6th Grade
NTI Day 11

Mrs. King	Reading	Unit One: Test 4
Mr. Simpson	Math	Solving one-step equations
Mrs. Overbay	Social Studies	The Birth of China
Mrs. Mike	Science	Laws of Motion/ Isaac Newton

Day 11

UNIT ONE: Test 4

Each item below starts with a pair of words in CAPITAL LETTERS. For each item, figure out the relationship between these two words. Then decide which of the choices (*a*, *b*, *c*, or *d*) expresses a similar relationship. Write the letter of your choice on the answer line.

____ 1. ANECDOTE : TELL ::

a. lecture : sing
b. television : delay
c. letter : write
d. garden : read

____ 2. CONCISE : WORDY ::

a. apologize : explain
b. exist : live
c. offer : suggest
d. arrive : leave

____ 3. CANDID : HONESTY ::

a. joyful : pain
b. powerful : strength
c. doubtful : certainty
d. confused : smoke

____ 4. DRASTIC : HARSH ::

a. frightening : scary
b. late : later
c. difficult : simple
d. different : interesting

____ 5. DIALOG : CONVERSATION ::

a. telephone : e-mail
b. radio : book
c. letter : envelope
d. lecture : speech

____ 6. ERRATIC : IRREGULAR ::

a. unusual : often
b. odd : typical
c. expected : event
d. unexpected : surprising

____ 7. ILLUMINATE : LIGHTBULB ::

a. water : oil
b. paint : picture
c. heat : furnace
d. cool : mixer

____ 8. REFUGE : BOMB SHELTER ::

a. dwelling : apartment
b. airport : traveler
c. train : station
d. mosque : religion

____ 9. DELETE : INSERT ::

a. erase : cross out
b. pronounce : word
c. outline : write
d. subtract : add

____ 10. MENACE : RECKLESS DRIVER ::

a. danger : loaded gun
b. medicine : common cold
c. food : plastic bag
d. rescue : shark attack

(Continues on next page)

Day 11

NAME _____

Lesson 5.5 Solving 1-Step Equations: Addition & Subtraction

Solve each equation.

	a	b	c
1.	$9 + d = 16$ _____	$y + 3 = 9$ _____	$12 + a = 27$ _____
2.	$18 - b = 4$ _____	$23 - c = 21$ _____	$w - 11 = 11$ _____
3.	$n + 8 = 41$ _____	$7 + m = 20$ _____	$9 + s = 9$ _____
4.	$t - 18 = 5$ _____	$36 - a = 36$ _____	$15 - b = 0$ _____
5.	$17 = c + 3$ _____	$29 = 5 + b$ _____	$36 = 35 + n$ _____
6.	$2 = d - 4$ _____	$19 = 25 - a$ _____	$12 = t - 12$ _____

Write an equation for each problem. Then, solve the equation.

7. Ruben read 37 pages in his history book over the weekend. He read 21 pages on Saturday. How many pages did he read on Sunday?

_____ He read _____ pages on Sunday.

8. The Garcias ate 9 pieces of toast for breakfast. If there are 33 slices of bread left, how many slices were in the loaf of bread?

_____ There were _____ slices in the loaf of bread.

9. In a 25-kilometer triathlon, competitors swim 2 kilometers, run 5 kilometers, and bike the rest. How far do they bike?

_____ They bike _____ kilometers.

Day 11 Social Stud

NAME _____ DATE _____ CLASS _____

networks

Early China

Lesson 1 The Birth of Chinese Civilization

ESSENTIAL QUESTION

What makes a culture unique?

GUIDING QUESTIONS

1. ***How have rivers, mountains, and deserts shaped the development of China's civilization?***
2. ***Why did China's Shang rulers become powerful?***
3. ***How did the Zhou claim the right to rule China?***

Terms to Know

warlord a leader who has his own army

aristocrat a person who belongs to the highest class of society

ancestor a family member who is no longer living

pictograph a symbol in a writing system based on pictures

ideograph a symbol in a writing system that represents a thing or an idea

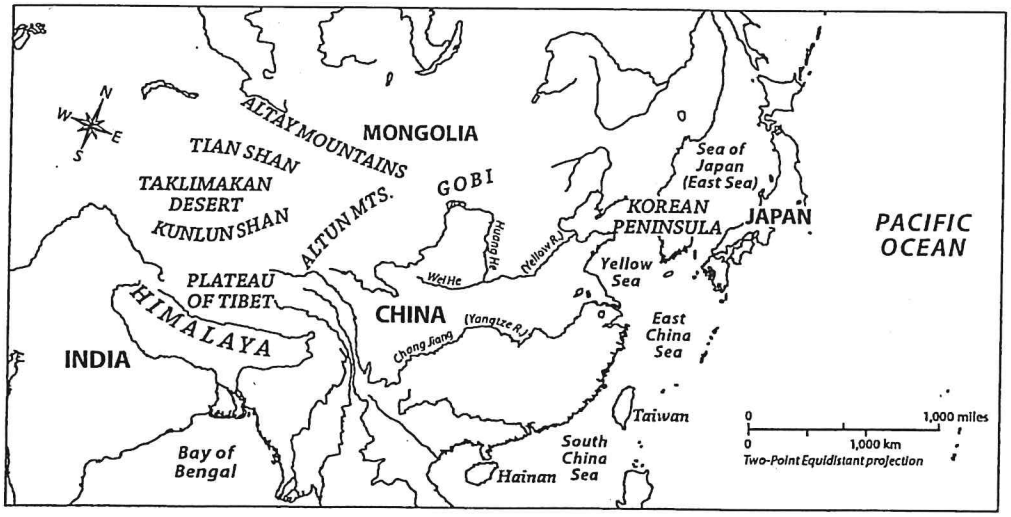
bureaucracy a group of non-elected government officials

hereditary having title or possession by reason of birth

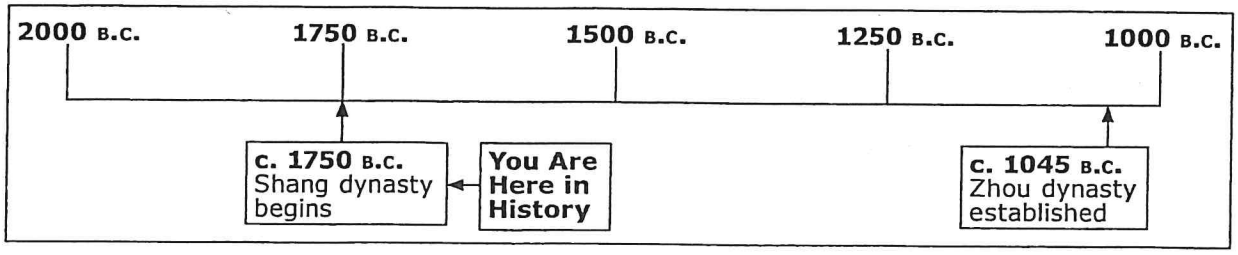
Mandate of Heaven belief that the Chinese king's right to rule came from the gods

Dao Chinese system of beliefs that describes the way a king must rule

Where in the world?



When did it happen?



NAME _____ DATE _____ CLASS _____

networks

Lesson 1 The Birth of Chinese Civilization, *Continued*

The Land of China

Two powerful rivers have helped shape Chinese history. The Huang He, or Yellow River, flows across China. As it flows, it carries large amounts of rich soil. The soil spreads along the banks of the river. This makes the land more fertile, or a high quality for farming. Farmers along the Huang He are able to grow more food. However, the Huang He often floods. Millions of people have died because of these floods.

The Chang Jiang, or Yangtze River, is another important waterway in China. Like the Huang He, the Chiang Jiang provides rich soil for farming. It also serves as a way of trade and transportation.

Mountains and deserts cover much of China. They were difficult to cross, acting like walls around the country. These natural barriers limited contact between China and other civilizations. The high mountains and vast deserts helped China develop a unique culture. Chinese civilization was different from other civilizations.

Explaining

1. How did mountains and deserts affect China's civilization?

_____

_____

_____

_____

Reading Check

2. How did rivers help civilization develop in China?

_____

_____

_____

rivers	• provided rich soil for Chinese farmers • caused many deaths by flooding • used as waterways for trade and transportation
mountains	• formed a barrier around the country making it difficult for invaders to enter • made it possible for China to develop a unique culture and civilization
deserts	• created a barrier around the country, like the mountains did

Marking the Text

3. In the text, circle the name of what historians believe to be the first Chinese dynasty.

The First Chinese Dynasty

A dynasty is a line of rulers who belong to the same family. Historians believe the first Chinese dynasty was the Shang. The Shang dynasty began about 1750 B.C.

Ruins of walls and buildings show that the Shang built the first cities in China. One was the royal capital at Anyang. A palace and temple stood at the city's center.

What Are the Laws of Motion?

Name: Day 11

Do you obey the laws of motion? You have to. Everybody and everything in the universe has to follow these laws. Isaac Newton worked out the three basic laws of motion in his early 20s. The first law of motion states that an object will remain at rest (not moving) or it will continue traveling at a constant speed until it is acted upon by an outside force. In simple terms, the first law of motion means an object, such as a baseball, will not start moving until it is hit, thrown, or otherwise moved. An object in motion, such as a baseball, will not stop moving on its own. It will stop when the force of friction in the air and gravity brings it down, for example. Of course, it will also stop when it is caught or hit. An object will not change direction either, until it is hit or interfered with in some way.

The second law of motion states that two factors influence the rate at which an unmoving object moves from its position at rest. These two factors also determine the extent to which a moving object is diverted from its path in a straight line. One factor is the amount of force applied. The second factor is the mass of the object providing the force. A child using a light bat will not change the path of a thrown baseball as much as a 300-pound third baseman swinging a heavy bat. The speed with which the force is applied matters, too. A swing that is feeble or a bunt is not going to change the direction of a thrown ball as much as a powerful, fast swing by a large professional player. The formula that applies here is "force equals mass times acceleration."

The third law of motion states that for every action, there is an equal and opposite reaction. If a force pushes in one direction, an equal force pushes in the opposite direction. A runner pushes against the starting block when he races forward. The downward push of the gases in a rocket is equaled by the upward thrust of the rocket. The pull back of a rubber band is equaled by the push forward when the front of the rubber band is released.

These three fundamental laws are the basis for the physics of motion in all areas of life.

What Did You Learn ?

1. Which law of motion is illustrated by a rocket taking off?
   Ⓐ first Ⓑ second Ⓒ third Ⓓ both A and B
2. Which law of motion relates to a baseball in flight?
   Ⓐ third Ⓑ second Ⓒ first Ⓓ both A and B
3. Which law of motion relates to hitting a ball off a tee?
   Ⓐ first Ⓑ second Ⓒ third Ⓓ both A and B
4. Which law of motion relates the action of a stretched rubber band?
   Ⓐ first Ⓑ second Ⓒ third Ⓓ both A and B

What Am I ?

I explained the three laws of motion.

Isaac Newton

Warm-Up 57

Name: Day 11

Some scientists considered Isaac Newton to be the greatest scientist who ever lived. Isaac Newton was born in England on Christmas day in 1642 and died in 1727. In the course of his long life, he changed the nature of scientific inquiry and math forever. He discovered the binomial theorem of mathematics. He invented the basic concept of calculus. This math is essential today for space travel and understanding vast distances in space. It is needed for creating complicated calculating devices. It has many other applications as well.

Newton discovered and explained the Universal Law of Gravitation. It states that all objects in the universe are attracted to each other. He also determined that the force of the attraction depends on how far they are from each other and how large each body is. His "inverse law of gravitation" explains how the force of gravity works. For example, if the moon and Earth were twice as far away, the force of the gravitational attraction would be only one-fourth as much as it presently is.

Newton worked out the three laws of motion related to objects at rest and in motion. He showed that planetary orbits had to be elliptical in nature. He did experiments with light that proved that white light is composed of the seven colors of the spectrum. Newton invented the reflecting telescope. This telescope greatly improved the sharpness and detail of objects in space. He studied the moon in great detail. He revised how governments coined money. The book he wrote and published in 1687, *Principia Mathematica*, is considered the greatest scientific book ever published.

What Did You Learn ?

1. What math is essential today for space travel and understanding vast distances in space?
   - Ⓐ the binomial theorem
   - Ⓑ multiplication
   - Ⓒ calculus
   - Ⓓ gravity
2. Which discovery helped explain the relationship between planets and other objects in space?
   - Ⓐ the telescope
   - Ⓑ elliptical orbits
   - Ⓒ the Universal Law of Gravitation
   - Ⓓ calculus
3. How long did Newton live?
   - Ⓐ about 40 years
   - Ⓑ about 80 years
   - Ⓒ about 85 years
   - Ⓓ into his 30s
4. If the Earth and moon were twice as far away, how great would the gravitational attraction be?
   - Ⓐ $\frac{1}{2}$ as strong
   - Ⓑ twice as strong
   - Ⓒ 4 times as strong
   - Ⓓ $\frac{1}{4}$ as strong

What Am I ?

I explain how gravity works.

6th Grade
NTI Day 12

Mrs. King	Reading	Chap 10: Ten words in context
Mr. Simpson	Math	Problem solving in the coordinate plane
Mrs. Overbay	Social Studies	The Birth of China (part 2)
Mrs. Mike	Science	What is energy?/ Potential vs. Kinetic

CHAPTER

10

convey	subtle
delusion	unique
devise	universal
savor	versatile
stimulate	vivid

Ten Words in Context

In the space provided, write the letter of the meaning closest to that of each **boldfaced** word. Use the context of the sentences to help you figure out each word's meaning.

1 convey
(kən-vā′)
-verb

- Using sign language, chimpanzees can **convey** such ideas as "Candy sweet" and "Give me hug."
- On my parents' twenty-fifth wedding anniversary, I sent a telegram to **convey** my congratulations and love.

___ *Convey* means a. to think of. b. to prevent. c. to communicate.

2 delusion
(dĭ-lo͞o′zhən)
-noun

- Alex clings to the **delusion** of being in total control even when drunk. In reality, he then lacks both judgment and muscle control.
- Quincy holds the **delusion** that money is everything. Sadly, in seeking financial success, he neglects what is truly important, such as family and friends.

___ *Delusion* means a. a pleasure. b. a misbelief. c. an action.

3 devise
(dĭ-vīz′)
-verb

- In the 1880s an American woman **devised** a machine that sprayed dinnerware with hot, soapy water—the first automatic dishwasher.
- The police had **devised** a plan to catch the thief, but he escaped through the freight elevator.

___ *Devise* means a. to create. b. to forget. c. to carry.

4 savor
(sā′vər)
-verb

- Katie **savored** the candy bar, eating it bit by bit so that the pleasure would last as long as possible.
- Given a rare chance to enjoy the beach, I **savored** every moment in the warm sun.

___ *Savor* means a. to save for later. b. to enjoy. c. to ignore.

5 stimulate
(stĭm′yə-lāt′)
-verb

- The teacher hoped to **stimulate** her students' interest in reading by choosing books that related to their own lives.
- I tried to **stimulate** my sick rabbit's appetite by offering him choice bits of carrots and celery.

___ *Stimulate* means a. to make active. b. to recognize. c. to discourage.

6 subtle
(sŭt′l)
-adjective

- Animal actors are trained to respond to human signals too **subtle** to be noticed by the audience.
- Although Yasmin was born in Alabama, she has lived in New York for many years. As a result, her Southern accent is so **subtle** that some of her friends don't even notice it.

___ *Subtle* means a. obvious. b. peaceful. c. slight.

7 **unique**
(yōō-nēk′)
-adjective

- Any live musical performance is **unique**—the music will never again be played in exactly the same way.
- My talents are **unique** in my family. For example, I'm the only one who can whistle through my nose.

__ *Unique* means a. active. b. hardly noticeable. c. one of a kind.

8 **universal**
(yōō′nə-vûr′səl)
-adjective

- The United Nations was founded to advance **universal** freedom and peace.
- The film had **universal** success—it was a hit in all parts of the United States and in other countries as well.

__ *Universal* means a. limited. b. throughout the world. c. throughout time.

9 **versatile**
(vûr′sə-təl)
-adjective

- Our new computer is **versatile**. It can balance the family checkbook, do word processing, keep tax records, and play against me in chess.
- Edie is the most **versatile** person I know: she paints, sings, does gymnastics, and is a math whiz.

__ *Versatile* means a. having many abilities. b. boring. c. out of control.

10 **vivid**
(vĭv′ĭd)
-adjective

- To make the living room bright and dramatic, we decorated it in **vivid** shades of red.
- At funerals, most people wear black or dark gray clothing with little or no **vivid** color.

__ *Vivid* means a. dull. b. bright. c. pale.

Matching Words with Definitions

Following are definitions of the ten words. Clearly write or print each word next to its definition. The sentences above and on the previous page will help you decide on the meaning of each word.

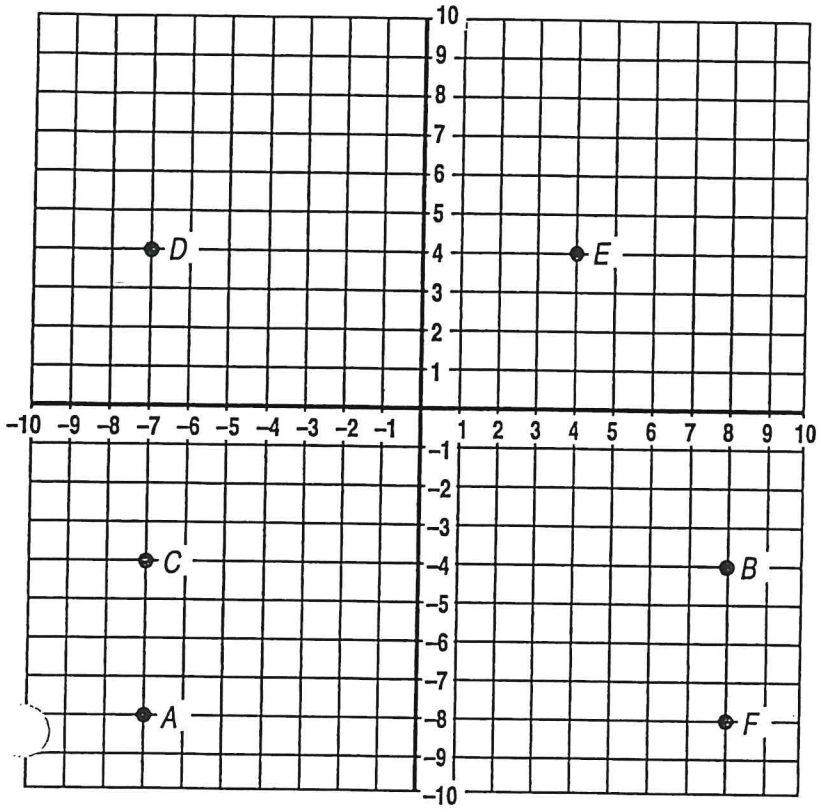
1. _____ Unlike any other; one of a kind
2. _____ To invent; think up; create
3. _____ Bright; brightly colored; striking
4. _____ Hardly noticeable; not obvious
5. _____ To communicate; make known
6. _____ To cause to become active or more active; arouse
7. _____ Worldwide; widespread
8. _____ To taste or smell with pleasure; to appreciate fully
9. _____ A false opinion or belief
10. _____ Able to do many things or serve many purposes well

CAUTION: Do not go any further until you are sure the above answers are correct. Then you can use the definitions to help you in the following practices. Your goal is eventually to know the words well enough so that you don't need to check the definitions at all.

Day 12 NAME _____

Lesson 4.6 Problem Solving in the Coordinate Plane

Use the coordinate grid to answer the questions.



A – stream
B – home
C – bookstore
D – school
E – park
F – fire station

How far is it from the fire station to the bookstore?

Begin at the fire station.

First move 15 units left. Then, move 4 units up.

15 + 4 = 19 units

It takes 19 units to get from the fire station to the bookstore.

1. How far is it from school to the park? _____ units

2. How far is it from the stream to the fire station? _____ units

3. How far is it from the bookstore to home? _____ units

4. How far is it from the stream to the school? _____ units

5. How far is from the fire station to home? _____ units

Day 1 Social Stud

NAME _____ DATE _____ CLASS _____

networks

Lesson 1 The Birth of Chinese Civilization, *Continued*

Defining

4. What is a *warlord*?

_____

_____

Identifying

5. Which group of people made up most of Chinese society?

_____

Contrasting

6. What is the difference between a pictograph and an ideograph?

_____

_____

_____

Reading Check

7. Why did Shang kings have questions scratched on oracle bones?

_____

_____

Public buildings and the homes of government officials were nearby. Beyond these stood workshops and other homes.

The king was the political, religious, and military leader of Shang China. Over time, the Shang conquered nearby areas. Kings began to rule more land and people. Warlords helped the Shang kings control territories throughout the country. A **warlord** is a military leader who has his own army.

Warlords and other royal officials were aristocrats. **Aristocrats** are people in an upper class of society. Their wealth comes from the land they own. Most Chinese people, however, were farmers. They farmed the land owned by aristocrats. A small number were merchants, artisans, and enslaved people.

People in Shang China:

- worshiped many gods
- believed the gods could bring good or bad fortune
- honored their **ancestors**, or long-dead family members.
- believed their ancestors would bring them good luck
- made offerings to the gods and their ancestors

Kings looked to their ancestors for help in making important decisions. They had priests scratch questions on oracle bones such as, "Will I win the battle?" Priests heated the bones until they cracked. Answers were found in the pattern of the cracks.

Early Chinese writing used pictographs and ideographs. **Pictographs** are characters that represent objects. **Ideographs** are another kind of character. They link two or more pictographs to express an idea.

The Zhou: China's Longest Dynasty

According to legend, the last Shang ruler was a wicked tyrant. Rebels overthrew the Shang government and declared a new dynasty called the Zhou. The Zhou ruled China for more than 800 years. The king led the government. He was helped by a **bureaucracy.** A bureaucracy is a group of selected officials who do different government jobs.

NAME _____ DATE _____ CLASS _____

networks

Lesson 1 The Birth of Chinese Civilization, *Continued*

Under Zhou rulers, China grew larger. The king divided the country into territories. Each territory was ruled by an aristocrat. When an aristocrat died, his son or another member of his family governed the territory. This means these positions were **hereditary**.

Zhou kings believed that the gods gave them the right to rule to China. This idea is known as the **Mandate of Heaven**. The Mandate said that the king must rule by the proper "Way," known as the **Dao**. The king's duty was to honor and please the gods.

During the Zhou dynasty, new technology helped farmers. The Chinese developed better ways to bring water to their fields. With a better irrigation system, farmers were able to grow more food than ever before. Under the Zhou, China's trade expanded also. Silk from the Zhou dynasty has been found as far away as Greece.

The aristocrats became more powerful under the Zhou. They began to ignore the king. They each took control of their own territory, or states. Aristocrats began to fight each other for power. These battles lasted for nearly 200 years. This time in Chinese history is known as the "Period of the Warring States."

Check for Understanding

List two different landforms and explain how each one helped shape Chinese history.

1. _____

2. _____

List one accomplishment of the Shang dynasty and one accomplishment of the Zhou dynasty.

3. _____

4. _____

Defining

8. What does *hereditary* mean?

_____

_____

_____

Reading Check

9. What technology was developed in China during the Zhou dynasty?

_____

_____

10. Place a two-tab Foldable along the dotted line to cover the Check for Understanding. Label the tabs—*Shang Dynasty* and *Zhou Dynasty*.

Use both sides to list facts about each family of Chinese kings, their beliefs, and how they governed the people. Use this Foldable and the chart on Geographic Features to complete the lists in the Check for Understanding.

What Is Energy?

Name: Day 12

What is energy? It is the ability to make things happen. The total amount of energy in the universe has stayed the same since the very first moment in time. Energy is never really lost or gained. It just moves or changes. Energy does its work either by transfer from one form of energy to another or by conversion. The transfer of energy occurs when energy moves from one place to another. When heat rises or a football is kicked, energy is transferred. Conversion of energy happens when wind power produces electricity or coal is burned to produce heat.

Scientists define two broad types of energy. One is potential energy. This type of energy is stored up and ready to use. Examples of this energy are a squeezed spring ready to snap out or an object ready to fall. Kinetic energy is moving energy. Examples of this kind of energy are a snowball rolling down a hill, a car in motion, or a falling baseball.

Energy cannot be destroyed, but it can be burned up. Energy, which is converted to heat, is not destroyed. However, it is hard to use again because the heat spreads out in all directions. Energy cannot be reused once it has been turned to heat. Scientists call energy that has become unusable "entropy." Energy moves from areas of high energy to areas of low energy and from areas of heat to areas of cold. The nature of energy is summed up in two laws of thermodynamics. The first law says that the total energy of the universe was fixed forever at the beginning of time. The second law says that energy is lost every time it is used. So entropy in the universe keeps increasing.

What Did You Learn ?

1. The ability to make things happen is a definition of what scientific term?
   - Ⓐ entropy
   - Ⓑ electricity
   - Ⓒ energy
   - Ⓓ conversion
2. Energy accomplishes work or makes things happen in which way?
   - Ⓐ conversion
   - Ⓑ transfer
   - Ⓒ heat
   - Ⓓ both A and B
3. What word is used to describe energy that cannot be used?
   - Ⓐ high energy
   - Ⓑ electrical
   - Ⓒ entropy
   - Ⓓ both A and B
4. Which law of thermodynamics says that the amount of energy in the universe was fixed forever since the dawn of time?
   - Ⓐ fourth
   - Ⓑ first
   - Ⓒ third
   - Ⓓ second

What Am I ?

Two laws about me sum up the nature of energy.

Warm-Up 90

Potential and Kinetic Energy

Name: Day 12

Potential Energy

Potential energy refers to energy that is stored in some way, but ready to use. A stretched rubber band, an apple ready to fall from a tree, and a spring that is stretched are forms of potential energy. So is food stored in an organism and ready to use.

Kinetic Energy

Kinetic energy is demonstrated in moving objects. The word *kinetic* means "moving or resulting from motion." A moving rubber band when it is snapped, a falling apple from a tree, and a spring that is in motion are examples of kinetic energy.

Directions: Identify each energy example below as *potential* (P) or *kinetic* (K) energy.

1. _____ a ripe orange hanging from a tree
2. _____ a skateboard at the top of a hill
3. _____ a car waiting to start a race
4. _____ a hammer in motion towards a nail
5. _____ a spring being sat on
6. _____ a fully stretched rubber band
7. _____ a branch being held back
8. _____ a branch being let go
9. _____ a stretched rubber band when it is let go
10. _____ a light bulb before it is turned on
11. _____ a light bulb that is lit
12. _____ a piece of wood before it goes into the fire
13. _____ a piece of wood burning in the fireplace
14. _____ a berry before it is eaten by a bird
15. _____ a berry after it has been eaten by a bird
16. _____ cold water sitting on a stove
17. _____ water that is steaming and boiling
18. _____ a cheetah running at full speed
19. _____ a cheetah waiting to spring on its prey
20. _____ a hammer sitting on a table

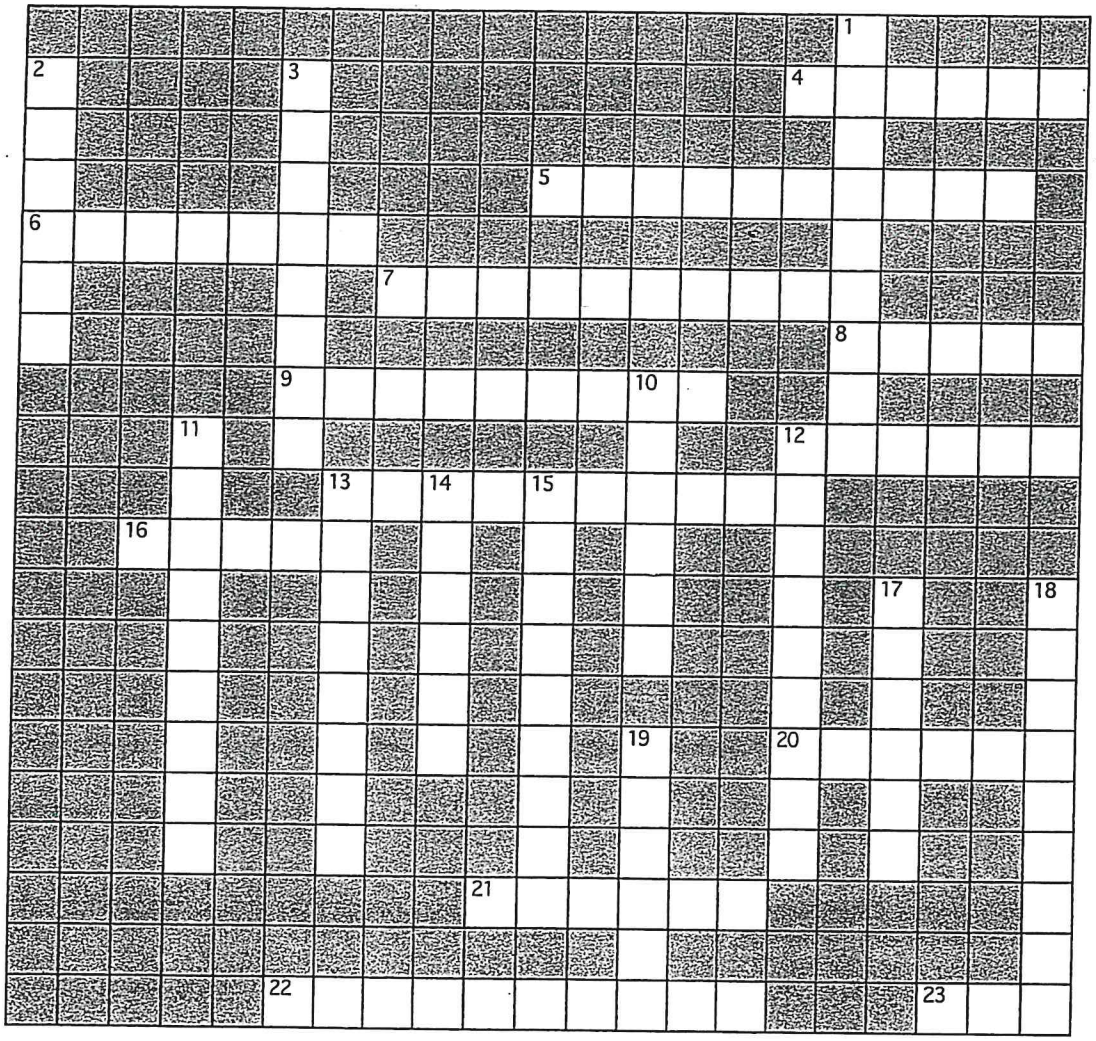
6th Grade
NTI Day 13

Mrs. King	Reading	Unit 2: Review
Mr. Simpson	Math	Integer concepts
Mrs. Overbay	Social Studies	Society & Culture in Ancient China
Mrs. Mike	Science	What is magnetism? Working with magnets

Day 13

UNIT TWO: Review

The box at the right lists twenty-five words from Unit Two. Using the clues at the bottom of the page, fill in these words to complete the puzzle that follows.



accessible
anonymous
arrogant
awe
compensate
convey
derive
devise
donor
exempt
fluent
futile
infer
inhibit
lethal
persistent
prominent
rational
recipient
retort
stimulate
supplement
tentative
unique
versatile

ACROSS

4. Able to cause death; deadly
5. To make suitable payment to; pay; repay
6. To hold back; prevent
7. To add to, especially to make up for a lack
8. To draw a conclusion from evidence
9. Created or given by an unknown or unidentified person
12. A sharp or clever reply
13. Easily reached or entered
16. A person who gives or contributes
20. Free from some unpleasant duty or situation
21. To receive from a source; get
22. Refusing to quit; stubbornly continuing
23. Great respect mixed with wonder and fear

DOWN

1. Able to do many things well
2. To invent; think up; create
3. Reasonable; logical
10. Unlike any other; one of a kind
11. Very noticeable; obvious
12. A person who receives
13. Filled with self-importance; overly proud and vain
14. To communicate; make known
15. To cause to become active or more active; arouse
17. Able to speak a language with skill and ease
18. Not definite; not final
19. Useless; unable to succeed

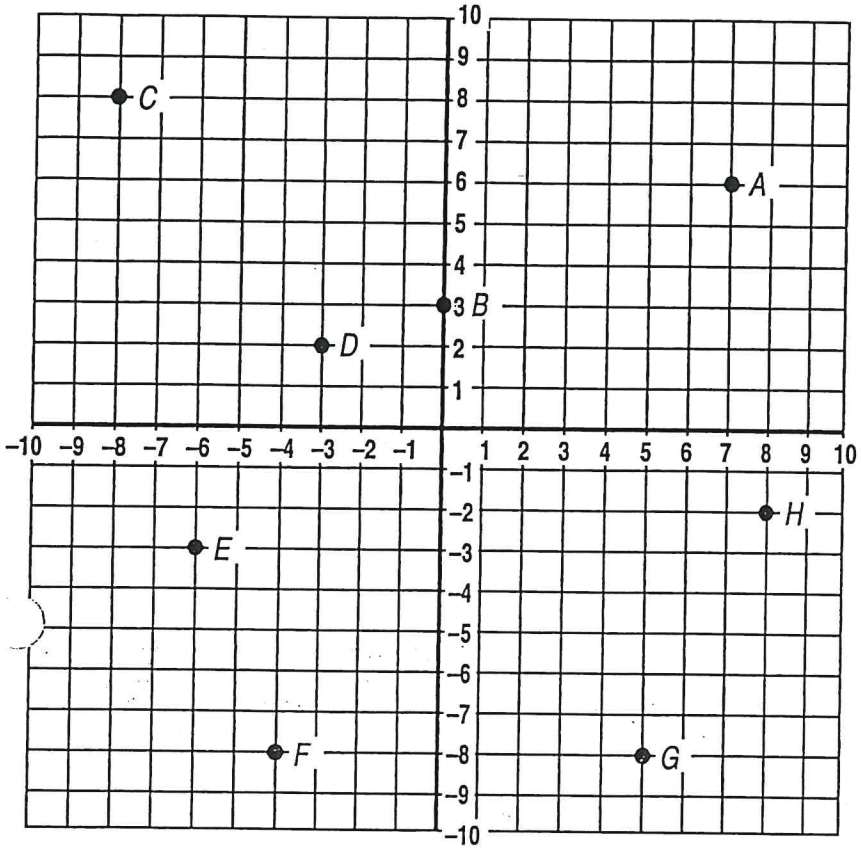
Day 13

NAME _____

Check What You Know

Integer Concepts

Use the coordinate grid to answer the questions.



Write the ordered pair for each coordinate.

13. *A* _____

14. *C* _____

15. *E* _____

16. *G* _____

Name the point located at each ordered pair.

17. (8, –2) _____

18. (–3, 2) _____

19. (–4, –8) _____

20. (0, 3) _____

Mark the following points on the coordinate grid.

21. *I* at (4, –3)

22. *J* at (–8, –5)

23. *K* at (–5, –5)

24. *L* at (6, 2)

UHY 13 Social Studies

NAME _____ DATE _____ CLASS _____

networks

Early China

Lesson 2 Society and Culture in Ancient China

ESSENTIAL QUESTION

How do new ideas change the way people live?

GUIDING QUESTIONS

1. ***How did Chinese thinkers influence society and government?***
2. ***How was early Chinese society organized?***

Terms to Know

Confucianism a system of beliefs based on the teachings of Confucius; duty is central idea

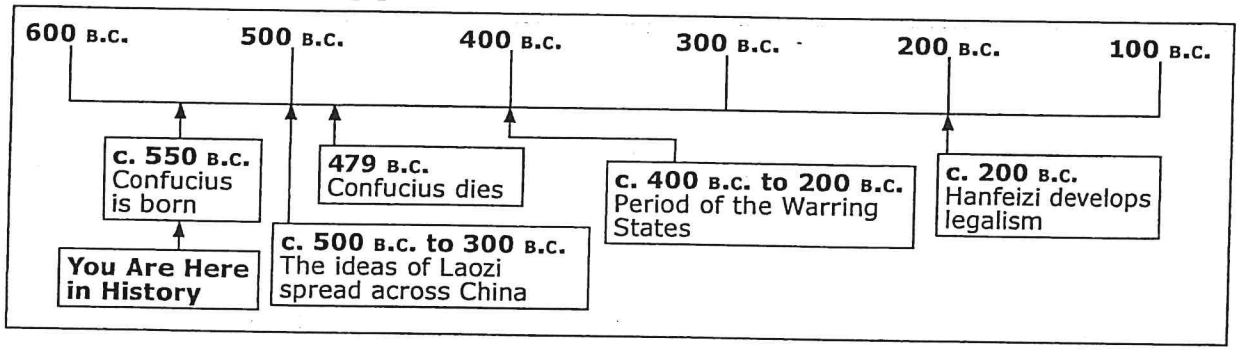
Daoism a Chinese philosophy focused on obtaining long life and living in harmony with nature

legalism a Chinese philosophy based on the importance of laws

social class a group of people at a similar cultural, economic, or educational level

filial piety the responsibility children have to respect, obey, and care for their parents

When did it happen?



What do you know?

In the first column, answer the questions based on what you know before you study. After this lesson, complete the last column.

Now...		Later...
	Who was Confucius?	
	What is legalism?	
	Who owned most of the land, farmers or aristocrats?	
	Were wealthy merchants respected?	
	What did Chinese philosophy say that children owed to their parents?	

NAME _____ DATE _____ CLASS _____

networks

Early China

Lesson 2 Society and Culture in Ancient China, *Continued*

Chinese Philosophies

Between 500 B.C. and 200 B.C. Chinese thinkers developed three major philosophies. They were Confucianism, Daoism, and legalism. The philosophies were different from each other. However, they had the same goal. Each philosophy aimed to create a well-run and peaceful society.

Marking the Text

1. In the text, circle the names of the founders of each Chinese philosophy. Underline the name of the philosophy they founded. Draw an arrow from the name of the founder to his philosophy.

Confucius	Laozi	Hanfeizi
People should put the needs of their family and community first.	People should give up worldly desires in favor of nature and the Dao, the force that guides all things.	Society needs a system of harsh laws and strict punishment.

Confucius was born about 550 B.C. to a farming family. He lived during a time when kings were often fighting each other. Confucius believed people should follow the beliefs of their ancestors. He also taught that everyone had a duty. Rulers had a duty to lead their people wisely. Children had a duty to respect their parents. Parents had a duty to love their children.

Confucius believed that if everyone did their duty and followed traditional beliefs, there would be peace. He also believed that all men should be able to serve in the government. This led to a system of examinations to choose government officials.

Confucius was honored as a great teacher. After his death, his teachings, called **Confucianism,** spread across China.

Like Confucianism, **Daoism** aimed to create a peaceful society. It began with the ideas of Laozi. Confucius thought people should work hard to make the world better. Daoism taught people to turn away from society and live in harmony with nature. Dao means "the Way." Laozi and his followers believed Daoism was the way, or path, to a better life. Many Chinese followed both Confucianism and Daoism.

Explaining

2. Why is a system of examinations a good way to choose government officials?

_____

_____

_____

_____

What Is Magnetism?

Warm-Up 65

Name: Day 13

What is magnetism, and how does it work? Magnetism is a force of attraction or repulsion between certain objects. The magnets may attract or repel at a distance or when they are touching. There are two basic types of magnets. One type is the permanent magnet. The other type is the electromagnet. All magnets are surrounded by a magnetic field. This magnetic field affects some metal objects that are near or touching the magnet. Permanent magnets are made from combinations of metals. These include nickel, iron, aluminum, and cobalt. Iron is by far the most common magnet encountered by children. Lodestone is a natural magnet found in nature. It was recognized for its special qualities even in ancient Greece more than two thousand years ago. Today, magnets come in various shapes and sizes. These include bar magnets, horseshoe magnets, disks, and rings.

Magnets exert an invisible force through their poles. However, you can see these lines of force. Spread iron filings on a sheet of paper and hold the magnet under the paper. The iron particles will be pulled into lines. They illustrate the lines of force generated at the poles of the magnet. When magnets are held near magnetic materials or rubbed in one direction, the domains or particles line up. This gives a magnetic property to the magnetic materials. These are temporary properties, and the domains fall out of alignment in a short time. You can see this yourself. Rub a nail in one direction several times along a magnet. The nail will attract other nails, particles of metal, or paper clips.

Electromagnets are created by sending an electric current through a wire wrapped around a solid core of iron or steel. A simple version of an electromagnet is a wire coiled around a nail. Each end of the wire is connected to each of the two poles of a battery. This creates a complete circuit. The electromagnet can be made much more powerful than a metal magnet. This is done by using a thicker piece of metal to increase the power of the battery, or by increasing the number of coils. For example, old cars are picked up by giant electromagnets to be placed in a crusher.

What Did You Learn ?

1. What property of natural magnets do iron filings illustrate?
   - Ⓐ attraction for iron
   - Ⓑ invisible lines of force
   - Ⓒ electromagnetism
   - Ⓓ both A and B
2. What is required to make an electromagnet?
   - Ⓐ a metal core
   - Ⓑ a source of electricity
   - Ⓒ wire coils
   - Ⓓ all of the above
3. What do you do to make a temporary magnet with a nail?
   - Ⓐ rub the nail in the sand
   - Ⓑ rub the nail on iron filings
   - Ⓒ rub the nail with a battery
   - Ⓓ rub the nail one way on a magnet
4. Which is the most powerful magnet?
   - Ⓐ a natural magnet
   - Ⓑ a temporary magnet made by rubbing
   - Ⓒ an electromagnet
   - Ⓓ both A and C

What Am I ?

I am a natural magnet found in the Earth. ____ ____ ____ ____ ____ ____ ____ ____ ____

Warm-Up 66

Working with Magnets

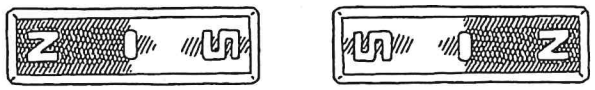
Name: Day 13

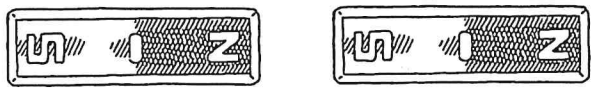
Directions: Read the information paragraph. Respond to the questions below.

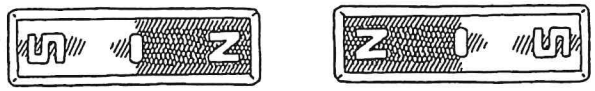
Magnetism is an invisible force that occurs between two or more materials with magnetic properties. A magnet will attract materials with these qualities. The most common metal it will attract is iron, but a few other metals are also magnetic. Magnets will attract or repel other magnets. This means they will pull these magnets towards them or push the magnets away. Every magnet has two different ends, or poles. The north pole of one magnet is attracted to the south pole of another magnet. The south pole of one magnet is repelled by the south pole of another magnet. This polar attraction and repulsion is a feature of all magnets. The force of attraction or repulsion is greatest at the poles. When a piece of metal is attracted to a magnet, the metal itself also becomes magnetized. It can then attract other magnetic objects. Some natural magnetic objects occur in nature. Lodestone is a magnetic rock found in the ground. In the ancient world, this natural magnet was used in compasses. Lodestone is a natural chemical compound called iron oxide.

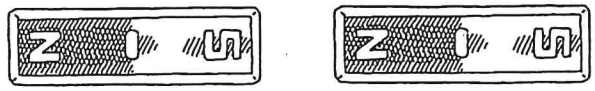
What Did You Learn ?

1. Look at the magnets pictured below and the directions they are pointing. Write **A** for attract and **R** for repel for each pair of magnets.

A. _____ 

B. _____ 

C. _____ 

D. _____ 

2. What will happen if you use the south pole of a magnet to try to pick up very small nails, tacks, or iron filings?

_____

_____

3. What will happen if you use the north pole of a magnet to try to pick up very small nails, tacks, or iron filings?

_____

_____

6th Grade
NTI Day 14

Mrs. King	Reading	Chap 11: Ten words in context
Mr. Simpson	Math	Finding percents using fractions
Mrs. Overbay	Social Studies	Society & Culture in Ancient China (part 2)
Mrs. Mike	Science	What is spectrum? Making a rainbow

defer	**inevitable**
endeavor	**malicious**
equate	**option**
impose	**passive**
indignant	**patron**

Ten Words in Context

In the space provided, write the letter of the meaning closest to that of each **boldfaced** word. Use the context of the sentences to help you figure out each word's meaning.

1 defer
(dĭ-fûr′)
-verb

- The children showed great respect for their grandmother and **deferred** to her every wish.
- When it comes to fixing cars, I **defer** to my brother's judgment. He knows much more about auto mechanics than I do.

___ *Defer* means a. to object. b. to give in. c. to avoid.

2 endeavor
(ĕn-dĕv′ər)
-verb

- Becky **endeavored** to raise money for Christmas presents by selling candy and cookies door to door.
- Your company would be wise to hire Jesse. He will **endeavor** to do his best at whatever jobs you give him.

___ *Endeavor* means a. to try. b. to pretend. c. to step aside.

3 equate
(ĭ-kwāt′)
-verb

- It would be a mistake to **equate** the two teams just because they both have perfect records. One team has played much stronger opponents.
- Don't **equate** all homework assignments with busywork. Homework can increase one's understanding of a subject.

___ *Equate* means a. to exchange. b. to consider to be the same. c. to enjoy.

4 impose
(ĭm-pōz′)
-verb

- Our neighbor pounded on our door as we were sitting down to eat. "I'm sorry to **impose** on you during dinner," he said, "but I need to borrow a fire extinguisher."
- Roy is always asking favors, yet people never seem to notice how much he **imposes** on them.

___ *Impose* means a. to selfishly bother. b. to improve. c. to spy.

5 indignant
(ĭn-dĭg′nənt)
-adjective

- My mother becomes **indignant** when she sees parents treat their children with disrespect.
- When she was falsely accused of stealing the gold chain, the student became very **indignant**.

___ *Indignant* means a. angry. b. patient. c. amused.

6 inevitable
(ĭn-ĕv′ĭ-tə-bəl)
-adjective

- I am such a chocoholic that if you put a brownie in front of me, it is **inevitable** that I will eat it.
- We try so hard to look and stay young, but aging is **inevitable**.

___ *Inevitable* means a. unlikely. b. surprising. c. certain.

7 **malicious**
(mă-lĭsh′əs)
-adjective

- Bullies are **malicious**—they take pleasure in hurting others.
- Rachel loves **malicious** gossip. The more spiteful it is, the more she likes it, and the more likely she is to repeat it.

__ *Malicious* means a. mean. b. ambitious. c. common.

8 **option**
(ŏp′shən)
-noun

- When the mugger said to me, "Give me your wallet or I'll kill you," I didn't like either **option**.
- Harry thinks a multiple-choice test allows him to choose more than one **option**.

__ *Option* means a. an opinion. b. an advantage. c. a choice.

9 **passive**
(păs′ĭv)
-adjective

- Taylor is very **passive**. He waits for things to happen instead of making them happen.
- Students learn more when they take part in class discussions instead of simply being **passive** listeners.

__ *Passive* means a. insincere. b. inactive. c. flexible.

10 **patron**
(pā′trən)
-noun

- The punk-rock star was a good **patron** of the beauty shop. She came in at least once a week to change her hair color.
- Many of the diner's **patrons** were stagehands who worked at the theater across the street.

__ *Patron* means a. an advertiser. b. an owner. c. a customer.

Matching Words with Definitions

Following are definitions of the ten words. Clearly write or print each word next to its definition. The sentences above and on the previous page will help you decide on the meaning of each word.

1. _____ A choice
2. _____ To take unfair advantage of
3. _____ Being acted upon without acting in return
4. _____ Sure to happen; unavoidable
5. _____ To consider to be equal, the same, or similar
6. _____ To make a serious effort; to attempt
7. _____ Angry because of some insult or injustice
8. _____ A customer, especially a steady one
9. _____ Showing great ill will; mean; deliberately harmful
10. _____ To give in to someone else's wishes or judgment; yield out of respect

CAUTION: Do not go any further until you are sure the above answers are correct. Then you can use the definitions to help you in the following practices. Your goal is eventually to know the words well enough so that you don't need to check the definitions at all.

Day 14

NAME _____

Lesson 3.7 Finding Percents Using Fractions

35% of 60 = 35% × 60

$= \frac{35}{100} \times 60$

$= \frac{7}{20} \times \frac{60}{1} = \frac{420}{20} = \frac{42}{2}$

$= 21$

40% of 32 =

$40\% \times 32 = \frac{40}{100} \times 32$

$= \frac{2}{5} \times \frac{32}{1} = \frac{64}{5}$

$= 12\frac{4}{5}$

Complete the following. Write each answer in simplest form.

a

Complete A Only

1. 8% of 65 = _____
2. 30% of 32 = _____
3. 150% of 12 = _____
4. 28% of 7 = _____
5. 40% of 20 = _____
6. 80% of 80 = _____
7. 45% of 70 = _____
8. 4% of 92 = _____
9. 90% of 60 = _____
10. 12% of 40 = _____
11. 60% of 60 = _____
12. 21% of 50 = _____

~~b~~

95% of 80 = _____

25% of 28 = _____

25% of 30 = _____

10% of 38 = _____

15% of 45 = _____

20% of 75 = _____

18% of 45 = _____

16% of 90 = _____

25% of 86 = _____

9% of 60 = _____

95% of 20 = _____

3% of 25 = _____

NAME _____ DATE _____ CLASS _____

networks

Lesson 2 Society and Culture in Ancient China, *Continued*

Explaining

3. Why did aristocrats and kings like legalism?

_____

_____

_____

Reading Check

4. How are the ideas of Confucius and Laozi similar? How are they different?

_____

_____

_____

Summarizing

5. Place a two-tab Foldable along the dotted line to cover the chart titled *Chinese Society*. Cut the tabs in half to form four tabs. Write *Chinese Social Classes* on the anchor tab. Label the tabs: *Aristocrats, Farmers, Artisans,* and *Merchants*. Write on both sides what you learn about the four social classes.

Hanfeizi introduced the ideas of **legalism** during the 200s B.C. Unlike Confucious and Laozi, he believed that humans are naturally evil. He thought only strict laws and harsh punishment would get people to do what they should do.

Many aristocrats supported legalism because it emphasized force. Under legalism, rulers did not have to think of the needs or wishes of their people. The ideas led to harsh punishments for even small crimes.

Chinese Life

Chinese society was made up of four social classes. A **social class** is a group of people in a society with the same economic and social position.

Aristocrats	• small number of people • wealthy • owned large plots of land and lived on large estates
Farmers	• most people • worked on land owned by aristocrats • paid rent in the form of crops • paid taxes • served as soldiers in wartime • worked one month per year on public projects, such as roads
Artisans	• skilled workers who made useful objects, such as tools and silk cloth • learned skills from fathers and taught them to sons
Merchants	• shopkeepers and traders • lived in towns • provided goods and services to aristocrats • some wealthy, but not respected because merchants made money only for themselves

NAME _____ DATE _____ CLASS _____

networks

Lesson 2 Society and Culture in Ancient China, *Continued*

Aristocratic families in China were wealthy. They lived on estates with walls surrounding their homes for protection. They owned large amounts of land. After a father died, his estate was divided equally among his sons. This meant that sons and grandsons ended up with much less land.

Most Chinese were farmers. They lived in villages surrounded by mud walls. Outside these walls were the fields that farmers rented from aristocrats. They paid rent by giving some of their harvest to the aristocrats.

Artisans are skilled workers who make useful objects. Merchants provided goods and services to the aristocrats. Some merchants grew wealthy, but they were not respected. People believed that merchants acted only for their own gain and not for the good of society.

The family was at the center of Chinese society. Chinese families practiced filial piety. **Filial piety** is the responsibility children have to respect, obey, and take care of their parents.

Men and women had very different roles in early China. Men grew crops, ran the government, and fought wars. Women raised children and saw to their education. They also managed the household and family finances.

Check for Understanding

What is a major difference between Confucianism and Daoism?

1. _____

_____

List the four classes of early Chinese society.

2. _____
3. _____
4. _____
5. _____

Marking the Text

6. Underline the work done by men. Circle the work done by women.

Reading Check

7. Why were merchants not respected in ancient China?

_____

_____

_____

8. Place a two-tab Foldable along the dotted line. Label the anchor tab *Philosophies*. Label the top tab *Confucianism* and the bottom tab *Daoism*.

Make a memory map by drawing three arrows below each title. Write words or phrases you remember about each. Use these notes and the *Chinese Social Classes* Foldable to help you answer the questions under the tabs.

What Is the Spectrum?

Warm-Up 105

Name: Day 14

Directions: Read the facts. Respond to the questions.

Facts to Know:

- The spectrum of visible light from the Sun is composed of seven colors.
- A rainbow actually contains the entire spectrum of colors, we just can't see all of them.
- The amount that a color is bent is called the *wavelength*.
- The color with the longest wavelength is red.
- The color with the shortest wavelength is violet.
- Indigo is usually hardest to recognize or see in a rainbow.
- Blue is the color of the sky usually visible during the day.
- Red is the color of the sky that is usually most visible in the evening before sunset.
- A lawn sprinkler often creates a rainbow on sunny days.
- When light is bent by water or a prism, it is refracted.
- Water is considered a natural prism.

1. When have you seen a rainbow at home or at school? Describe what it looked like.

   _____

   _____

2. Which color has the longest wavelength? _____
3. Which color has the shortest wavelength? _____
4. What is an example of a natural prism? _____
5. Even though the visible spectrum has seven colors, there are many more colors than just seven that you can see. Explain how you think this is possible.

   _____

   _____

   _____

   _____

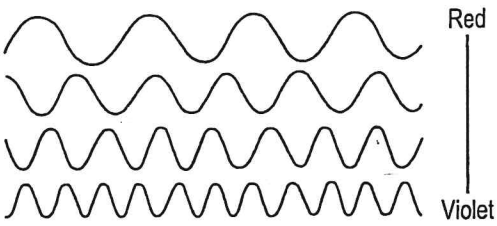
Warm-Up 106

Making a Rainbow

Name: Day 14

Directions: Read the passage. Answer the questions below.

White light from the Sun hits drops of water still in the air after a rainstorm. The colors are split up inside each drop of water. This is the same thing that happens in a prism, which is a triangular piece of glass designed to refract or break light into its component colors. The seven colors of the rainbow are red, orange, yellow, green, blue, indigo, and violet.



Each color has a different wavelength and is bent or refracted at a different angle. Light coming from the Sun is refracted different amounts because it has different wavelengths. Red has the longest wavelength. It is followed by orange with the next longest. The third color is yellow, followed by green, which is in the center. The last three colors have shorter wavelengths. They are blue, indigo, and the shortest of all is violet. Students of science use this acronym to keep the colors in mind in their correct order: ROY G. BIV.

1. What do you think happens if you put a glass of water on a large white sheet of paper in the sun?

2. Which time of the day do you think that you would see the best spectrum of color? Why?

3. How can you make a small rainbow with the spectrum of colors at home or at school with a hose or hand sprinkler?

4. What kind of day would work best for the rainbow? Why?

5. How would the Sun affect making the rainbow?

6th Grade
NTI Day 15

Mrs. King	Reading	Chap 17: Ten words in context
Mr. Simpson	Math	Understanding percents
Mrs. Overbay	Social Studies	Section 1 questions
Mrs. Mike	Science	The Moon in Motion Phases of the moon

Day 15

discriminate	**site**
dismal	**subside**
dispense	**summon**
profound	**theoretical**
severity	**vocation**

Ten Words in Context

In the space provided, write the letter of the meaning closest to that of each **boldfaced** word. Use the context of the sentences to help you figure out each word's meaning.

1 discriminate
(dĭ-skrĭm′ə-nāt′)
-verb

- It's easy to **discriminate** between canned and fresh vegetables—fresh vegetables taste much better.
- Tests show that women tend to **discriminate** among colors better than men. Cherry red, cranberry red, and purplish red are all simply dark red to many men.

__ *Discriminate* means a. to tell the difference. b. to become confused. c. to make an error.

2 dismal
(dĭz′məl)
-adjective

- Kyle was disappointed by the **dismal** news that his knee injury would keep him out of college for a whole semester.
- "It is a **dismal** rainy day," Mona told her disappointed children. "But we don't have to cancel the picnic—we can have it on the kitchen floor."

__ *Dismal* means a. welcome. b. lengthy. c. gloomy.

3 dispense
(dĭ-spĕns′)
-verb

- The broken soda machine **dispensed** either a cup or soda, but not both together.
- Restroom soap holders that are supposed to **dispense** liquid soap at each push seem to be empty most of the time.

__ *Dispense* means a. to pay. b. to give out. c. to do without.

4 profound
(prə-found′)
-adjective

- The death of a spouse can cause **profound** depression that, in some cases, can even lead to the death of the partner.
- Ever since her stepfather insulted her mother, Serena has had a **profound** hatred of him.

__ *Profound* means a. deep. b. mild. c. accidental.

5 severity
(sə-vĕr′ə-tē)
-noun

- The **severity** of the fire could be seen in the burned, smoking ruins of the once beautiful building.
- Mark believes the **severity** of his punishment was too great. A hundred hours of weekend trash cleanup seemed too harsh a penalty for throwing two Coke cans onto the highway.

__ *Severity* means a. gentleness. b. intensity. c. a cause.

6 site
(sīt)
-noun

- The oldest private home in the New England town was named a historical **site**.
- Wounded Knee, South Dakota, is the **site** of a conflict between the federal government and the Sioux Indians in 1973.

__ *Site* means a. a state. b. a fact. c. a place.

7 subside
(səb-sīd′)
-verb

- When I'm really furious, a walk around the block makes the anger **subside**.
- Consuela sat in her car until the storm **subsided**. Then she dashed up the sidewalk and into school.

__ *Subside* means a. to begin. b. to lessen. c. to increase.

8 summon
(sŭm′ən)
-verb

- When the king couldn't sleep, he would **summon** the court clown to come and entertain him.
- The principal liked to **summon** troublesome students to his office by announcing their names over the loudspeaker.

__ *Summon* means a. to order. b. to see. c. to allow.

9 theoretical
(thē′ə-rĕt′ĭ-kĕl)
-adjective

- At first, Cruz enjoyed simply looking through his telescope. However, when questions occurred to him, he began to read **theoretical** explanations of what he was seeing.
- The teacher explained the **theoretical** basis for the chemistry experiment so the class would understand why it worked as it did.

__ *Theoretical* means a. about action. b. about theory. c. only imagined.

10 vocation
(vō-kā′shən)
-noun

- Raising collies was just a hobby for Louise. Her **vocation** was library science.
- If you can't decide on a career, you might wish to take a test that reveals which **vocations** you're suited for.

__ *Vocation* means a. recreation. b. an activity. c. an occupation.

Matching Words with Definitions

Following are definitions of the ten words. Clearly write or print each word next to its definition. The sentences above and on the previous page will help you decide on the meaning of each word.

1. _____ Deeply felt
2. _____ To see differences; distinguish
3. _____ The past, present, or future location of a building or buildings or an event
4. _____ A profession or occupation
5. _____ About or based on theory (as opposed to practice or practical use)
6. _____ Gloomy; cheerless; depressing
7. _____ To send for; order to come
8. _____ To give out in portions or amounts
9. _____ The condition or quality of being severe; harshness; intensity; seriousness
10. _____ To become less active; calm down; decrease

CAUTION: Do not go any further until you are sure the above answers are correct. Then you can use the definitions to help you in the following practices. Your goal is eventually to know the words well enough so that you don't need to check definitions at all.

Day 15

NAME _____

Lesson 3.6 Understanding Percents

The symbol % (percent) means $\frac{1}{100}$ or 0.01 (one hundredth).

$7\% = 7 \times \frac{1}{100} = \frac{7}{1} \times \frac{1}{100} = \frac{7}{100}$

$6\% = 6 \times 0.01 = 0.06$

$23\% = 23 \times \frac{1}{100} = \frac{23}{100}$

$47\% = 47 \times 0.01 = 0.47$

Write the fraction and decimal for each percent. Write fractions in simplest form.

	Percent	Fraction	Decimal
1.	2%		
2.	8%		
3.	27%		
4.	13%		
5.	68%		
6.	72%		
7.	56%		
8.	11%		
9.	3%		
10.	22%		
11.	17%		
12.	83%		
13.	97%		
14.	43%		

Day 5

NAME _____ DATE _____ CLASS _____

Section 1

networks

Early China

DIRECTIONS: Matching Match each item with the correct statement below.

_____ **1.** a noble whose wealth comes from the land he or she owns

_____ **2.** a drawn character that stands for objects

_____ **3.** a person who someone is descended from

_____ **4.** a character that represents a thought used in Chinese writing

_____ **5.** appointed officials who run different parts of the government

A. ancestor

B. aristocrat

C. bureaucracy

D. ideograph

E. pictograph

DIRECTIONS: Multiple Choice Indicate the answer choice that best completes the statement or answers the question.

_____ **6.** Why do the Chinese call the Huang He "China's Sorrow"?

A. because it is dirty and polluted

B. because it is yellow in color

C. because it is now dried up

D. because its flooding has drowned many people

_____ **7.** What new technology was developed during the Zhou Dynasty?

melted bronze to make works of art

channels to block flood waters

C. new systems to irrigate the land

D. silk worms to make clothing

_____ **8.** Which answer gives the best explanation of why the Chang Jiang was so important to the people of ancient China?

A. It was a key waterway for trade and transportation.

B. It is the third longest river in the world.

C. It flows west to east across central China.

D. It flows through canyons and plains to the East China Sea.

_____ **9.** Who built the first cities in China?

A. Yü the Great

B. the Shang

C. the Xia

D. the Zhou

NAME _____ DATE _____ CLASS _____

Section 2

networks

Early China

DIRECTIONS: True/False Indicate whether the statement is true or false.

_____ **1.** Confucius believed that people should put the needs of their families and community above their own needs.

_____ **2.** Confucianism was never a major influence on Chinese society and government.

_____ **3.** Hanfeizi, the person who introduced the ideas of legalism, believed that humans are naturally good.

_____ **4.** Chinese farmers were forced to serve as soldiers during wartime.

_____ **5.** Zhou merchants were often rewarded with government jobs.

DIRECTIONS: Matching Match each item with the correct statement below.

_____ **6.** includes the belief that all people with a talent for governing should be able to govern

_____ **7.** includes the belief that people should live in harmony with nature

_____ **8.** people who share a similar position in society

_____ **9.** the responsibility children have to respect, obey, and care for their parents

_____ **10.** also called the "School of Law"

A. Confucianism

B. filial piety

C. Daoism

D. legalism

E. social class

Warm-Up 118

Name: Day 15

As the moon orbits around Earth, half of its surface is lit by the Sun. The rest of the moon's surface remains in darkness. The moon appears to change shape as different sections of the moon are lit by sunlight. When the moon is positioned between Earth and the Sun, the lit side faces away from Earth. In this "new moon" phase, the side facing Earth is dark.

However, as the moon continues its orbit around Earth, more of the lit part of the moon's surface becomes visible. First, there is a small crescent, or sliver, of light visible. It is shaped like a curved sword. As the sliver of light gets larger every night, the crescent gets larger. As the lit portion "waxes," or grows, each night, more of the surface seems to swell into view. This "gibbous," or humped or swollen, area grows until a full moon is visible about two weeks after the new moon.

The lit portion of the moon then appears to gradually shrink or "wane" through a gibbous stage and a crescent stage. Then, another new moon appears when no light is visible. Despite the changes in the amount of observable light, the same side of the moon is always facing Earth. The moon's schedule is the basis for the concept of a month. Some years there are 12 full moons. In others there are 13 full moons. It takes almost 30 days for the moon to go through all of its stages.

What Did You Learn ?

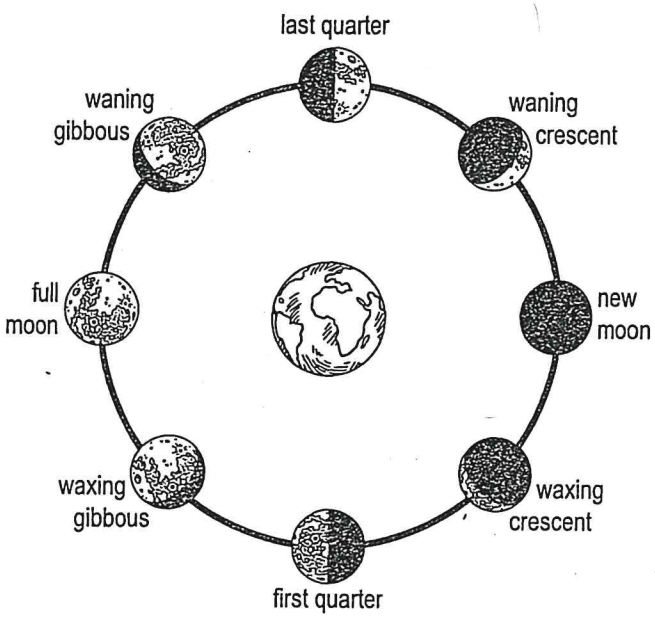
1. In what phase of the moon is the side facing Earth dark?
   - Ⓐ crescent
   - Ⓑ new moon
   - Ⓒ gibbous
   - Ⓓ both A and C
2. Which word means "humped" or "swollen"?
   - Ⓐ crescent
   - Ⓑ gibbous
   - Ⓒ new
   - Ⓓ moon
3. Which phase comes after the new moon?
   - Ⓐ waxing crescent
   - Ⓑ waning crescent
   - Ⓒ waxing gibbous
   - Ⓓ waning gibbous
4. Which phase comes directly before a new moon?
   - Ⓐ waning crescent
   - Ⓑ full moon
   - Ⓒ waning gibbous
   - Ⓓ waxing gibbous

What Am I ?

I look like a sliver of light in the night sky.

Phases of the Moon

Name: Day 15



The moon is constantly seen from Earth through one of the phases shown above.
The moon goes through one complete cycle in about 30 days (exactly 29 days and 13 hours).

Directions: Use the information above to answer these questions.

1. In what phase is the moon not seen from Earth?_____
2. In which two phases is the least amount of the moon visible at night?

   _____ _____
3. In which phase is the moon fully visible as a round ball?_____
4. In which two phases is the moon partially visible as a squashed or humped ball of light?

   _____ _____
5. In what phase is it easiest to see at night for traveling?_____
6. Which moon phase do you like most? Why? What can you do best when the moon is in this phase?

   _____

   _____
7. About how many days does the moon remain in each phase?_____
8. What is the moon going to look like tonight? (Check your answer tonight.)

   _____

6th Grade
NTI Day 16

Mrs. King	Reading	Idioms Test 1
Mr. Simpson	Math	Ratios problem solving
Mrs. Overbay	Social Studies	Early China
Mrs. Mike	Science	What is Plate Tectonics? The Continents Keep Drifting.

Email availability from 9am to 4pm

Brandy.King@mboro.kyschools.us
John.Simpson@mboro.kyschools.us
Mary.Overbay@mboro.kyschools.us
Nicole.Mike@mboro.kyschools.us

9th 11th Day # 16

Name: _____

Idioms Test 1

Directions: Determine the meaning of the bolded expression. Choose the best answer.

Idiom: A common expression understood figuratively, as the literal definition makes no sense.

1. After going to the zoo, the mall, and the movies, Cassie was sick of **bending over backwards** to entertain her nieces.

a. Cassie was doing very little to entertain her nieces.
b. Cassie was making small efforts to entertain her nieces.
c. Cassie was trying very hard to entertain her nieces.
d. Cassie was not trying at all to entertain her nieces.

2. Bobby would have been playing ball **until the cows came home** if it hadn't been for Suzie dragging him home for dinner.

a. Bobby was just about to stop playing ball.
b. Bobby didn't even want to play ball to begin with.
c. Bobby prefers nature to athletics.
d. Bobby would have continued playing ball for a long time.

3. Mr. Johnson was very particular about the arrangement of his classroom, so the thing he hated most was when his students caused a ruckus with their wild **horseplay**.

a. Mr. Johnson hated when his students pretended to be animals.
b. Mr. Johnson hated when his students played sports.
c. Mr. Johnson hated when his students wrestled around with each other.
d. Mr. Johnson hated when his students made animal noises.

4. Eric wanted to fix his cousin's computer, but he was already having problems setting up his Aunt's Wi-Fi network and he didn't want to **open a whole new can of worms**.

a. Eric was sick of spending his time helping his family.
b. Eric wanted to go fishing instead of working on computers.
c. Eric was having difficulties untangling the computer wires.
d. Eric was not ready to begin working on a complicated new problem.

5. Even though Candace already had a new job, she submitted her two week notice and conducted herself in a professional way at her old job because she didn't want to **burn bridges**.

a. Candace didn't want to ruin her positive relationship with her old employer.
b. Candace wasn't ready to start her new job.
c. Candace was really going to miss her old job.
d. Candace was waiting until her last day to rub it in everyone's face that she was leaving.

6. World renowned country western super group The Mountain Boys can sell out an arena **at the drop of a hat**.

a. The Mountain Boys may be able to sell out an arena, but it will take a long time.
b. The Mountain Boys can sell out an arena very quickly.
c. The Mountain Boys are always willing to perform at charity events.
d. The Mountain Boys enforce a dress code at all of their shows.

7. Vivian expected Craig to sob uncontrollably when she broke up with him; however, Craig **kept a stiff upper lip**.

a. Craig cried even more than Vivian had expected.
b. Craig cried about as much as Vivian had expected.
c. Craig cried a little less than Vivian had expected.
d. Craig did not cry.

8. Mrs. Robinson expects Cassie and my presentation to be good, but we have been working on it every night for the last week, so we are really going to **knock her socks off.**

a. Cassie and the speaker are not prepared to give a good presentation.
b. Cassie and the speaker intend on hitting Mrs. Robinson rather than presenting.
c. Cassie and the speaker's presentation will far exceed Mrs. Robinson's expectations.
d. Cassie and the speaker's presentation will meet Mrs. Robison's expectations.

9. Over the summer Brian was really excited about being placed in the advanced math class, but after getting his syllabus on the first day and seeing the workload, he was ready to **jump ship.**

a. Brian was even more excited about the math class than he was over the summer.
b. Brian wanted to start working on his math assignments right away.
c. Brian did not want to be in the advance math class anymore.
d. Brian wanted to cause some trouble in the advanced math class.

10. Jose had a hard time comparing the iPhone to the Samsung phone because to him they were **apples and oranges.**

a. Jose can hardly tell the difference between the two phones because they are so similar.
b. Jose believes that the phones are so different from one another that they cannot be compared.
c. Jose doesn't know anything about phones so he may as well be thinking about fruits.
d. Jose is too hungry to think about phones at this time.

11. When Brian felt pretty good about getting the a pair of roller-skates for his birthday, until he saw his twin brother Ryan open up his GameBox X-9000, and then Brian felt like he **got the short end of the stick.**

a. Brian felt like Ryan received a better gift than he.
b. Brian was quite pleased with his roller skates.
c. Brian wanted a long stick that he could use to support himself on hikes.
d. Brian feels bad for Ryan because Ryan wanted roller-skates.

12. After Ms. Smith caught Darnisha chewing gum for the third time, Ms. Smith scheduled a parent teacher conference with Darnisha's mother. When Darnisha's mother came into Ms. Smith's classroom, she was chewing gum. Ms. Smith thought to herself, **"the apple doesn't fall far from the tree."**

a. Ms. Smith thinks that Darnisha dresses like her mother.
b. Ms. Smith thinks that Darnisha acts a lot like her mother.
c. Ms. Smith is surprised to see that Darnisha's mother came.
d. Ms. Smith thinks that Darnisha's mother lives very close to the school.

13. Brad was accusing us of stealing his phone until he found it, and now he's trying to **sweep it under the rug.**

a. Brad thinks that his phone will be safer if he hides it under the rug.
b. Brad wants to do something to make up for his mistake.
c. Brad is trying to locate a signal for his phone so that he can use it.
d. Brad wants to pretend that the incident never happened.

14. Keisha got up a started yelling at Ronnie and threatening him but Ronnie didn't even flinch because he knew that her **bark was worse than her bite.**

a. Ronnie thinks that Keisha will get in trouble for yelling.
b. Ronnie thinks that Keisha has bad breath.
c. Ronnie thinks that Keisha is loud but not dangerous.
d. Ronnie thinks that Keisha has a crush on him.

15. You might think that Billy Parker is the kid who has everything, but if you saw the list of chores his parents give him, I guarantee that you wouldn't want to **be in his shoes.**

a. You wouldn't want your shoes to get as dirty as Billy's when he's doing his chores.
b. If you have to do as many chores as Billy, you'll want a pair of comfortable shoes.
c. Billy shoes are so uncomfortable that doing his chores is really unpleasant.
d. Billy has so many chores to do that it is unpleasant to imagine doing them all.

Day 116

NAME _____

Lesson 3.5 Problem Solving

SHOW YOUR WORK

Solve the problems below using ratios and unit rates.

1. Gas mileage is the number of miles you can drive on a gallon of gasoline. A test of a new car results in 440 miles driven on 20 gallons of gas. How far could you drive on 60 gallons of gas? _____

   What is the car's gas mileage? _____

1.

2. An ice-cream factory makes 100 quarts of ice cream in 5 hours. How many quarts could be made in 36 hours? _____

   What was that rate per day? _____

2.

3. A jet travels 590 miles in 5 hours. At this rate, how far could the jet fly in 10 hours? _____

   What is the rate of speed of the jet? _____

3.

4. You can buy 5 cans of green beans at the Village Market for $2.30, or you can buy 10 of them at Best Food for $5.10.

   Which place is the better buy? _____

4.

5. You can buy 3 apples at the Quick Stop for $1.29. You can buy 5 apples at Shop and Save for $2.45.

   Which place is the better buy? _____

5.

6. A ferris wheel can accommodate 55 people in 15 minutes.

   How many people could ride the ferris wheel in 2 hours? _____

   What is the rate per hour? _____

6.

NAME _____ DATE _____ CLASS _____

networks

Early China

Lesson 3 The Qin and the Han Dynasties

ESSENTIAL QUESTION

How do governments change?

GUIDING QUESTIONS

1. ***How did the Qin Emperor unite China?***
2. ***What improvements did the Chinese make under Han rulers?***
3. ***How did the Silk Road benefit China and the rest of the world?***
4. ***Why did Buddhism become a popular religion in China?***

Terms to Know

censor an official who made sure that government workers did their jobs

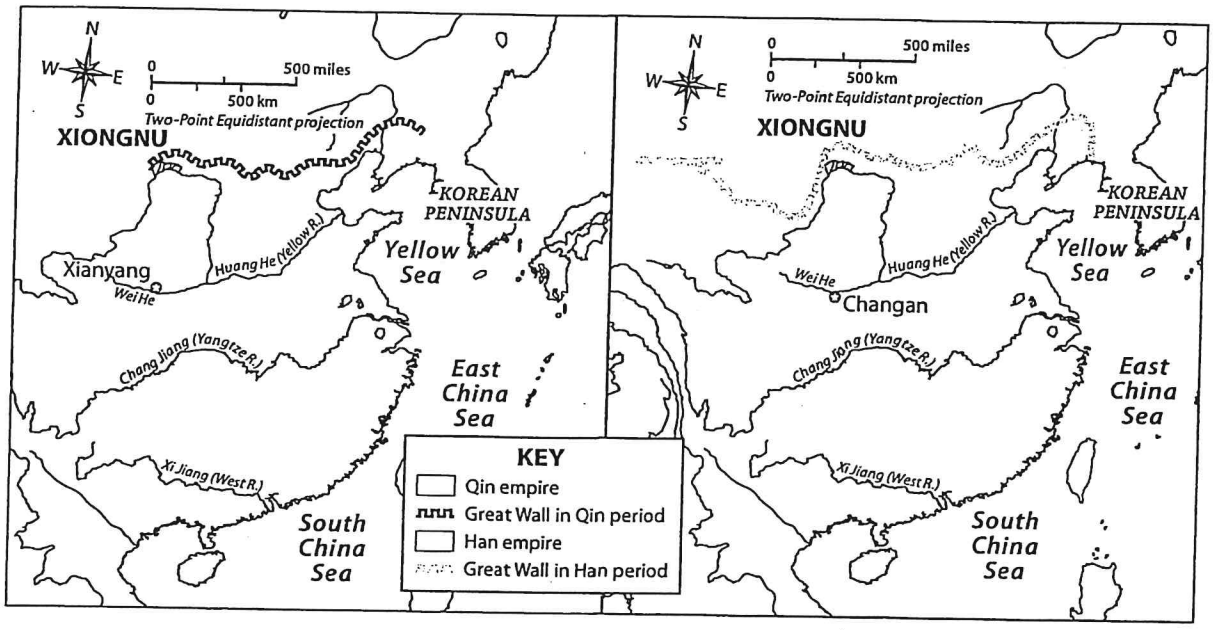
currency something that is used as money

civil service government work

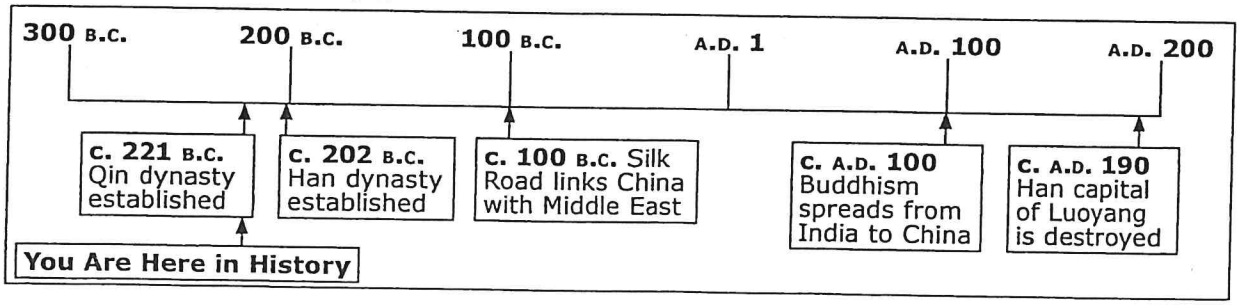
tenant farmer a farmer who works land owned by someone else

acupuncture a Chinese practice of inserting fine needles through the skin to treat disease or relieve pain

Where in the world?



When did it happen?



NAME _____ DATE _____ CLASS _____

networks

Lesson 3 The Qin and the Han Dynasties, *Continued*

The Qin Emperor

In 221 B.C. the ruler of the Chinese state of Qin took control of China and ended the Zhou dynasty. The new ruler called himself Qin Shihuangdi, which means "the First Qin Emperor." Qin brought many changes to China.

Qin wanted to unify China. He took control of China's provinces. Before then, the provinces were ruled by aristocrats. The aristocrats passed control to their sons when they died. Instead, Qin now appointed the governors.

Qin's rule was harsh. Anyone who disagreed with him was punished or killed. He burned writings that did not agree with him. He appointed **censors** to make sure government officials did their work.

Qin's Efforts to Unify China

- He created a single **currency** that everyone had to use.
- He hired experts to simplify and set rules for the Chinese writing system.
- He ordered farmers to build a canal connecting the Chang Jiang River in central China to a city in southern China.
- He began a project to connect a series of walls across northern China to keep invaders out.

When Qin died in 210 B.C., aristocrats and farmers revolted. By 206 B.C., the Qin dynasty was over.

Marking the Text

1. Underline two examples that show Qin's rule was harsh.

Analyzing

2. Do you think Qin's rule helped to unite the country? Why or why not?

_____

_____

_____

Reading Check

3. How would you describe Qin as a ruler?

_____

_____

_____

Han Rulers

In 202 B.C. a new dynasty in China called the Han dynasty came to power. The Han dynasty would rule China for over 400 years.

The first strong Han emperor was Han Wudi. Han Wudi ruled from 141 B.C. to 87 B.C. He wanted dedicated and talented people to work in the government. He created schools to prepare students for **civil service** jobs, or government jobs given to people based on their scores on tests. Civil service tests were a way of choosing educated government workers. The tests for the Chinese civil service were very difficult. Some students who passed got jobs as teachers. Others worked for the government. They won great respect because they were well-educated.

Marking the Text

4. Circle two jobs that someone could get after passing the civil service examination.

What in the World Is Plate Tectonics?

Name: Day 16

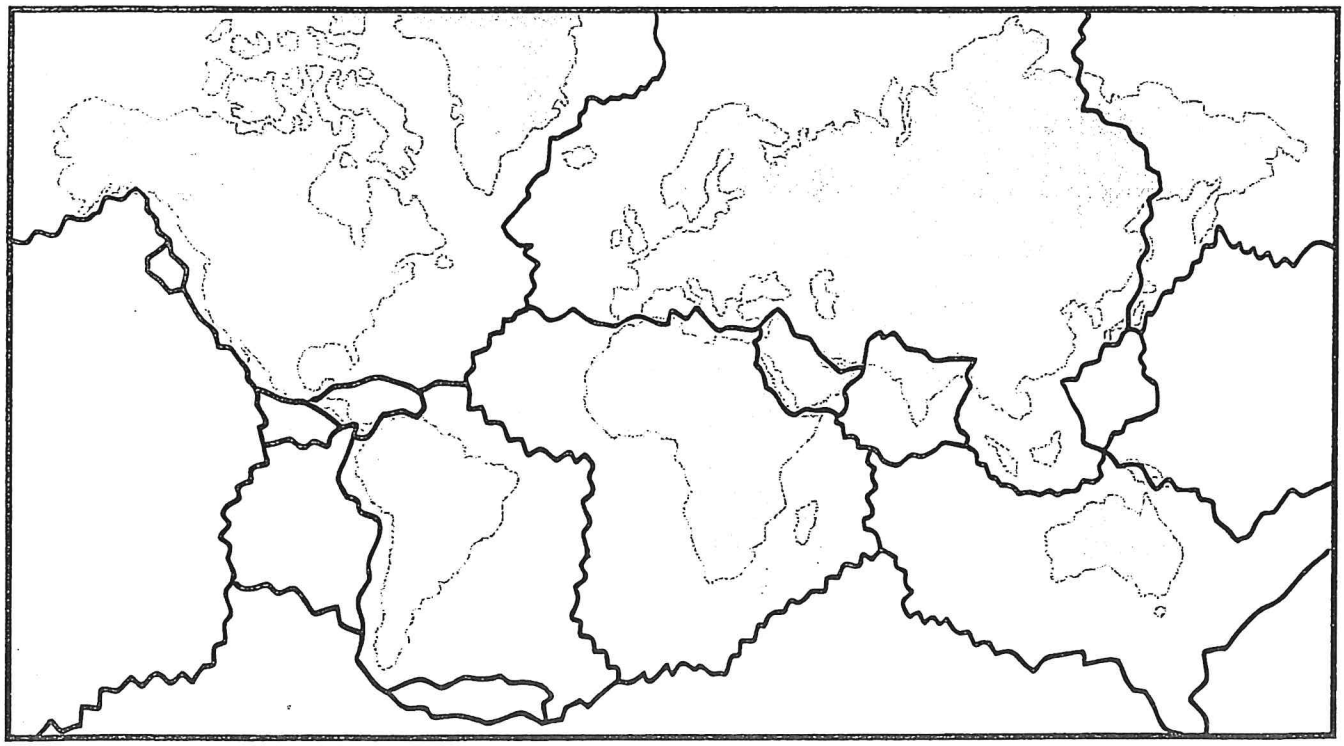
You are living on a giant plate! Earth's crust is made up of about 15 major tectonic plates. The plates hold the continents and the oceans on huge shelves of rock. These can vary from 43 miles deep for some continental plates and as few as three miles under some ocean and coastal areas. These continental and ocean plates are constantly in motion, but the movement is measured in fractions of an inch. Nevertheless, they grind against each other or slide by each other. This creates earthquakes and sets the stage for volcanoes. These plates also help to build mountains by pushing and grinding against each other. Mount Everest and other tall mountains in the Himalayan chain were created this way. They are still rising. This is happening because the tectonic plate holding the Indian subcontinent is pushing up against the Asian plate.

This continental drift accounts for the movement of continents over vast periods of time. These giant plates fit together like a jigsaw puzzle with ragged edges or like a giant dinner plate with some cracked and broken pieces. Pieces of the plates form in mid-ocean ridges. Here new material is added as the continents move away from the ridges. Some plates slide under each other by a process called *subduction*.

The **Pacific Plate** holds the largest section of the largest ocean. The **Eurasian Plate** is the largest of the plates holding a continent. It carries Europe and most of Asia on that plate. The **North American Plate** includes almost all of that continent. It also holds Greenland, half of Iceland, and the western end of the North Atlantic Ocean. Other large plates include the **African**, **South American**, **Australian**, and **Antarctic** plates. The rest of the plates are much **smaller**.

Activity

Directions: On the map below, label the seven tectonic plates that were named (in bold) in the last paragraph of the reading passage. Use the clues given and your knowledge of the continents to do this.



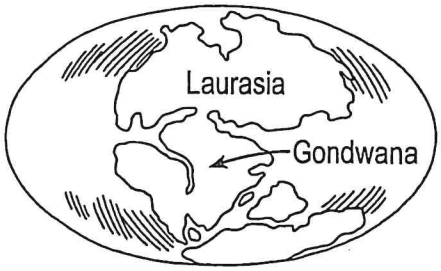
Warm-Up 152

The Continents Keep On Drifting

Name: Day 16

The movement of Earth's continents is called *continental drift*.

Here Are Some Facts to Know About Continental Drift



- Pangaea is a word indicating one giant landmass on Earth long ago.
- Australia is a continent that broke off from Antarctica and drifted north.
- Africa is a continent that was once connected to South America.
- Antarctica is the continent at the South Pole.
- Antarctica was connected to Australia; Australia was connected to Asia where India is located.
- Asia is the largest landmass on Earth today.
- Gondwana was the southern part of two large landmasses formed when Pangaea broke apart.
- Laurasia was the northern part of two large landmasses formed when Pangaea broke apart.
- South America is a continent that was once attached to Africa and is drifting farther away at the rate of 8 inches a year.
- North America is a continental landmass drifting away from Europe and attached to South America.

What Do You Think?

1. Since the continents are still drifting, what do you think the world might look like on a map 100 million years from now? Which continents might be connected to each other? Where do you think North America might go or be connected to?

2. Why do you think you usually can't feel or notice the movement of the continents?

3. Why are fossils so important in proving the idea of continental drift?

6th Grade
NTI Day 17

Mrs. King	Reading	Onomatopoeia
Mr. Simpson	Math	Dividing Fractions
Mrs. Overbay	Social Studies	Early China (cont)
Mrs. Mike	Science	Climate/Reading Graphs:Temperature

Email availability from 9am to 4pm

Brandy.King@mboro.kyschools.us
John.Simpson@mboro.kyschools.us
Mary.Overbay@mboro.kyschools.us
Nicole.Mike@mboro.kyschools.us

7 ING 111 + Day 71.1

Name: _____

Onomatopoeia Worksheet 1

Directions: Read each sentence and circle the onomatopoeic word. Also explain what makes this noise.

1. During a dangerous mission on the foreign planet, Spaceman Spiff zapped the alien with his ray-gun.

What made the noise? _____

2. As Daryl was gargling his mouthwash, he regretted starting his day with orange juice.

What made the noise? _____

3. Keith threw his brother on the ground and the dishes fell to the floor with a clatter.

What made the noise? _____

4. As the solider ran through the field, a bullet whizzed by his ear.

What made the noise? _____

5. Juan had a hard time hearing the teacher over his grumbling stomach.

What made the noise? _____

6. Dissatisfied with her work, Beth crinkled up the paper and threw it in the trash.

What made the noise? _____

7. The patient sounded like he was hacking up a lung.

What made the noise? _____

8. I secretly ripped up the birthday checks that my grandmother sent me.

What made the noise? _____

9. Jake was pleased when he heard the new pencil sharpener hum efficiently.

What made the noise? _____

10. When he pressed on the gas, he took off so quickly that his tires screeched.

What made the noise? _____

11. We all knew she was in the kitchen because the cabinet opened with a distinct creak.

What made the noise? _____

12. If you're going to cough, it is polite to cover your mouth.

What made the noise? _____

13. The lion's mighty roar could be heard across the Savannah and the Zebra ran in terror.

What made the noise? _____

14. Wow, the race car zoomed past the finish line.

What made the noise? _____

15. My brother is the coolest because he can burp the alphabet.

What made the noise? _____

16. You could hear the slap from across the room, but the teacher did not seem to notice.

What made the noise? _____

17. Jake was doing the dishes and the clanging pots and pans awoke the baby.

What made the noise? _____

18. Even after several months in captivity, the prisoner was still terrified to hear the crack of the whip.

What made the noise? _____

19. Billy will cry if you pop his balloon and then you will get in trouble.

What made the noise? _____

20. Janet rested her head on the window pane and meditated as the rain trickled down the gutter.

What made the noise? _____

21. Kristen looked away as the lunch lady plopped a scoop of something on her tray.

What made the noise? _____

22. After making a rude remark, Jade snapped her fingers and rolled her neck.

What made the noise? _____

23. The dim-witted pigeon repulsed us with its nerve crawling coo.

What made the noise? _____

24. Having never left the city, Juan eagerly sniffed the country air.

What made the noise? _____

25. We all were taken back when Dad released a belch from the pit of his stomach.

What made the noise? _____

Day 17 NAME _____

Lesson 2.3 Dividing Fractions

Divide. Write answers in simplest form. Complete A & C only

	a	b	c	d
1.	$\frac{3}{5} \div \frac{2}{7} =$	$\frac{3}{4} \div \frac{1}{2} =$	$\frac{5}{8} \div \frac{3}{5} =$	$\frac{5}{6} \div \frac{1}{10} =$
2.	$\frac{1}{5} \div \frac{1}{4} =$	$\frac{1}{2} \div \frac{2}{3} =$	$\frac{6}{7} \div \frac{1}{8} =$	$\frac{1}{4} \div \frac{1}{2} =$
3.	$\frac{7}{10} \div \frac{1}{4} =$	$\frac{1}{2} \div \frac{6}{11} =$	$\frac{3}{5} \div \frac{1}{3} =$	$\frac{1}{4} \div \frac{3}{8} =$
4.	$\frac{10}{12} \div \frac{2}{7} =$	$\frac{1}{15} \div \frac{4}{5} =$	$\frac{12}{15} \div \frac{1}{4} =$	$\frac{4}{5} \div \frac{9}{10} =$
5.	$\frac{9}{10} \div \frac{2}{6} =$	$\frac{7}{15} \div \frac{8}{10} =$	$\frac{2}{12} \div \frac{3}{4} =$	$\frac{7}{15} \div \frac{7}{9} =$

DAy 179
Social
Studies

NAME _____ DATE _____ CLASS _____

networks

Lesson 3 The Qin and the Han Dynasties, *Continued*

Reading Check

5. Why did Han rulers create civil service examinations?

_____

_____

_____

Explaining

6. Why did Han Wudi encourage trade with the West?

_____

_____

FOLDABLES

Listing

7. Place a two-tab Foldable along the dotted line. Write *Silk Road* on the anchor tab. Label the first tab *to China* and the second tab *from China*. Draw arrows from one tab to the other to illustrate the flow of trade to and from China. On the reverse sides, list facts about the trade routes.

During the Han dynasty, many farmers became tenant farmers. A **tenant farmer** works land that belongs to someone else. Most tenant farmers were very poor. As the population grew, the Han empire took in new areas. Han armies conquered lands to the north, including Korea, and moved south into Southeast Asia. They went west as far as India. The Chinese lived peacefully for nearly 150 years.

During this time, ideas, art, literature, and science blossomed. The ideas of Confucius influenced more people. New paintings and sculptures were created. Writers wrote about current events. They made copies of old works.

New technology helped Chinese farmers produce more food.

- The cast-iron plow was developed. It could break up soil better than wooden plows.
- Waterwheels ground more grain.
- Silk manufacturing improved.
- Paper, a Chinese invention, was used to keep written records.
- The rudder and a new way to move a ship's sails allowed the Chinese to travel farther.

Doctors discovered that certain foods prevented disease. They learned to treat some illnesses with herbs. Chinese doctors relieved their patients' pain with acupuncture. **Acupuncture** is the practice of inserting thin, short needles into a patient's skin at certain points to relieve pain.

On the Silk Road

During the Han period, Chinese traders grew rich by delivering expensive goods to other parts of the world. Both sea and land routes led to an exchange of goods and ideas.

In A.D. 139 Han Wudi sent a general named Zhang Qian to explore areas west of China. Zhang's mission was to find allies to help China fight their enemies. He returned 13 years later. He had not found allies. However, he told about the people and places he had seen.

He told Han Wudi about the strong horses of the West. Han Wudi wanted these horses for his soldiers. To get them, the emperor encouraged trade between China and the West. Chinese merchants traded silk, spices, and other

NAME _____ DATE _____ CLASS _____

networks

Early China

Lesson 3 The Qin and the Han Dynasties, *Continued*

luxury goods. This trade route to the West would later be called the Silk Road.

The Silk Road was a network of trade routes. When it was completed, it stretched from China to the Mediterranean. Travel on the Silk Road was difficult and dangerous. Traders had to cross high mountains and vast deserts. Robbers and thieves also traveled the roads. Over the years, China came into contact with other civilizations. Chinese inventions, such as paper, traveled along the Silk Road to civilizations in the West.

Reading Check

8. What developments led to the creation of the Silk Road?

_____

_____

_____

Buddhism Reaches China

The Silk Road also served as a way to spread ideas. Buddhism spread from India to China along the Silk Road. At first, Buddhism attracted few followers. However, the long period of unrest after the fall of the Han dynasty helped the spread of Buddhism.

Many of the Han emperors after Han Wudi were weak and dishonest. Greedy aristocrats took over more of the land. They forced many farmers to give up their property. Finally, the people rebelled against the Han rulers. In A.D. 190, rebels destroyed the Han capital city, Luoyang. By A.D. 220, civil war divided China. For the next 400 years, China was divided into many small kingdoms.

The long years of civil war made many Chinese feel unsafe. Many turned to Buddhism. Buddhist ideas appealed to people dealing with fear and worry. By the A.D. 400s, Buddhism had become one of China's major religions.

Reading Check

9. Why did the fall of the Han dynasty help Buddhism spread in China?

_____

_____

_____

FOLDABLES

10. Place a two-tab Foldable along the dotted line. Label the anchor tab *Powerful Dynasties.* Label the two tabs—*Qin Dynasty* and *Han Dynasty.* Make a memory map by drawing three arrows below each title. Write three words or phrases that you remember about each on the front of the tabs.

Check for Understanding

List two acts by Qin Shihuangdi to unify China.

1. _____

2. _____

Name one way in which life for farmers worsened during the Han dynasty and one way in which it improved.

3. _____

4. _____

If You Don't Like the Climate...

Name: Day 17

Did you know that climate is really just a long-term pattern of weather? Climate is the weather that is typical of an area over a long period of time. Earth's orbit around the Sun and its rotation on its axis have a great deal to do with seasonal temperatures. The regions near the North Pole and the South Pole are less affected because the Sun is almost never directly overhead either Pole. The temperature at the Poles averages -22°F. By comparison, climates are very warm at the Equator where that part of Earth is closer to the Sun most often. The Sun is directly above the Equator during March and September. Weather at the Equator is usually hot. It may be hot and dry in the deserts or hot and wet in tropical areas. Average temperatures on either side of the Equator may be 80°F or higher.

Most humans live in the temperate zones between the tropics and the polar regions. These zones have temperatures that range from an average of the low 70s (°F) in the summer to the 50s (°F) in the winter. Of course, daily temperatures may be much higher or lower than these averages. These depend on local variations in the weather.

A Mediterranean climate is a temperate climate with warm summers and mild winters. This climate is typical of the Mediterranean area, southern California, South Africa, and southern Australia. By comparison, a continental climate is drier with hot summers and cold winters. This climate occurs in the center of such continents as North America or Europe. Mountain climates are cooler as the elevation increases. A monsoon climate has two seasons: one is very wet and the other very dry. Southeast Asia and India experience these extreme conditions. An oceanic climate occurs near some oceans. It has a lot of moisture and relatively cool summers and warm winters.

Which climate appeals to you?

What Did You Learn?

1. What word means weather that is generally typical of an area?
   Ⓐ climate Ⓑ tropics Ⓒ continental Ⓓ average
2. Which climate is temperate with warm summers and mild winters?
   Ⓐ monsoon Ⓒ Mediterranean
   Ⓑ oceanic Ⓓ mountain
3. Which climate is characterized by a very wet season and a very dry season?
   Ⓐ oceanic Ⓒ monsoon
   Ⓑ Mediterranean Ⓓ mountain
4. Which climate occurs in the middle of the United States?
   Ⓐ monsoon Ⓒ oceanic
   Ⓑ continental Ⓓ Mediterranean

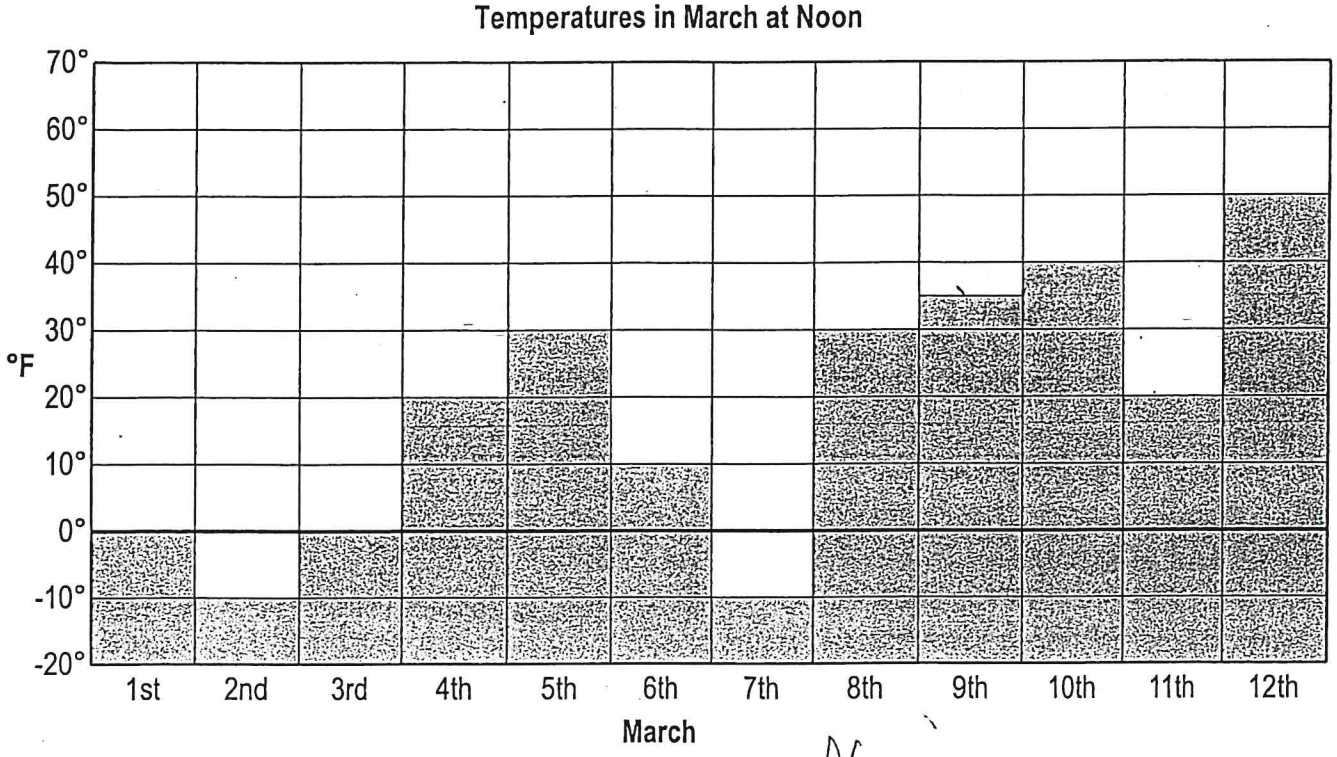
What Am I?

m a climate with warm summers and mild winters, and I am named for a sea between two continents.

Reading Graphs: Temperature

Name: Day 17

Directions: Study the graph of temperatures below and then answer the questions.



1. At what time each day were the temperatures recorded? N

2. What was the temperature on the first day, March 1st?

3. How many degrees did the temperature drop on the next day?

4. What was the lowest temperature recorded?

5. What was the highest temperature recorded?

6. What were the steepest drops in temperature from one day to the next? How many degrees dropped between which days?

7. What was the steepest increase in temperature from one day to the next? How many degrees higher was it?

8. What was the average temperature at noon for the 12 days? (Average is computed by adding all the temperatures and dividing by the number of numbers. Don't forget that many numbers are negative numbers.)

9. Which temperatue is closest to the middle (the median) among the temperatures?

6th Grade
NTI Day 18

Mrs. King	Reading	Author's Purpose
Mr. Simpson	Math	Multiplying fractions and mixed numbers
Mrs. Overbay	Social Studies	Ancient China:Religion & Philosophies
Mrs. Mike	Science	The Speed of Light/ Seeing Light

Email availability from 9am to 4pm

Brandy.King@mboro.kyschools.us
John.Simpson@mboro.kyschools.us
Mary.Overbay@mboro.kyschools.us
Nicole.Mike@mboro.kyschools.us

King III L Day #18

Name: _____

Author's Purpose Activity 2

Directions: Read the descriptions of each item and determine the author's purpose (to entertain, persuade, or inform). Then, in a sentence or two, explain your answer.

1. A pamphlet urging people not to eat animals or use products made from animals or animal suffering because the author thinks that is cruel and unnecessary

Author's Purpose: _____

Explain Your Answer:
Write a sentence or two.

2. A book of over 1,000 knock-knock jokes

Author's Purpose: _____

Explain Your Answer:
Write a sentence or two.

3. A cook book containing recipes for making cakes, cookies, and other desserts

Author's Purpose: _____

Explain Your Answer:
Write a sentence or two.

4. The story of a young woman who, after the death of her grandfather, quit her job in the business world and returned home to help her aging grandmother

Author's Purpose: _____

Explain Your Answer:
Write a sentence or two.

5. A politician's speech about how homes should be provided to families who cannot afford them

Author's Purpose: _____

Explain Your Answer:
Write a sentence or two.

6. A poem about a "packrat," a person who refuses to throw things away, even things that most people would consider garbage

Author's Purpose: _____

Explain Your Answer:
Write a sentence or two.

7. An article comparing and contrasting American and Swedish health care systems

Author's Purpose: _____

Explain Your Answer:
Write a sentence or two.

8. The Shakespearean tragedy Romeo and Juliet, where two young lovers are forbidden from seeing one another due to a centuries old blood feud between their two families

Author's Purpose: _____

Explain Your Answer:
Write a sentence or two.

9. A young girl's note to her parents giving reasons why they should buy a puppy

Author's Purpose: _____

Explain Your Answer:
Write a sentence or two.

10. A website describing a local dog leash ordinance, detailing its history and the penalties for walking around with one's dog unleashed

Author's Purpose: _____

Explain Your Answer:
Write a sentence or two.

Day 18

NAME _____

Lesson 2.1 Multiplying Fractions and Mixed Numbers

Multiply fractions.

$\frac{3}{8} \times \frac{2}{3} = \frac{3 \times 2}{8 \times 3}$ Multiply numerators together. Multiply denominators together.

$= \frac{6}{24} = \frac{1}{4}$ Simplify.

Multiply mixed numbers.

$2\frac{3}{4} \times 3\frac{1}{3} = \frac{11}{4} \times \frac{10}{3}$ Rename each mixed number as an improper fraction.

$\frac{11}{4} \times \frac{10}{3} = \frac{110}{12} = \frac{55}{6}$ Multiply.

$= 9\frac{1}{6}$ Simplify.

Multiply. Write answers in simplest form. Complete A & C only

	a	~~b~~	c	~~d~~
1.	$\frac{2}{5} \times \frac{2}{3} =$	$\frac{3}{4} \times \frac{5}{6} =$	$\frac{7}{8} \times \frac{5}{7} =$	$\frac{2}{5} \times \frac{3}{4} =$
2.	$\frac{7}{12} \times \frac{3}{4} =$	$\frac{2}{3} \times \frac{8}{9} =$	$\frac{4}{5} \times \frac{3}{8} =$	$\frac{3}{7} \times \frac{3}{5} =$
3.	$\frac{1}{6} \times \frac{2}{3} =$	$\frac{11}{12} \times \frac{2}{3} =$	$\frac{2}{5} \times \frac{2}{5} =$	$\frac{3}{4} \times \frac{3}{7} =$
4.	$1\frac{1}{3} \times 2\frac{1}{8} =$	$2\frac{1}{2} \times 1\frac{3}{4} =$	$2\frac{5}{8} \times 2\frac{3}{5} =$	$1\frac{1}{2} \times 2\frac{2}{3} =$
5.	$3\frac{1}{5} \times 5\frac{2}{3} =$	$4\frac{1}{2} \times 4\frac{1}{2} =$	$2\frac{1}{3} \times 3\frac{1}{4} =$	$2\frac{4}{5} \times 3\frac{1}{8} =$
6.	$2\frac{2}{3} \times 5\frac{1}{4} =$	$2\frac{1}{3} \times 2\frac{1}{3} =$	$3\frac{1}{4} \times 1\frac{1}{8} =$	$2\frac{7}{8} \times 1\frac{1}{3} =$

DAY 18
SOCIAL
STUDIES

Ancient China: Religion and Philosophies

Three major religions or philosophies shaped many of the ideas and history of Ancient China. They are called the three ways and include Taoism, Confucianism, Buddhism, and Legalism.

Taoism

Taoism was founded during the Zhou Dynasty in the 6th century by Lao-Tzu. Lao-Tzu wrote down his beliefs and philosophy in a book called the Tao Te Ching.

Taoism believes that people should be one with nature and that all living things have a universal force flowing through them. Taoists didn't believe in a lot of rules or government. In this way they were very different from the followers of Confucius.

The idea of Yin and Yang comes from Taoism. They believed that everything in nature has two balancing forces called Yin and Yang. These forces can be thought of as dark and light, cold and hot, male and female. These opposing forces are always equal and balanced.

Confucianism

Not long after Lao-Tzu founded Taoism, Confucius was born in 551 BC. Confucius was a philosopher and thinker. Confucius came up with ways that people should behave and live. He didn't write these down, but his followers did.

Confucius' teachings focus on treating others with respect, politeness, and fairness. He thought that honor and morality were important qualities. He also said that family was important and honoring one's relatives was required. Unlike Taoists, followers of Confucius believed in a strong organized government.

Confucius

Lao-Tzu was the founder of Taoism

Confucius is famous today for his many sayings. Here are a few of them:

- Forget injuries, never forget kindnesses.
- It does not matter how slowly you go so long as you do not stop.
- Our greatest glory is not in never falling, but in getting up every time we do.
- When anger rises, think of the consequences.
- Everything has its beauty but not everyone sees it.

Buddhism

Buddhism was based on the teachings of Buddha. Buddha was born in Nepal, just south of China, in 563 BC. Buddhism spread throughout much of India and China. Buddhists believe in a "rebirth" of the self. They also believe that the cycle of rebirth is complete once a person lives a proper life. At this point the person's soul would enter nirvana.

Legalism

Idea of Legalism: Punishment for bad behavior and a reward for good behavior. Legalists believe the people of China should work to serve the government and the emperor Shi Huangdi demands ALL BOOKS BE BURNED except books on Medicine, Technology, and Farming

1) What are the three major religions of Ancient China (Taoism, Buddhism, and Confucianism) sometimes called?

A. The triple threat
B. The three ways
C. The three perfections
D. The three philosophies

2) Which religion did Lao-Tzu found?

A. Taoism
B. Buddhism
C. Hinduism
D. Confucianism

3) Which of the following is NOT part of the Taoist beliefs?

A. People should be one with nature
B. Lots of rules and a strong government is good
C. Everything in nature has two forces: the Yin and the Yang
D. All living things have a universal force flowing through them

4) Where did the religion of Buddhism begin?

A. Mongolia
B. India
C. Japan
D. Nepal

5) The strictest of Chinese philosophical schools, which advocated strong laws and punishments.

A. Mohists
B. Reformists
C. Legalists
D. Classicists

6) Which of the Ancient Chinese religions believed that eventually your spirit can enter a place called nirvana?

A. Buddhism
B. Taoism
C. Animism
D. Confucianism

7) In the religion of Buddhism, what is the concept that all actions have consequences?

A. Destiny
B. Karma
C. Nirvana
D. Boomerang Theory

8) Which of the following statements is part of the philosophy of Confucianism?

A. Everything in the world has a balance of forces called the Yin and Yang
B. If you live your life right, then eventually you can enter nirvana
C. Honoring your family and relatives is an important part of life
D. Laws and rules are not important

9) Which of the following men was not a founder of a major Ancient Chinese religion/philosophy?

A. Muhammad
B. Buddha
C. Confucius
D. Lao-Tzu

10) What is something that Confucius is still famous today for?

A. The book he wrote called The Art of War His
B. His many sayings that were written down by his followers
C. His art including many paintings and drawings
D. Poetry describing the beauty of nature

The Speed of Light

Name: Day 18

Just how fast is light? Light is the fastest thing in the universe. Light and other forms of radiation travel through space at 186,000 miles per second. The moon is about 239,000 miles away. Therefore it takes moonlight about 1.3 seconds to reach us. It takes 8.3 minutes for sunlight to travel the 93 million miles from the Sun to Earth. (The distance varies a little depending on the time of year.) We can measure distances in our solar system in miles. Beyond that, most distances are measured in light years.

A light year is the distance light can travel in one year. That distance is 5,900,000,000,000 (5.9 trillion) miles. The Milky Way, which is our home galaxy, is 100,000 light years across. This distance seems impossible to comprehend. It means that light travels 100,000 times 5.9 trillion miles to get from one end of the galaxy to the other end. Galaxies that are 13 billion light years away have been detected. It took that light 13 billion light years to reach us. The source of the light could be gone, have moved, or have become a dead star long ago.

Visible light is the part of electromagnetic radiation we can see with our eyes. Stars create other forms of energy, too. Those forms travel at the same speed, but are not as easily detectable. Low-energy vibrations include radio waves at the low end of the electromagnetic spectrum. Visible light is in the middle of the spectrum. X-rays and gamma rays are at the far end of the electromagnetic spectrum with high-energy waves. Gamma rays are signs of massive star explosions. All forms of radiation travel at the same speed as light.

What Did You Learn?

1. How long does it take sunlight to reach Earth?
   - Ⓐ 1.3 seconds
   - Ⓑ 8.3 minutes
   - Ⓒ 1 light year
   - Ⓓ 100,000 years
2. Which of the following are forms of electromagnetic energy?
   - Ⓐ X-rays
   - Ⓑ gamma rays
   - Ⓒ visible light
   - Ⓓ all of the above
3. How far away are the farthest galaxies that have been detected?
   - Ⓐ 100,000 miles
   - Ⓑ 13 light years
   - Ⓒ 5.9 trillion miles
   - Ⓓ 13 billion light years
4. Which waves are at the low-energy end of the electromagnetic spectrum?
   - Ⓐ gamma rays
   - Ⓑ radio waves
   - Ⓒ visible light
   - Ⓓ both A and C

What Am I?

The entire range of energy in the universe including visible light, gamma rays, and radio waves.

Name: Day 18

Directions: Read the information paragraph. Respond to the questions below.

When light strikes glass or other clear, transparent objects, light passes through the object. It is not usually stopped or bent. When light strikes an object with frosted glass or other materials on the glass, the material is translucent and mixes or distorts the light. When light strikes an object that stops it altogether, like a dark, painted surface, the object is opaque, which means that it does not let any light through.

However, when light passes through transparent objects, such as a window or water, the rays are refracted, or bent. You see a refracted image because light travels more slowly through glass and water. When you stick a straw into a glass of water, it appears bent or broken. When the light rays from the straw leave the water, they are bent or refracted as the rays speed up. The straw looks bent through the glass, even though it is actually neither bent nor broken.

Lenses work in the same way. Concave lenses are dish-shaped. They are thin in the middle and thick at the edges. When light passes through this concave lens, the rays are bent outward and they are spread out. When you examine an object through a concave lens, the image is actually smaller than it really is. You actually see a reduced image of the object.

Convex lenses, like those usually worn in glasses, bulge outward. They are thicker in the middle and thinner around the edges. When light rays pass though a convex lens, they are bent inward, so that they come together. When an object is observed through a convex lens, the object appears larger. The object is magnified. This is why glasses are effective in helping people see better. Most magnifying glasses use these convex lenses.

Applying Your Knowledge

1. Explain how the ability to bend light helps people see better. _____

2. What materials or objects can bend light?

3. Describe the difference between a concave and convex lens.

4. What do translucent objects do to light? What do you see through translucent objects?

6th Grade
NTI Day 19

Mrs. King	Reading	Context Clues
Mr. Simpson	Math	Multiplying decimals
Mrs. Overbay	Social Studies	Ancient China: Inventions & Technology
Mrs. Mike	Science	Electromagnetic Radiation/How do electromagnets work?

Email availability from 9am to 4pm

Brandy.King@mboro.kyschools.us
John.Simpson@mboro.kyschools.us
Mary.Overbay@mboro.kyschools.us
Nicole.Mike@mboro.kyschools.us

King ITL Day #19

Name: _____

Context Clues 1.1

Directions: read each sentence and determine the meaning of the word using cross sentence clues or your prior knowledge. Then, explain what clues in the sentence helped you determine the word meaning.

1. **Dignity:** Even when the police officers put the handcuffs on my mother, she maintained her **dignity,** holding her head up high as she was marched off the protest site.

Definition: _____

What clues in the sentence lead you to your definition?

2. **Splendid:** The rays from the rising sun shined **splendidly** through our kitchen window.

Definition: _____

What clues in the sentence lead you to your definition?

3. **Particle:** John was so hungry that he didn't leave a single **particle** of the muffin on the plate.

Definition: _____

What clues in the sentence lead you to your definition?

4. **Elegant:** Cassie took her time when she wrote in cursive, slowly making each word out of an **elegant** series of arcs and loops.

Definition: _____

What clues in the sentence lead you to your definition?

5. **Injustice:** Kevin thought that it was a great **injustice** that girls could wear earrings in the school while the boys could not.

Definition: _____

What clues in the sentence lead you to your definition?

6. **Decline:** After *Gears of Pain 6* came out, the amount of people playing *Gears of Pain 5* **declined.**

Definition: _____

What clues in the sentence lead you to your definition?

7. **Paradise:** When Rex had a bone, a warm spot to lie, and someone petting him, he was in **paradise.**

Definition: _____

What clues in the sentence lead you to your definition?

8. **Fascinate:** Alvin went to the museum every Saturday because he was so **fascinated** by art.

Definition: _____

What clues in the sentence lead you to your definition?

9. **Yearn:** Even though John had a good job and a nice family, he **yearned** for more.

Definition: _____

What clues in the sentence lead you to your definition?

10. **Seldom:** Since professional athletes have to stay in peak physical shape, most athletes **seldom** eat junk food.

Definition: _____

What clues in the sentence lead you to your definition?

11. **Delicate:** Tracy held the flower as gently as she could, fearing that the **delicate** stem would break.

Definition: _____

What clues in the sentence lead you to your definition?

12. **Remark:** Jennie didn't like the jacket her mother bought her until several strangers made **remarks** about how much they liked it.

Definition: _____

What clues in the sentence lead you to your definition?

Bonus: Define each of the words on a separate sheet of paper to check your answers. Attach your sheet.

Day 19

NAME _____

Lesson 1.9 Multiplying Decimals

The number of digits to the right of the decimal point in the product is the sum of the number of digits to the right of the decimal point of the factors.

$$\begin{array}{r} 0.4 \\ \times\ 0.2 \\ \hline 0.08 \end{array} \qquad \begin{array}{r} 0.28 \\ \times\ 0.6 \\ \hline 0.168 \end{array} \qquad \begin{array}{r} 3.2432 \\ \times\ 0.13 \\ \hline 97296 \\ +\ 32432 \\ \hline 0.421616 \end{array}$$

If needed, add zeros as place holders.

Multiply. Complete A, C, & E only

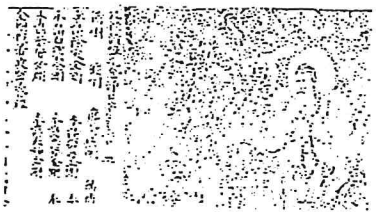
	a	~~b~~	c	~~d~~	e
1.	0.7×8	0.08×0.5	0.325×0.3	1.68×8	25×0.7
2.	0.03×3.06	0.162×0.3	8.03×3.5	0.297×7.1	76.4×3.6
3.	53.64×0.37	328.1×0.63	9.806×31	600.3×0.034	895×0.63
4.	27.1×3.54	3.263×18	1.253×12	58.9×0.038	0.82×0.82
5.	0.283×0.6	0.178×53	0.83×0.23	3.6×0.025	48.2×0.26

DAY 19
SS

Ancient China: Inventions and Technology

The Ancient Chinese were famous for their inventions and technology. Many of their inventions had lasting impact on the entire world. Other inventions led to great feats of engineering like the Grand Canal and the Great Wall of China.

Firing a rocket using gunpowder



The Diamond Sutra is the world's oldest Printed Book

Here are some of the notable inventions and discoveries made by the engineers and scientists of Ancient China:

Silk - Silk was a soft and light material much desired by the wealthy throughout the world. It became such a valuable export that the trade route running from Europe to China became known as the Silk Road. The Chinese learned how to make silk from the cocoons of silkworms. They managed to keep the process for making silk a secret for hundreds of years.

Paper - Paper was invented by the Chinese as well as many interesting uses for paper like paper money and playing cards. The first paper was invented in the 2nd century BC and the manufacture later perfected around 105 AD. (Modern paper, not papyrus paper).

Printing - Wood block printing was invented in AD 868 and then moveable type around 200 years later. This was actually hundreds of years before the invention of the printing press by Gutenberg in Europe.

The Compass - The Chinese invented the magnetic compass to help determine the correct direction. They used this in city planning at first, but it became very important to map makers and for the navigation of ships.

Gunpowder - Gunpowder was invented in the 9th century by chemists trying to find the Elixir of Immortality. Not long after, engineers figured out how to use gunpowder for military uses such as bombs, guns, mines, and even rockets. They also invented fireworks and made great beautiful displays of fireworks for celebrations.

Boat Rudder - The rudder was invented as a way to steer large ships. This enabled the Chinese to build huge ships as early as 200 AD, well before they were ever built in Europe.

Other - Other inventions include the umbrella, porcelain, the wheelbarrow, iron casting, hot air balloons, seismographs to measure earthquakes, kites, matches, stirrups for riding horses, and acupuncture.

Fun Facts

- Gunpowder, paper, printing, and the compass are sometimes called the Four Great Inventions of Ancient China.
- Kites were first used as a way for the army to signal warnings.
- Umbrellas were invented for protection from the sun as well as the rain.
- Chinese doctors knew about certain herbs to help sick people. They also knew that eating good foods was important to being healthy.
- Compasses were often used to make sure that homes were built facing the correct direction so they would be in harmony with nature.
- The Grand Canal in China is the longest manmade canal or river in the world. It is over 1,100 miles long and stretches from Beijing to Hangzhou.
- They invented the abacus in the 2nd century BC. This was a calculator that used sliding beads to help compute math problems quickly.
- A clear coating called lacquer was made to protect and enhance certain works of art and furniture.
- Paper money was first developed and used in China during the Tang dynasty (7th century)

1) What are two of the great feats of civil engineering accomplished by the engineers of Ancient China?

A. The Pyramids and the Sphinx
B. Aqueducts and the Colosseum
C. The Great Wall and the Grand Canal
D. The Taj Mahal and the Panama Canal

2) What important invention did the Ancient Chinese invent before Johannes Gutenberg did in Europe?

A. Gunpowder
B. Telescope
C. Silk material
D. Printing Press

3) What are considered the four great inventions of the Ancient Chinese civilization?

A. Printing, silk, kites, and fireworks
B. Gunpowder, paper, printing, and the compass
C. Compass, paper, telescope, and the cotton gin
D. Wheelbarrow, boat rudder, matches, and acupuncture

4) What did ancient Chinese chemists discover when trying to find the Elixir of Immortality?

A. Silk
B. A cure for the Black Plague
C. How a compass works
D. Gunpowder

5) What important ingredient was used by the Ancient Chinese to make silk?

A. The cocoons of silkworms
B. The webs of silk spiders
C. The leaves from the silk tree
D. A special silk mineral found in mines throughout China

6) What was the main use of the compass when it was first invented?

A. As a child's game for the young emperor
B. To keep the army straight during battles
C. For city planning
D. To help when lost in the woods

7) Which of the following was a use for gunpowder?

A. Fireworks
B. Bombs
C. Rockets
D. All of the above

8) What invention allowed the Ancient Chinese to build huge ships well before the rest of the world?

A. Silk Sails
B. Boat rudder
C. Waterproof
D. Compass

9) What invention did the Chinese keep secret from the rest of the world for hundreds of years?

A. The process for making silk
B. The process for making gunpowder
C. The process for making paper
D. The process for iron casting

10) How were kites first used by the Ancient Chinese?

A. As a toy for young children
B. A way to celebrate at festivals
C. A way to move things to the top of the Great Wall
D. As signal warnings for the army

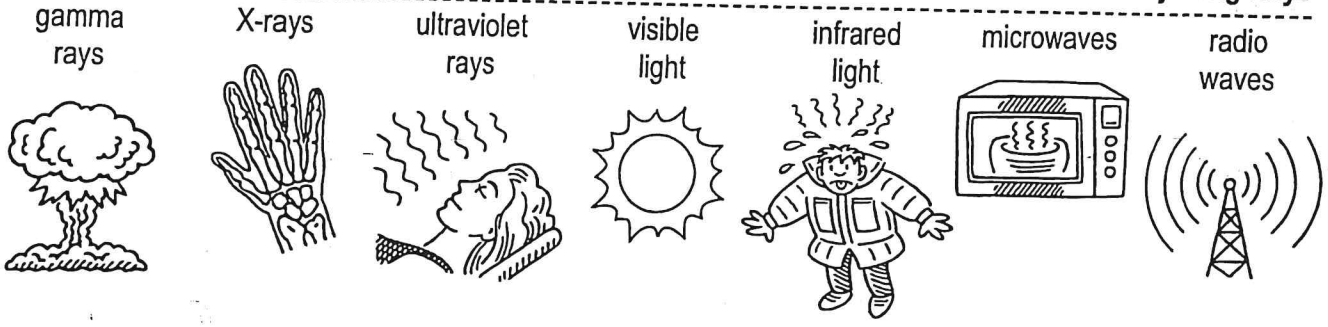
What Is Electromagnetic Radiation?

Name: Day 19

Electromagnetic radiation from the Sun or other sources is commonly divided into 7 categories arranged by the level of energy and the length of the rays. Very short rays have high energy and are dangerous. The longest rays can be used to send messages. The illustration below shows the range of rays along the magnetic spectrum.

Magnetic Spectrum

Extremely Short Rays ---------- **Extremely Long Rays**



Directions: Use the clues to identify the correct name along the electromagnetic spectrum.

1. These rays are the shortest and the most dangerous. They are produced by stars like the Sun and by nuclear weapons.

   _____

2. These rays are the longest and are used in communication for radio and television broadcasts.

   _____

3. These longer rays can be used to send telephone messages to satellites to be broadcast across the planet or to cook food.

   _____

4. These rays are longer than gamma rays and can pass through the human body except for bones.

   _____

5. This is the part of the spectrum that most people recognize and use daily. These waves vary from short violet ones to long red ones.

   _____

6. This radiation is given out by hot objects, including people and campfires.

   _____

7. This radiation from the Sun can give you a tan, or they can give you cancer if you are exposed too long to them. The rays are shorter than visible light.

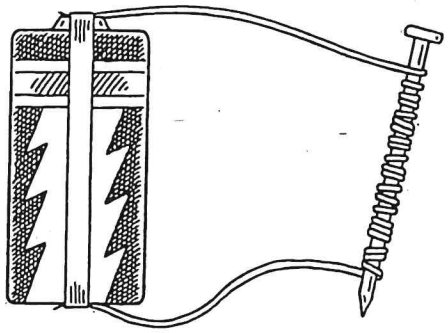
   _____

How Do Electromagnets Work?

Name: Day 19

Directions: Study the paragraphs. Respond to the questions below.

An electromagnet can be created by running an electric current through a wire. The magnetic effect is greatly increased by winding the wire around a nail or some other metal bar. The more coils you wrap around the nail or bolt, the stronger the electromagnet will become. The magnetism produced is exactly the same as the magnetism produced by a metal magnet. However, it is possible to make extremely powerful electromagnets by using more wire, thicker wire, a larger central bolt, or a stronger source of electricity. Giant electromagnets are designed to pick up and transfer junk cars before they are crushed, for example. Large electromagnets are created to provide the source of electricity in some cases.



An electromagnet has a magnetic field just as a metal magnet does. This magnet has a north pole and a south pole just as a metal magnet has. Changing the direction of the flow of electricity reverses the magnetic field. Electric motors use permanent magnets and coils of wire to create electromagnets. The two magnetic types interact to provide power.

What Do You Know?

1. Name 3 things you need to create an electromagnet.

   _____ _____ _____

2. What things can you do to make an electromagnet stronger?

   A. _____

   B. _____

   C. _____

3. Which is likely to be the stronger magnet, an electromagnet or a natural magnet? Why? How do you know the answer from machines or tools you have seen?

   _____

   _____

   _____

4. What machinery needs both natural magnets and electromagnets?

   _____

   _____

   _____

   _____

6th Grade
NTI Day 20

Mrs. King	Reading	Fact and Opinion
Mr. Simpson	Math	Greatest Common Factor
Mrs. Overbay	Social Studies	Ancient China: The Silk Road
Mrs. Mike	Science	The Water Cycle

Email availability from 9am to 4pm

Brandy.King@mboro.kyschools.us
John.Simpson@mboro.kyschools.us
Mary.Overbay@mboro.kyschools.us
Nicole.Mike@mboro.kyschools.us

King MLK Day #20

Name: _____

Fact and Opinion

Directions: Read each statement and then circle whether it is a fact or opinion. Explain your answer.

1. The fastest land dwelling creature is the Cheetah.

Fact or Opinion Explain: _____

2. Michael Jordan has a career average of 30.4 points per game.

Fact or Opinion Explain: _____

3. George Washington was the first President of the United States under the Constitution.

Fact or Opinion Explain: _____

4. The ugliest sea creature is the manatee.

Fact or Opinion Explain: _____

5. Michael Jordan is the greatest basketball player of all time.

Fact or Opinion Explain: _____

6. There seems to be too much standardized testing in public schools.

Fact or Opinion Explain: _____

7. Prison is one of the worst places on the planet.

Fact or Opinion Explain: _____

8. It is wrong for people under the age of 21 to drink alcohol.

Fact or Opinion Explain: _____

9. *Sister Carrie* was written by Theodore Dreiser.

Fact or Opinion Explain: _____

10. *Lord of the Rings: Return of the King* won eleven Oscars (Academy Awards).

Fact or Opinion Explain: _____

11. Oranges contain both calcium and vitamin C.

Fact or Opinion Explain: _____

12. The television show *The Simpsons* is just not as funny as it used to be.

Fact or Opinion Explain: _____

13. Diamonds are the hardest substance on Earth.

Fact or Opinion Explain: _____

14. McDonalds sells more hamburgers than any other restaurant chain in the world.

Fact or Opinion Explain: _____

15. Horse manure smells awful.

Fact or Opinion Explain: _____

16. The price of gas has grown to become too expensive.

Fact or Opinion Explain: _____

17. KFC has engineered "chickens" that do not have beaks and are double breasted.

Fact or Opinion Explain: _____

18. The more money someone has the more successful they are.

Fact or Opinion Explain: _____

19. Vegetarians are healthier than people who eat meat.

Fact or Opinion Explain: _____

20. Cell phones emit radiation that may or may not cause brain cancer.

Fact or Opinion Explain: _____

21. Students have a lot harder time in school than the teachers.

Fact or Opinion Explain: _____

22. Popular music today is not as good as it was in the past.

Fact or Opinion Explain: _____

23. It is illegal to yell out "Fire" in a crowded movie theater.

Fact or Opinion Explain: _____

24. People should not be allowed to talk on cell phones in a movie theater.

Fact or Opinion Explain: _____

25. Drug dealers belong in prison.

Fact or Opinion Explain: _____

Day 20

Lesson 1.7 Greatest Common Factor

A **factor** is a divisor of a number. (For example, 3 and 4 are both factors of 12.) A **common factor** is a divisor that is shared by two or more numbers (1, 2, 4, and 8). The **greatest common factor** is the largest common factor shared by the numbers (8).

To find the greatest common factor of 32 and 40, list all of the factors of each.

32 < 1 × 32, 2 × 16, 4 × 8 > 1, 2, 4, 8, 16, and 32

40 < 1 × 40, 2 × 20, 4 × 10, 5 × 8 > 1, 2, 4, 5, 8, 10, 20, and 40

The greatest common factor is 8.

List the factors of each number below. Then, list the common factors and the greatest common factor.

		Factors	Common Factors	Greatest Common Factor
1.	8			
	12			
2.	6			
	18			
3.	24			
	15			
4.	4			
	6			
5.	5			
	12			
6.	16			
	12			

Day 20

The Silk Road

The Silk Road was a trade route that went from China to Eastern Europe. It went along the northern borders of China, India, and Persia and ended up in Eastern Europe near today's Turkey and the Mediterranean Sea.

Why was the Silk Road important?

The Silk Road was important because it helped to generate trade and commerce between a number of different kingdoms and empires. This helped for ideas, culture, inventions, and unique products to spread across much of the settled world.

Why is it called the Silk Road?

It was called the Silk Road because one of the major products traded was silk cloth from China. People throughout Asia and Europe prized Chinese silk for its softness and luxury. The Chinese sold silk for thousands of years and even the Romans called China the "land of silk".

What goods did the Chinese trade?

Besides silk, the Chinese also exported (sold) teas, salt, sugar, porcelain, and spices. Most of what was traded was expensive luxury goods. This was because it was a long trip and merchants didn't have a lot of room for goods. They imported, or bought, goods like cotton, ivory, wool, gold, and silver.

How did they travel?

Merchants and tradesmen traveled in large caravans. They would have many guards with them. Traveling in a big group like a caravan helped in defending from bandits. Camels were popular animals for transport because much of the road was through dry and harsh land.

History

Although there was some trade between China and the rest of the world for some time, the silk trade was significantly expanded and promoted by the Han Dynasty which ruled from 206 BC to 220 AD.

Later, under the rule of the Yuan Dynasty set up by Kublai Khan of the Mongols, trade from China along the Silk Road would reach its peak. During this time the Mongols controlled a significant portion of the trade route, enabling Chinese merchants to travel safely. Also, merchants were granted more social status during the Mongol rule.

Fun facts about the Silk Road

- It was over 4,000 miles long.
- Marco Polo traveled to China along the Silk Road.
- Not all that was traded along the Silk Road was good. It is thought that the bubonic plague, or Black Death, traveled to Europe from the Silk Road.
- Very few merchants traveled along the entire route. Goods were traded at many cities and trade posts along the way.
- There wasn't just one route, but many routes. Some were shorter, but more dangerous.

1) Which of the following statements best describes the Silk Road?

A. A paved highway through central China used by the Ancient Chinese emperors

B. A number of trade routes that went between China and Eastern Europe

C. A short road covered with silk between the emperor`s house and his palace

D. An established trade route between India and Europe

2) During what Ancient Chinese dynasty did the Silk Road reach its peak?

A. Song Dynasty C. Han Dynasty

B. Ming Dynasty D. Yuan Dynasty

3) About how long was the Silk Road?

A. 150 miles long C. 2000 miles long

B. 1000 miles long D. Over 4000 miles long

4) True or False: Most merchants traveled the entire distance of the Silk Road, carrying their goods from one end to the other.

TRUE or FALSE

5) What was the most popular way to travel along the route?

A. By train C. By foot

B. In a caravan of camels D. Alone on a horse

6) What sorts of things were traded along the Silk Road?

A. Silk

B. Spices

C. Porcelain

D. All of the above

7) Where did the Silk Road get its name?

A. From the silk that the Romans sold to the East

B. From the smoothness

C. From the silk that China sold to the rest of the world

D. From the silk worms that infested much of the route

8) What deadly disease is thought to have traveled to Europe along the Silk Road?

A. The bubonic plague C. Small pox

B. Polio D. Influenza

9) What Ancient Chinese Dynasty significantly expanded the silk trade during their rule from 206 BC to 220 AD?

A. Tang Dynasty C. Qing Dynasty

B. Ming Dynasty D. Han Dynasty

10) What famous explorer is thought to have traveled along the Silk Road on his way to China?

A. Christopher Columbus C. Ferdinand Magellan

B. Marco Polo D. Vasco da Gama

What Is the Water Cycle?

Name: Day 20

What is the water cycle, and how does it work? The water cycle in nature works efficiently and without fail. It does so because air absorbs and releases water like a sponge. When the Sun heats up the water in oceans, rivers, lakes, and seas, the water evaporates and becomes water vapor, a kind of gas. As this water vapor rises in the air, it cools again. This makes the vapor condense again. This means that it turns into a liquid again. The liquid water is now in the form of very tiny droplets that form clouds in the air. The clouds may be carried a great distance by the wind. The constant movement of the air makes the droplets move around and collide with each other. This activity makes the droplets become larger in the cloud. The average raindrop has about one million times more water than the original cloud droplet. When the droplets become heavy enough, they fall from the clouds as rain, snow, or occasionally as hail.

Rain falls over both land and the oceans. Plants absorb the water from the soil. The water then is released from the leaves of the plants as water vapor. Humans and animals take in the liquid water. They also release water vapor when they breathe out. Water flows from the higher land areas to lower ones. It flows both on the land and below the surface. Water eventually enters rivers and flows back to the oceans, which hold 97 percent of all the water on Earth. The clouds hold enough water in the air at any one time to produce about an inch of rain over the entire world. The total amount of precipitation (rain, snow, or hail) in one year on Earth is about 1 quadrillion (1,000,000,000,000,000) tons.

What Did You Learn?

1. Where does most water get evaporated from?
   - Ⓐ oceans
   - Ⓑ rivers
   - Ⓒ lakes
   - Ⓓ all of the above
2. What makes droplets get bigger and heavier?
   - Ⓐ air movement
   - Ⓑ snow
   - Ⓒ colliding with each other
   - Ⓓ both A and C
3. Water flows in what direction?
   - Ⓐ from higher land to lower land
   - Ⓑ from the land to the seas
   - Ⓒ from oceans to the mountains
   - Ⓓ both A and B
4. What holds 97 percent of all Earth's water?
   - Ⓐ oceans
   - Ⓑ the air
   - Ⓒ the clouds
   - Ⓓ the land

What Am I?

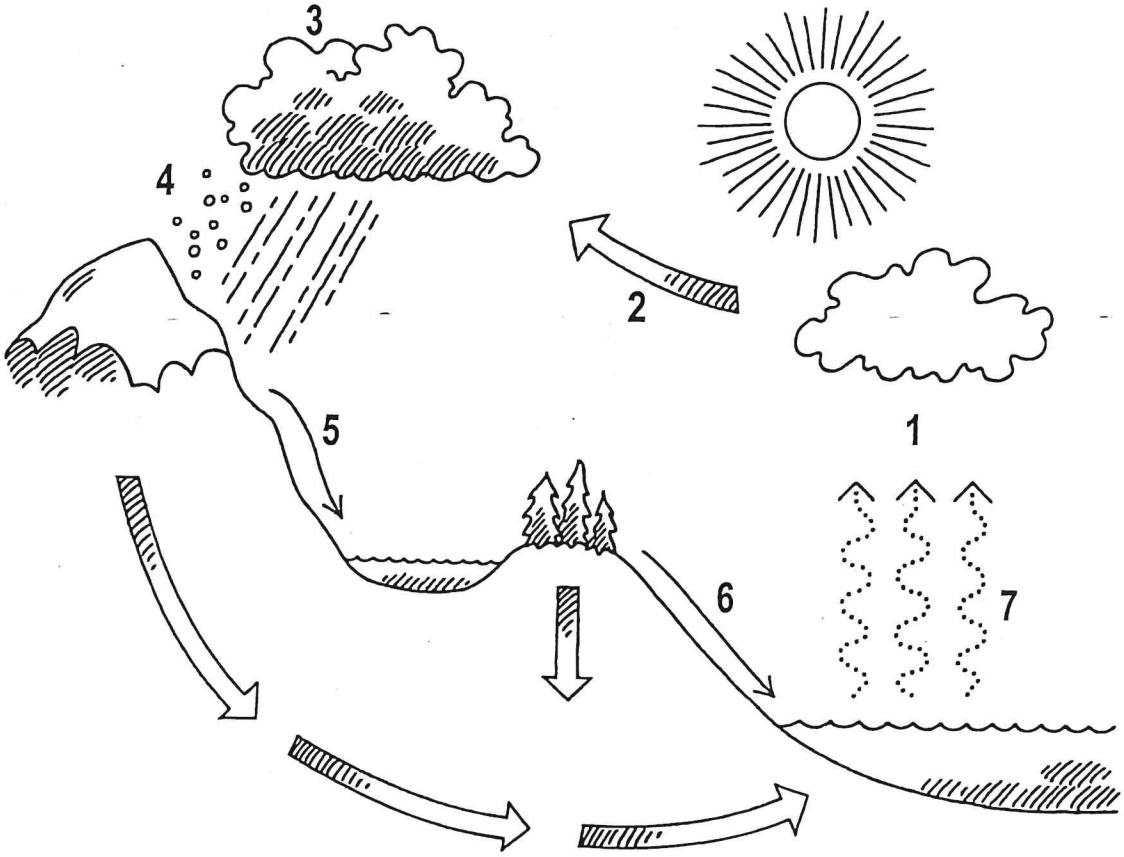
I am a word that means water from the sky in the form of rain, snow, hail, or mist.

_____

How Water Travels

Name: Day 20

Directions: Place the sentences below in the proper order to show how the water cycle works.



_____ The rivers gradually carry water to lakes and oceans.

_____ Water vapor in the air cools and condenses to form clouds.

_____ Water enters the air by evaporation over rivers, lakes, seas, and especially oceans.

_____ The water evaporates again, and the cycle continues.

_____ Clouds eventually condense and turn to rain.

_____ Rain falls over oceans, other water areas, and land.

_____ The rain falling on the land flows into streams and rivers.

Think About it

What happens after the 7th step?