscle fibers can shorten and thicken when a message is sent to them through the nerves. When the fibers become shorter, the whole muscle becomes shorter. The shortening of the muscle is called a contraction. The lengthening of the muscle is known as relaxing. This process is how movements all over the body are produced.

1. Muscle threads are called _____.
Ⓐ tissues
Ⓑ webs
Ⓒ fibers
Ⓓ forearms

The spider is not an insect. A true insect has six legs, while a spider has eight. Also, the body of an insect is usually divided into three parts: head, chest, and abdomen. A spider's body is divided into only two parts, with the head and chest united. In certain species of spiders, the long legs have seven joints so the spider can move in any direction.

The spider's mouth contains fangs that are somewhat similar to the fangs in a snake's mouth. When a spider bites its prey, a drop of poison is injected into the blood of these small insects. The tiny amount of poison in most spiders is not enough to harm humans.

The spider has six spinning fingers called spinnerets. The liquid silk is manufactured inside the body of the spider. The liquid is forced through tiny holes in the ends of the spinnerets. When the silk is exposed to air, it hardens immediately.

2. An insect's body has _____.
Ⓐ eight eyes
Ⓑ three parts
Ⓒ two parts
Ⓓ long legs



3. A spider's mouth is similar to _____.
Ⓐ an insect's mouth
Ⓑ a cat's mouth
Ⓒ a snake's mouth
Ⓓ a silk covering

4. The spider preys on _____.
Ⓐ spinnerets
Ⓑ snakes
Ⓒ small insects
Ⓓ humans

5. The liquid silk comes through holes in _____.
Ⓐ the fangs
Ⓑ the spider's eggs
Ⓒ the spinnerets
Ⓓ the insect's body