

Colonel NTI Packet

2025 – 2026

4th Grade

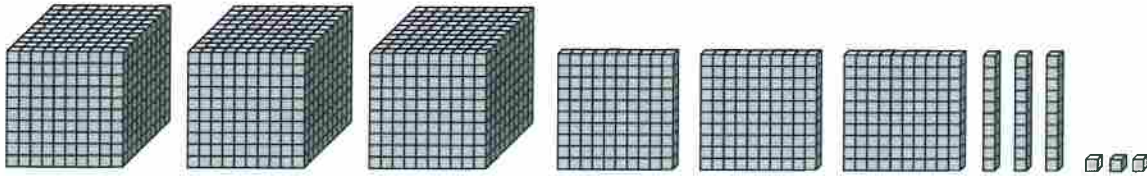
Day 1

Table of Contents

Subject	Assignment
Math	Reteach to Build Understanding 1 - 2
Language Arts	Strangler Figs
Science	Week 1, Day 1 (Life Science)
Social Studies	Week 1, Day 1 (History)

Vocabulary

1. When two **digits** next to each other in a number are the same, the value of the digit on the left is always ten times as great as the value of the digit on the right.



What number is represented in the model above?

2. The first 3 in 3,333 is the thousands place. What is the value of the first 3? _____
3. The second 3 in 3,333 is in the hundreds place. What is the value of the second 3? _____
4. What is the relationship between the value of the first 3 and the value of the second 3 in 3,333?

The value of the first 3 is _____ times as great as the value of the second 3.

5. Complete these sentences.
In 5,550, the second 5 is in the hundreds place.

Its value is _____.

The third 5 is in the _____ place.

Its value is _____.

The value of the 5 in the _____ place is ten times as great as the value of the 5 in the _____ place.

On the Back!

6. Describe the relationship between the 2s in 75,222.

Strangler Figs

by ReadWorks



a strangler fig around its host tree

If plants starred in movies, the strangler fig would be the main character in a horror film. The strangler fig is known in Spanish as *matapalo*, the "killer tree." It can be found in rainforests and other humid environments all over the world. It has an unusual and interesting way of growing because it is an epiphyte. An epiphyte is an air plant that grows on the surface of another plant. This epiphyte can grow figs that many species of birds enjoy. Once birds eat the figs of the epiphyte, they clean their bills and drop fig seeds on high tree branches. Strangler fig seeds then germinate in the rainforest canopy, where there is plenty of sunlight. As a strangler fig seed matures, it begins sending down long roots to the forest ground. Once the roots reach the ground and enter the soil, they weave together and slowly wrap around their host tree. The host tree now must compete with the strangler fig for sunlight and nutrients in the soil. Usually, this process kills the host and only the fig tree is left. The "trunk" of the fig tree is actually a giant web of roots. These trees are immune from forest clearing by humans because loggers do not like their knotted and twisted wood.

According to historians, the strangler fig played a role in destroying Mayan cities in Central America. Seeds dropped by birds and bats germinated high on the walls of buildings. The

roots would force their way between the stone bricks of the walls and would eventually destroy the entire wall.

Although this killer tree may seem like an enemy, it is also an incredible shelter for a diverse group of animals such as bats, birds, rodents, reptiles, and amphibians. Its hollow openings provide protection for many of these organisms. At certain points of the year, fig trees are the only trees producing fruit, and they provide necessary nutrients for primates and birds. Although these python-like trees may seem menacing, their ability to adapt illustrates how necessary it is for plants to compete successfully in order to survive in the rainforest.

Vocabulary

canopy

noun

definition: A canopy is something high in the air or sky that is spread out over the earth.
The top layer of branches and leaves in a rainforest is called a canopy.

Spanish: dosel, copa

forms: canopies

compete

verb

definition: When you compete, you try to win or get something that others are also trying to get. People who compete in a race are all trying to be the first one to get to the end of the race.

Ben likes playing soccer, but he doesn't like it when he has to compete against his best friend's team.

Spanish: competir, concursar

forms: competed, competes, competing

hollow

adjective

definition: When something is hollow, the space inside it is empty. Footballs and soccer balls are always hollow. They have only air inside. Bunnies made out of chocolate are sometimes hollow and sometimes solid.

The hollow log had many insects living inside it.

Spanish: hueco

forms: hollower, hollowest

nutrient

noun

definition: A nutrient is something in food that helps people, animals, and plants to live and grow. There are many different nutrients, and some foods have more nutrients than others.

Candy has very little nutrients in it.

Spanish: nutriente

Name: _____ Date: _____

1. What is an epiphyte?
 - A. any plant that kills other plants by sucking out their nutrients
 - B. a plant that can be found in rainforests all over the world
 - C. a plant that grows well in humid climates
 - D. an air plant that grows on the surface of other plants

2. This passage describes strangler figs and their role in the rainforest. What is one way strangler figs are good for the rainforest?
 - A. Strangler figs' trunks are actually a tangled web of roots.
 - B. Strangler figs block their host tree from getting sunlight and nutrients.
 - C. Strangler figs provide food and shelter for many rainforest animals.
 - D. Strangler figs' seeds germinate in the top of the rainforest canopy.

3. The text says, "The host tree now must compete with the strangler fig for sunlight and nutrients in the soil. Usually, this process kills the host and only the fig tree is left." What conclusion can be drawn about strangler figs based on this evidence?
 - A. Strangler figs are very good at competing for sunlight and nutrients.
 - B. Strangler figs squeeze their host trees just like a python squeezes its prey.
 - C. Strangler figs' host trees need a huge amount of water to survive.
 - D. Strangler figs choose weak host trees to grow on.

4. Strangler figs do not rely on nutrients directly from the surface they are growing on. What evidence from the text best supports this conclusion?
 - A. "Usually, this process kills the host and only the fig tree is left. The "trunk" of the fig tree is actually a giant web of roots."
 - B. "According to historians, the strangler fig played a role in destroying Mayan cities in Central America. Seeds dropped by birds and bats germinated high on the walls of buildings."
 - C. "Once birds eat the figs of the epiphyte, they clean their bills and drop fig seeds on high tree branches."
 - D. "Although these python-like trees may seem menacing, their ability to adapt illustrates how necessary it is for plants to compete successfully in order to survive in the rainforest."

5. What is the main idea of this passage?

- A. Strangler figs played a role in destroying Mayan cities in Central America, by growing on and through the walls of buildings.
- B. Strangler figs can be dangerous to other rainforest trees, but they provide food and shelter for rainforest animals.
- C. Strangler figs are the most important food source for rainforest birds who drop their seeds high in the branches of other trees.
- D. Strangler figs are unusual trees that cannot grow on their own; they need the support of other trees to hold them up.

6. Please read the following sentences from the text.

"The 'trunk' of the fig tree is actually a giant web of roots. These trees are **immune** from forest clearing by humans because loggers do not like their knotted and twisted wood."

As used in these sentences, what does the word **immune** mean?

- A. a main cause of something
- B. twisted around something
- C. destroyed by something
- D. protected from something

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

Strangler figs destroyed some buildings in ancient Mayan cities _____ their roots grew between the bricks in stone walls, eventually destroying the walls.

- A. meanwhile
- B. because
- C. although
- D. instead

8. How do strangler figs help rainforest animals? Use examples from the text in your answer.

9. How do strangler figs kill other plants? Use examples from the text in your answer.

10. Imagine that a scientist discovered a way to get rid of all strangler fig trees in a rainforest. Is this a good idea or not? Support your answer with details from the text.

Name: _____

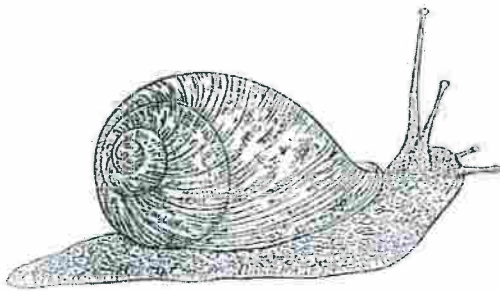
Date: _____

Directions: Read the text, and answer the questions.

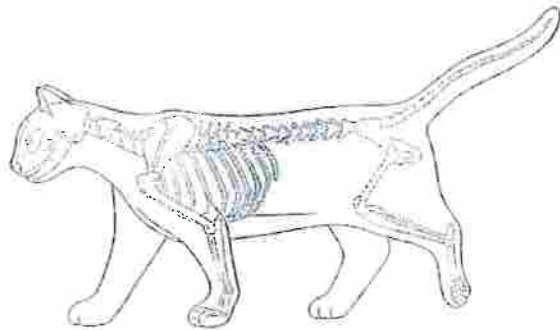
Vertebrates and Invertebrates

Some animals have backbones. They are called vertebrates. Birds, fish, and lizards are vertebrates. So are cats and dogs. Humans are vertebrates, too. All vertebrates have skeletons made of bone or cartilage. They also have brains. Their brains are protected by skeletal framework called a skull.

Animals without backbones are invertebrates. Spiders, insects, and worms are invertebrates that live on land. Crabs, jellyfish, and clams are invertebrates that live in water. They either don't have brains or have very simple brains. They do not have bones. Often, they have hard outer coverings. These coverings help protect them.



invertebrate



vertebrate

1. Which animal is an invertebrate?

- a. parrot
- c. giraffe

- b. eagle
- d. ladybug

2. All vertebrates _____.

- a. are warm blooded
- c. have backbones

- b. have tails
- d. have fur or hair

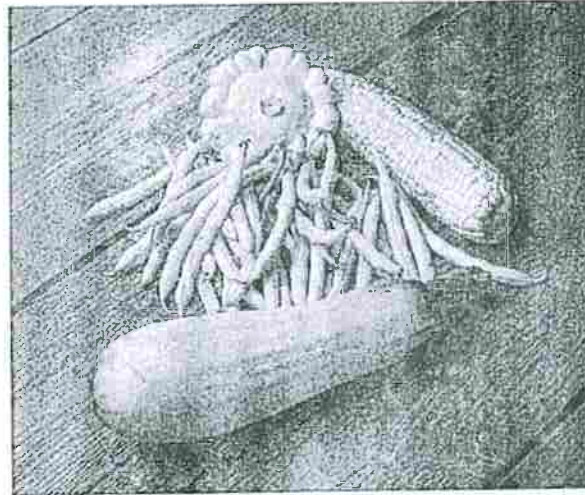
3. Why doesn't an animal's home tell you whether it is a vertebrate or invertebrate?

Name: _____ Date: _____

Directions: Read the text, look at the image, and answer the questions.

American Indians have been living in North America for thousands of years. In 1500, there were about five to ten million. They belonged to about 550 tribes. Some tribes got along. Others were at war. They wanted the other tribes' land and food. Some tribes hunted for food and some farmed. Some tribes did both. The farmers grew the Three Sisters, which are beans, squash, and corn.

The most important thing was family. American Indians believed that all life, such as trees, grass, and animals, was important. They believed that all life was connected.



the Three Sisters

1. Which plants did American Indians grow? Circle all that apply.
 - a. beans
 - b. avocados
 - c. corn
 - d. squash
2. Based on the text, why might tribes have gone to war with each other? Circle all that apply.
 - a. to get the other tribes' horses and food supplies
 - b. to use the land where the other tribes lived
 - c. to practice warfare for the future
 - d. because all life was connected
3. Why would it be useful for a tribe to both hunt and farm?
 - a. This provided jobs for many people.
 - b. They had many things that needed to be done.
 - c. They would have more than one source of food.
 - d. They would not get bored by the same foods.



Colonel NTI Packet

2025 – 2026

4th Grade

Day 2

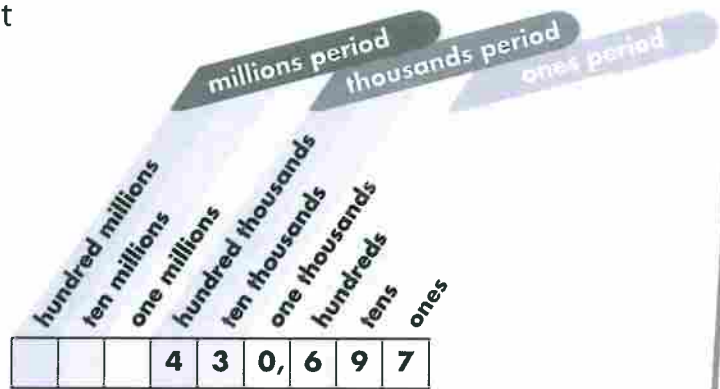
Table of Contents

Subject	Assignment
Math	Reteach to Build Understanding 1 - 1
Language Arts	Weather – An Introduction to Weather
Science	Week 1, Day 2 (Life Science)
Social Studies	Week 1, Day 2 (History)

A-Z Vocabulary

1. Each **period** of a place-value chart has three places.

Which periods are shown in the place-value chart at the right?



2. The position of a digit in a number tells the value of the digit. This is called **place value**.

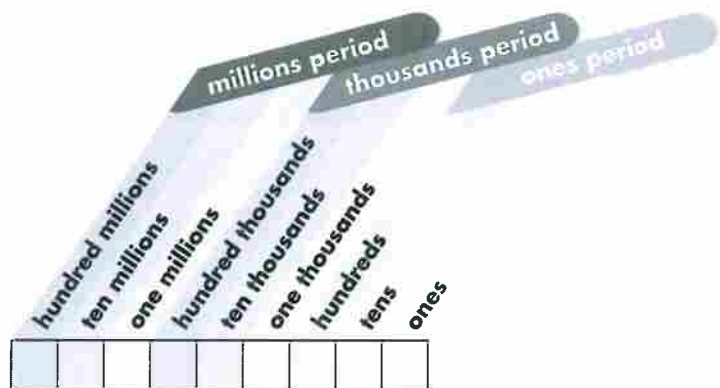
What is the value of the 6 in 430,697?

3. The **expanded form** of a number shows the sum of the value of each digit in a number.

Use the place-value chart to help write 430,697 in expanded form.

4. Write 656,132 in the place-value chart to the right.

5. Write 656,132 in expanded form.

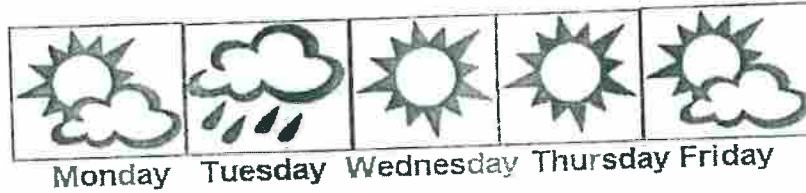


On the Back!

6. According to the 2010 census, the population of 20-24 year olds in Alabama was 335,322. Draw a place-value chart and record 335,322. Then write 335,322 in expanded form.

Weather - An Introduction to Weather

by ReadWorks



What does the word "weather" mean to you? Everyone knows how to describe the weather. There are beautiful, sunny days with blue skies, and then there are gray, rainy days perfect for staying in bed. But do you know what actually *causes* weather? The pictures above show the forecast for a week. Soon you will know what causes different types of weather!

Let's start with a scientific definition of weather. Weather is the state of the atmosphere at a given time and place. Four main factors determine the weather: *temperature*, *humidity*, *wind speed and direction*, and *air pressure*.

Temperature is the measure of how hot or cold the air is. When the sun shines down on the earth, it warms up the earth's surface. But that is not all that happens. The warmth of the sun also heats up the water on the earth. This process is responsible for many changes in weather and weather patterns. A thermometer measures temperature.

Humidity is the amount of water in the air. The air always has water in it even though we cannot always see it. Most of the weather conditions that we can observe come from humidity. Clouds, rain, and snow all have to do with humidity.

Wind speed and direction carry the weather. They also help forecasters predict the weather. Forecasters can measure wind speed and direction to determine how fast a storm is moving. Often the winds blowing far up in the earth's atmosphere are different than the winds we feel on the earth.

Air pressure has to do with the thickness of air. To understand air pressure, imagine you are standing in a room packed with people. There is a lot of pressure in the room. You can feel the person behind you hitting your elbow. If someone opens up a door into an empty room, people would start moving into the empty room until there are about the same number of people in both rooms. Air particles spread out in the same way. They always move from an area of high pressure to an area of low pressure. A barometer measures air pressure.

All of the weather's four main factors interact with each other. As air particles respond to changes in pressure, they move and create wind. On a very humid day, there may be many clouds in the sky. When it is cloudy, many of the sun's rays never reach the earth. What would this do to the temperature?

Vocabulary

forecast

noun

definition: a guess or estimate about something that will happen in the future.
Stay tuned for the weekend weather forecast.

Spanish: pronóstico, predicción

measure

verb

definition: When you measure something, you find out the size, weight, or amount of it, usually by using some kind of device.
My parents measured the living room before they bought a new rug.
I like to measure the ingredients when my mom bakes something.

Spanish: medir, tomar medidas

forms: measured, measures, measuring

predict

verb

definition: When someone predicts something, they say what they believe will happen based on some evidence that they have.
The people on the weather report are predicting snow for tomorrow.

Spanish: predecir

forms: predicted, predicting, predicts

Name: _____

Date: _____

1. According to the text, what is the state of the atmosphere at a given time and place?

- A. weather
- B. temperature
- C. humidity
- D. air pressure

2. What does the text describe?

- A. some types of clouds
- B. some famous forecasters
- C. some examples of barometers
- D. some factors that determine the weather

3. Read this paragraph from the text.

Temperature is the measure of how hot or cold the air is. When the sun shines down on the earth, it warms up the earth's surface. But that is not all that happens. The warmth of the sun also heats up the water on the earth. This process is responsible for many changes in weather and weather patterns. A thermometer measures temperature.

Based on this evidence, what can you conclude about the sun's relationship with the earth's surface?

- A. the longer the sun shines, the colder the earth's surface
- B. the longer the sun shines, the warmer the earth's surface
- C. the longer the sun shines, the longer the earth's surface
- D. the shorter the sun shines, the warmer the earth's surface

4. Imagine you were looking up at the sky, and you saw storm clouds moving slowly your way. The clouds come from humidity.

Based on the text, what determines the clouds moving slowly your way?

- A. temperature
- B. humidity
- C. wind speed and direction
- D. air pressure

5. What is this text mostly about?

- A. the sun warming the earth
- B. things forecasters do
- C. some causes of weather
- D. the thickness of air

6. Read these sentences from the text.

All of the weather's four main factors **interact** with each other.
As air particles respond to changes in pressure, they move and create wind. On a very humid day, there may be many clouds in the sky.

What does the word "**interact**" mean as used in the text?

- A. to be unrelated or not impact something
- B. to stay the same or not change
- C. to have an effect on or change something
- D. to argue or talk to each other

7. Choose the answer that best completes the sentence.

Weather is caused by a few things, _____ air pressure.

- A. finally
- B. including
- C. excluding
- D. but

8. According to the text, what are the four main factors that determine the weather?



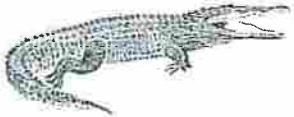


9. Read the last paragraph from the text.

All of the weather's four main factors interact with each other. As air particles respond to changes in pressure, they move and create wind. On a very humid day, there may be many clouds in the sky. When it is cloudy, many of the sun's rays never reach the earth. What would this do to the temperature?

What is the answer to the question at the end of the paragraph? Use evidence from the rest of the text to support your answer.

Name: _____ Date: _____

Directions: Study the chart, and answer the questions.

Vertebrate	Characteristics
mammals 	hair or fur, warm-blooded, live births, lungs, live on land
birds 	feathers, warm-blooded, lay eggs, lungs, live on land
reptiles 	scales, cold-blooded, lay eggs, lungs, live on land and in water
amphibians 	smooth skin, cold-blooded, lay eggs, lungs, live on land and in water
fish 	scales, cold-blooded, lay eggs, gills, live in water



Analyzing Data

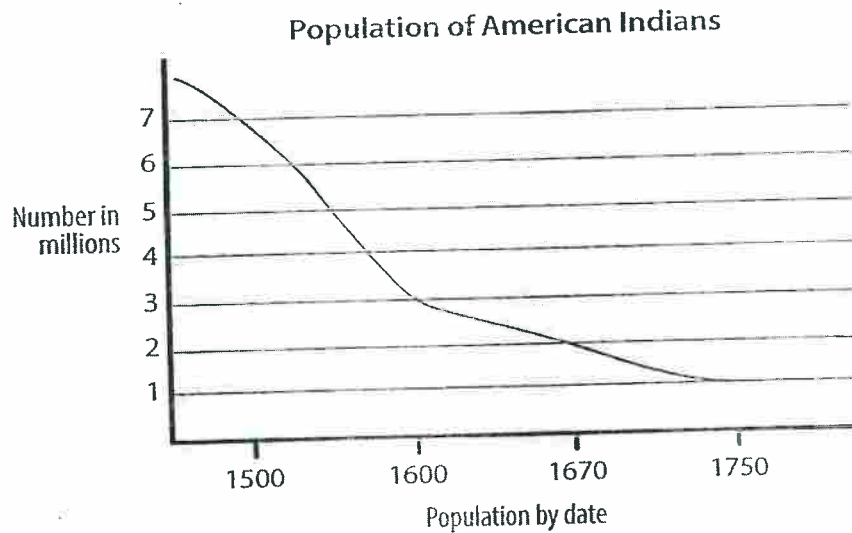
- Some vertebrates are warm-blooded, and some are cold-blooded. Which vertebrate is warm-blooded?
 - fish
 - amphibian
 - bird
 - reptile
- What do fish and reptiles have in common besides backbones?
 - They live on land.
 - They have scales.
 - They lay eggs.
 - both b and c
- What is one major difference between mammals and other vertebrates?

Name: _____

Date: _____

Directions: Look at the chart, and read the text. Answer the questions.

When the first Europeans arrived, they brought new diseases. The diseases were spread by germs. The American Indians caught these diseases. These diseases were new to them. They could not fight the sickness. Many people died.



- Based on the text, why did the American Indians get so sick?
 - The diseases were new to them.
 - They were weak.
 - They were already sick.
 - They did not take enough medicine.
- What happened to the population between 1500 and 1750?
 - It went up.
 - It went down.
 - It stayed the same.
 - none of the above
- What inference can be drawn from the graph and text?
 - The American Indians did not want to stay in the area.
 - The American Indians were not able to fight the new diseases.
 - The germs spread from the American Indians to the Europeans.
 - The Europeans took over the American Indian villages.



Colonel NTI Packet

2025 – 2026

4th Grade

Day 3

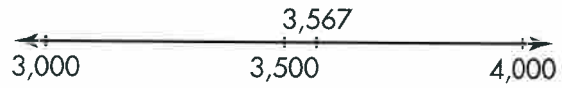
Table of Contents

Subject	Assignment
Math	Reteach to Build Understanding 1 - 4
Language Arts	Clues About the Continents
Science	Week 1, Day 3 (Life Science)
Social Studies	Week 1, Day 3 (History)

Vocabulary

1. **Rounding** is a way to find which multiple of 10, 100, or 1,000, and so on, a number is closest to.

First mark the two multiples of 1,000 that 3,567 is between.



Next find the halfway point between the two multiples, 3,000 and 4,000.



Is 3,567 to the right or to the left of the halfway point? _____

Rounded to the nearest thousand, 3,567 rounds to _____.

Complete each number line. Place a point on the number line where the number you are rounding is. Then round.

2. Round 392,153 to the nearest ten. _____



3. Round 29,485 to the nearest thousand. _____



4. Round 199,999 to the nearest hundred thousand. _____



On the Back!

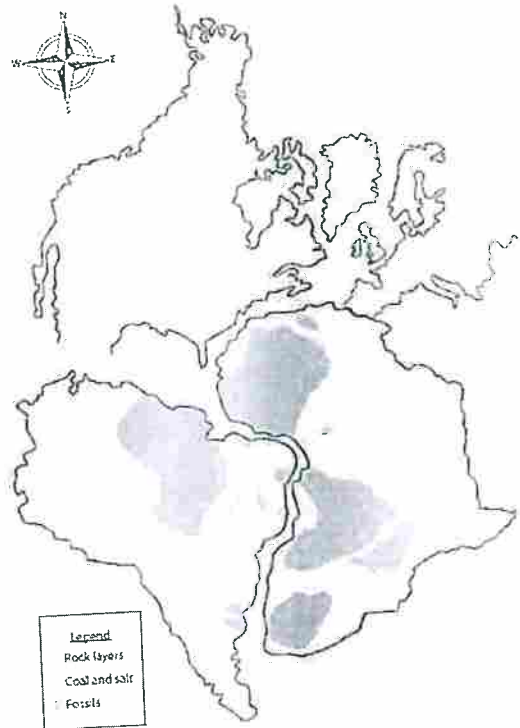
5. Round 592,655 to the nearest hundred thousand, ten thousand, and thousand.

6. Write three numbers that round to 400.

Clues About the Continents

This text is adapted from an original work of the Core Knowledge Foundation.

As early as the 1400s, 1500s, and 1600s, people studying maps noticed something interesting. They saw that several continents looked as if they might fit together like pieces of a jigsaw puzzle.



Discoveries of rock layers, as well as coal and salt, indicated that the continents had once been joined.

Later, during the 1800s and early 1900s, geologists studied rock layers on the continents. They made additional intriguing discoveries. For example, rock layers along the northern and eastern coasts of South America match rock layers along Africa's western coast. Also, deposits of coal and salt in eastern North America are similar to those in southern Europe.

Geologists found fossils of an ancient fern called *Glossopteris* in similar rock layers in Africa, India, Australia, and South America. They found fossils of an ancient reptile, *Lystrosaurus*, in both southern Africa and India. In South America and Africa, fossils of another ancient reptile, *Cynognathus*, turned up directly across the Atlantic Ocean from each other.

All of these discoveries seemed to indicate that the continents had once been joined-but how? Furthermore, how had they become separated? Several scientists proposed explanations, but they were quite far-fetched. One involved a gigantic eruption from the center of the earth that ripped all the land apart. Another suggested that part of Earth's land broke away to become the moon and what was left became the continents. Few people paid much attention to these ideas. A better explanation was needed, one with evidence to support it. In the early 1900s, Alfred Wegener provided just that.

Enter Alfred Wegener

Born and educated in Germany, Alfred Wegener was interested in many scientific subjects, including weather, astronomy, and cold, polar regions. Around 1910, Wegener read a scientific paper about similar fossils and rock formations found on different continents. He was intrigued by the mystery of the matching continents and he wanted to solve this mystery.



Alfred Wegener

Wegener gathered evidence. He pulled together discoveries made by many other scientists about rock formations, fossils, and mountain ranges. Polar explorers had recently unearthed fossils of *Glossopteris* in Antarctica. Similar fossils had previously been found in other parts of the world. This seemed to indicate that ice-covered Antarctica might once have been joined to

South America, Africa, India, and Australia. It also meant that Antarctica had once had a climate warm enough for ferns to grow.

From this evidence, Wegener concluded that all the present-day continents had been joined as one huge landmass long ago. He understood, as with any new discovery, that his conclusions might be altered or challenged in the future by more evidence. Nonetheless, he believed that the existing evidence supported his conclusions.

Vocabulary

eruption

noun

definition: When there is an eruption, something breaks open and material comes out. If there is an eruption of a volcano, there is an explosion inside it. The mountain breaks open and lava pours out.

Scientists can sometimes predict volcanic eruptions before they happen, which is helpful for people who live near volcanoes.

Spanish: erupción, explosión

evidence

noun

definition: Evidence is something that gives you a reason to believe something. When you have evidence that the dog slept on the couch, it means there is some reason to believe that. Dirty footprints or dog hair may be evidence that makes you believe the dog slept on the couch.

Scientists have been searching for evidence of life on distant planets.

I didn't believe what he said because he couldn't give me any evidence for it.

Spanish: evidencia

explanation

noun

definition: When you give an explanation, you say why or how something happened or how something works. An explanation is also information to help people know or understand something.

The violin player's explanation of how he fell in love with playing music was very interesting.

Her explanation of the story helped me understand it better.

Spanish: explicación, aclaración, exposición

fossil

noun

definition: A fossil is something left behind by a living thing that lived on the earth a very long time ago. Sometimes a fossil is a part of an animal's body, like a bone from a dinosaur or a backbone of a fish. Sometimes it is a pattern formed by things like shells or leaves or animal tracks that you can see in the surface of a rock. It is the rock itself that has preserved these things so that we can see them now, even after such a long time.

Liz loved looking at the fossils at the earth science museum. Her favorite was a skeleton of a huge fish.

Spanish: fósil

Name: _____ Date: _____

1. Long ago, when people studied maps, what did they notice?
 - A. The continents all looked as though they were the same shape and size.
 - B. Fossils of the same kind of lizard could be found in India and Africa.
 - C. Rock layers from Eastern South America matched rock from Western Africa.
 - D. The continents looked as though they could fit together, like a puzzle.

2. This text lists and describes the evidence scientists used to conclude that the continents were once joined. What is one piece of evidence scientists used to prove this idea?
 - A. There was a gigantic volcanic eruption that caused the continents to split apart across the Atlantic Ocean.
 - B. Fossils of an ancient reptile called *Lystrosaurus*, were found in Southern Africa and India.
 - C. Parts of Earth's land broke off to become the moon and the land that was left became the continents.
 - D. Scientists discovered fossils of ancient ferns that could survive in the freezing temperatures.

3. The text says, "In South America and Africa, fossils of another ancient reptile, *Cynognathus*, turned up directly across the Atlantic Ocean from each other." What conclusion can be drawn based on this evidence?
 - A. Long ago, the place where the fossils were found in South America was connected to the part of Africa where the fossils were found.
 - B. Long ago, the ancient lizard *Cynognathus* was able to swim across entire oceans and survive in vastly different lands.
 - C. Long ago, South America and Africa were connected, but they separated before the time that *Cynognathus* lived.
 - D. Long ago, the separation of the continents caused the death of many ancient animals, like *Cynognathus*.

4. Antarctica once had a climate warm enough for ferns to grow there. What evidence from the text best supports this conclusion?
- A. "...ice-covered Antarctica might once have been joined to South America, Africa, India, and Australia."
 - B. "Polar explorers had recently unearthed fossils of [the ancient fern] *Glossopteris* in Antarctica."
 - C. "Similar fossils had previously been found in other parts of the world."
 - D. "...Wegener read a scientific paper about similar fossils and rock formations found on different continents."
5. What is the main idea of this text?
- A. Alfred Wegener was obsessed with learning the truth about the continents, dinosaurs and ancient plants.
 - B. Scientists have been studying ancient plants and animals that can survive both tropical and Antarctic climates.
 - C. Alfred Wegener gathered evidence from many scientists' discoveries to conclude that the continents were one landmass long ago.
 - D. Several ancient lizard species were excellent swimmers and crossed the Atlantic Ocean several times.
6. Please read the following sentences from the passage.

"All of these discoveries seemed to indicate that the continents had once been joined -but how? Furthermore, how had they become separated? Several scientists proposed **explanations**, but they were quite far-fetched. [...] Few people paid much attention to these ideas. A better **explanation** was needed, one with evidence to support it."

Based on the text, what does the word **explanation** most closely mean?

- A. an idea about why something is a certain way
- B. an exploration of a new or unfamiliar land
- C. a mystery that cannot be solved
- D. evidence that supports a certain idea

7. Please choose the answer that best completes the sentence below.

Alfred Wegener wanted to solve the mystery of the matching continents, _____ he gathered evidence.

- A. however
- B. until
- C. so
- D. but

8. What evidence did Wegener use to help him conclude that the continents had been joined together? Support your answer with at least two examples from the text.

9. The passage says that before Alfred Wegener, some people thought that part of Earth's land broke away to become the moon and other people thought the continents were blown apart by a gigantic eruption. However, few people paid attention to these ideas. Why did many people ignore them?

10. The passage says that Alfred Wegener collected enough evidence to convince him that the continents were joined together long ago. However, "He understood, as with any new discovery, that his conclusions might be altered or challenged in the future by more evidence."

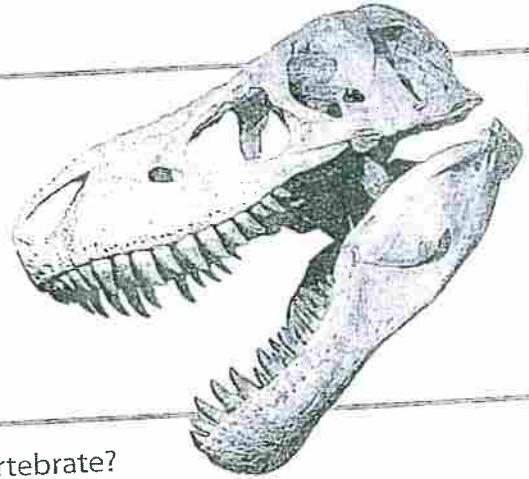
Why is it important for scientists to support their conclusions with solid evidence? Support your answer with details from the text.

Name: _____

Date: _____

Directions: Read the text, and answer the questions.

Dylan is a paleontologist. This means that she is a scientist who studies fossils. Fossils are the remains of animals and plants that lived long ago. They can help us learn many things. Dylan finds a new fossil. She wants to know if the animal was a vertebrate or an invertebrate.



1. What part would tell Dylan that the fossil is a vertebrate?

- a. the shell
- b. the backbone
- c. the muscles
- d. the stem

2. What other part would tell Dylan that the fossil is from a vertebrate?

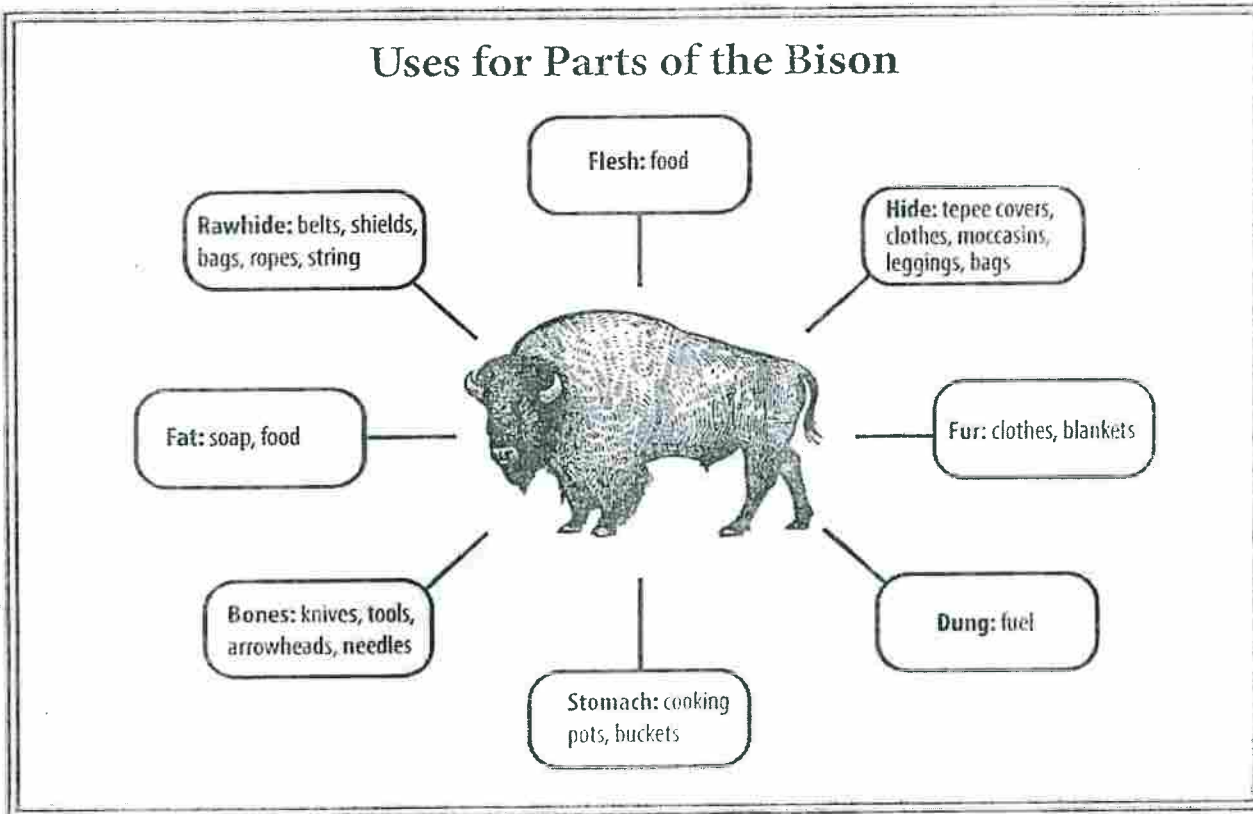
- a. antenna
- b. a heart
- c. a skull
- d. a shell

3. What is a question that Dylan might ask about the fossil to find out what type of animal it was?

4. What is a type of vertebrate that a paleontologist might find?

Name: _____ Date: _____

Directions: Study the graphic, and read the text. Then, answer the questions.



1. From what did American Indians make moccasins?
 - a. the flesh
 - b. the bones
 - c. the stomach
 - d. the hide

2. Why did American Indians use all parts of the bison?

3. Why do you think the American Indians honor the bison?



Colonel NTI Packet

2025 – 2026

4th Grade

Day 4

Table of Contents

Subject	Assignment
Math	Reteach to Build Understanding 2 - 4
Language Arts	How Mountains Form
Science	Week 1, Day 4 (Life Science)
Social Studies	Week 1, Day 4 (History)

Vocabulary

1. An **algorithm** is a set of steps used to solve a problem. The standard algorithm for adding whole numbers is shown.

Use the steps to find the sum.

$$\begin{array}{r} 34,227 \\ + 12,321 \\ \hline \end{array}$$

1. Add the ones. Regroup if needed.
2. Add the tens. Regroup if needed.
3. Add the hundreds. Regroup if needed.
4. Add the thousands. Regroup if needed.
5. Add the ten thousands. Regroup if needed.

2. Find $2,835 + 429$.

Write the addends. Align place values. Then use the algorithm to add.

$$\begin{array}{r} , \\ + \\ \hline , \end{array}$$

$$5 + 9 = 14$$

Regroup: $14 = 1 \text{ ten} + 4 \text{ ones}$

3. Estimate to check if your answer to Exercise 2 is reasonable. Explain.

4. Add $62,810 + 89,467$.

Write the addends. Align place values. Then use the algorithm to add.

$$\begin{array}{r} , \\ + , \\ \hline , \end{array}$$

5. Estimate to check if your answer to Exercise 4 is reasonable. Explain.

On the Back!

6. Find $1,567 + 302 + 984$. Estimate to check.

How Mountains Form

This text is excerpted from an original work of the Core Knowledge Foundation.

Mountains are formed in several different ways. To understand how mountains are formed, you need to remember that the Earth has a crusty shell made up of gigantic plates. These plates can shift, crack, and wrinkle.

Folded mountains are created when Earth's crust shifts. As it shifts, one piece of rock folds on top of another. The Himalayas (/him*uh*lae*uhz/) in Asia are folded mountains. Some of the Appalachian (/ap*uh*lae*chun/) Mountains in the eastern United States are folded mountains, too.



Folded mountains are created when one piece of rock folds over another. Both the Himalayas (left) and the Appalachians (right) are folded mountains.

Fault block mountains are also created by shifting plates. In this case, pieces of rock are broken off and driven upward by the force of the shifting plates. The Sierra Nevadas of western North America are fault block mountains.

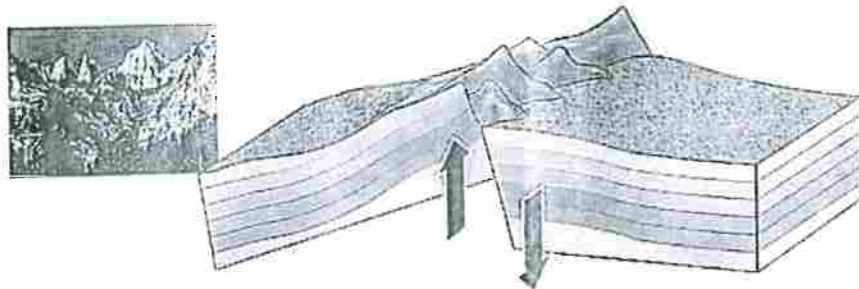


photo: Cullen328 (CC BY 3.0); illustration: Core Knowledge

Fault block mountains are created when pieces of rock are driven up. The Sierra Nevadas are fault block mountains.

Dome mountains are created when melted rock called magma pushes up below the surface of the Earth. As the magma moves up, it makes bumps on Earth's surface.

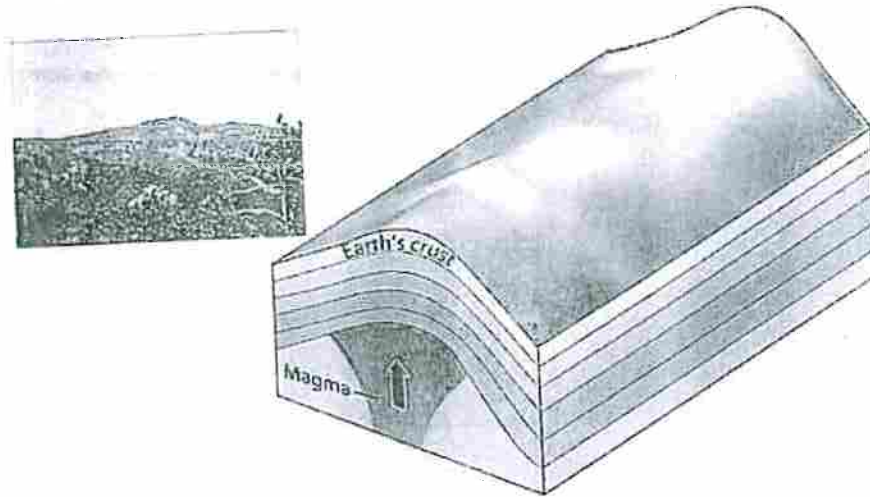


photo: © 2001 Doug Swisher (CC BY-SA 3.0); illustration: Core Knowledge

Magma pushing up below the surface of the Earth forms dome mountains. The Black Hills of South Dakota are dome mountains.



Japan's Mount Fuji is a volcano.

These bumps often look more like hills than mountains. The Black Hills of South Dakota are dome mountains.

Volcanic mountains form when a volcano erupts and breaks a hole in Earth's crust. Lava and ash flow down the sides of the volcano and harden into a mountain. Many islands, such as the Hawaiian Islands, are actually the tops of volcanic mountains. Japan's highest mountain, Mount Fuji, is a volcano. It last erupted in 1707.



Mountains sometimes form when a volcano erupts. The Hawaiian Islands are the tops of volcanic mountains.

The highest mountain in Africa, Mount Kilimanjaro (/kil*uh*man*jar*oe/), is an extinct (/ek*stink/) volcano.

Volcanic mountains can be produced by a few days of huge eruptions. However, most mountains take thousands, or even millions, of years to form. They form so slowly that, in real life, you can't see them changing.

Some of Earth's mountains, such as the Appalachians, were formed more than two hundred million years ago. Others, such as the Rocky Mountains in western North America, were formed only about a million years ago. You can often tell whether mountains are young mountains or old mountains by their shape. Young mountains are usually steep, have a high elevation, and are often sharp or pointy. Old mountains have been worn down by many years of erosion (/er*oe*zhun/).



Mount Everest is the highest mountain in the world.

Look at the picture of Mount Everest. You'll notice that there is snow on top of the mountain. Most tall mountains are covered with snow all year long. That is because the farther above sea level you go, the colder it gets. We use the term sea level to explain land elevation in relation to the surface level of the world's oceans. You may have noticed this if you have ever hiked up a mountain or driven to the top of one.

Mountaintops are usually cold, even when they are located in hot places. Snow covers the top of Mount Kilimanjaro, in the African country of Tanzania (/tan*zuh*nee*uh/), all year long even though it is very close to the equator.

Vocabulary

erupt

verb

definition: When a volcano erupts, it breaks open and sends out hot melted rock and ash.
That volcano erupted only ten years ago.

Spanish: erupcionar entrar en erupción
forms: erupted, erupting, erupts

form

verb

definition: When something forms a new thing, it creates or changes into that new thing. When many things come together, they can form something. For example, tiny drops of water come together to form clouds. When people form something, they shape it into something new or put it together from pieces or parts. Different people can come together and form a club.

Amy formed a flower pot out of clay.

Spanish: formar, modelar
forms: formed, forming, forms

form

verb

definition: When something forms, it gets created. It starts as a new thing. When water in a river gets very cold, ice forms on the surface. Sometimes many things or people come together to become a new thing. A choir can form, for example, when different people decide that they want to sing together.

When Adrian and Drew first met, a friendship formed almost immediately.

Little buds form on the tips of these branches in the spring.

Spanish: formar, crear
forms: formed, forming, forms

shift

verb

definition: When something shifts, it moves its position or changes its direction. When you shift, you change your position or go in a different way or move to a different place.

Spanish: mover, cambiar de posición, mudarse
forms: shifted, shifting, shifts

Name: _____ Date: _____

1. How are folded mountains formed?

- A. Huge pieces of rock break off the Earth's crust when it moves, piling up to form mountains.
- B. Magma from below the Earth's crust pushes upwards, causing the crust to swell upwards.
- C. Lava erupts through the Earth's crust, forming a mountain of hardened lava.
- D. When the Earth's crust shifts, one piece of rock folds on top of another to form mountains.

2. In this passage, the author describes how mountains can change over time. Over time, what effect does erosion have on mountains?

- A. Erosion wears down mountains over time.
- B. Erosion makes mountains sharp and pointy over time.
- C. Erosion causes new mountains to form over time.
- D. Erosion causes mountain tops to hold more snow over time.

3. The text states that fault block mountains are formed when, "pieces of rock are broken off and driven upward by the force of the shifting plates." Based on this evidence, what conclusion can you draw about the force of Earth's shifting plates?

- A. The force of Earth's shifting plates is somewhat gentle.
- B. The force of Earth's shifting plates is loud.
- C. The force of Earth's shifting plates is very powerful.
- D. The force of Earth's shifting plates is created quickly.

4. Based on the information in the text, what is one feature of a mountain that a person could look at to draw conclusions about how that mountain formed?

- A. the color of the rock that makes up the mountainside
- B. how cold and snowy it is around the mountain
- C. how sharp and pointy or smooth and hilly the mountain is
- D. how quickly the rocks of the mountain are shifting

5. What is the main idea of this text?

- A. Mountains are all very cold, but they come in all shapes and sizes.
- B. Mountains can form in different ways and look different based on how they formed.
- C. Mountains can be made of rock, Earth plates, or lava.
- D. Mountains can form on land or in the ocean when volcanoes erupt and lava hardens.

6. Please read the following sentences from the text. "...the Earth has a crusty shell made up of gigantic plates. These plates can **shift**, crack, and wrinkle. Folded mountains are created when Earth's crust **shifts**. As it **shifts**, one piece of rock folds on top of another."

Based on these sentences, what does the word **shifts** mean?

- A. moves
- B. explodes
- C. shrinks
- D. shivers

7. Please choose the answer that best completes the sentence below.

Most mountains take thousand or millions of years to form, ___ volcanic mountains can be produced in just a few days.

- A. also
- B. before
- C. therefore
- D. but

8. The text says you can often tell whether mountains are old or young by their shape. What do young mountains usually look like?

9. The text says, "Some of Earth's mountains, such as the Appalachians, were formed more than two hundred million years ago. Others, such as the Rocky Mountains in western North America, were formed only about a million years ago." Using evidence from the text, describe how these two mountain ranges might look different.

10. Imagine you are going on a hike. In the distance, you see a huge, rocky mountain range with several pointed, snow-covered peaks at the top. What kind of mountains could these be? Use evidence from the passage in your answer.

Name: _____ Date: _____

Directions: Read the text, and look at the picture of an animal's backbone. Then, answer the questions.

Animals with backbones tend to be faster and stronger than animals without backbones. One of the functions of a backbone is to help support an animal's weight. A backbone isn't a single bone. It is made up of many small bones. These bones are called vertebrae. Vertebrae make an animal's backbone flexible. They allow an animal to move freely. If the backbone were one solid bone, the animal would be stiff. It couldn't walk or bend over.

Lauren wants to make a model of a backbone for the science fair.



Planning Solutions

1. What characteristics of a backbone does Lauren need to show in her model for the science fair?
 - a. It is strong, but not very flexible.
 - b. It is flexible, but not very strong.
 - c. It is both strong and flexible.
 - d. It is neither strong nor flexible.

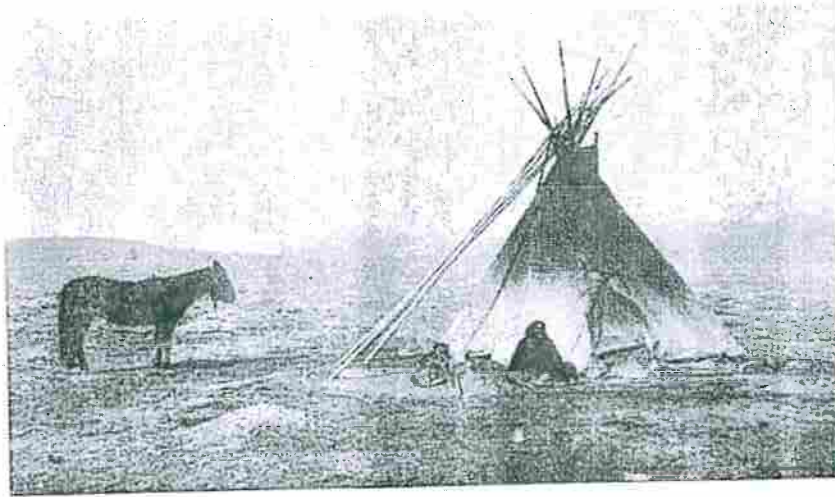
2. Which materials would be best for Lauren to use in her model backbone?
 - a. a pipe cleaner with beads on it
 - b. a string with beads strung on it
 - c. a craft stick with beads glued on it
 - d. a craft stick without beads

3. How could Lauren demonstrate how a backbone supports an animal's weight but still lets the animal be flexible?

Name: _____ Date: _____

Directions: Look at the picture, and read the text. Answer the questions.

The picture shows a Ute American Indian beside her tepee. Her tepee is covered in bison hide. Some American Indians moved around a lot. They had to set up and take down their tepees quickly. Usually they only took thirty minutes to take down their tepees and pack up.



1. Which tribe used tepees as their houses?
 - a. Ute American Indians
 - b. Woodland Indians
 - c. Algonquin Indians
 - d. Iroquois Indians

2. How are today's tents different from or the same as tepees?

Colonel NTI Packet

2025 – 2026

4th Grade

Day 5

Table of Contents

Subject	Assignment
Math	Reteach to Build Understanding 2 - 7
Language Arts	Got Allergies?
Science	Week 1, Day 5 (Life Science)
Social Studies	Week 1, Day 5 (History)

Vocabulary

1. **Regrouping** is used to name a whole number in a different way. Regroup to complete each statement.

1 ten = _____ ones

1 hundred = _____ tens

2 tens, 2 ones = 1 ten, _____ ones

3 hundreds, 6 tens = 2 hundreds, _____ tens.

2. Subtract $30,220 - 4,116$.

Write the problem vertically, and use the algorithm to find the difference.

1. Subtract the ones. Regroup.

2 tens = 1 ten, _____ ones

2. Subtract the tens.

3. Subtract the hundreds.

4. Subtract the thousands. Regroup.

3 ten thousands = _____ ten thousands, 10 thousands

3. Subtract $830,502 - 746,319$.

Write the problem vertically, and use the algorithm to find the difference.

On the Back!

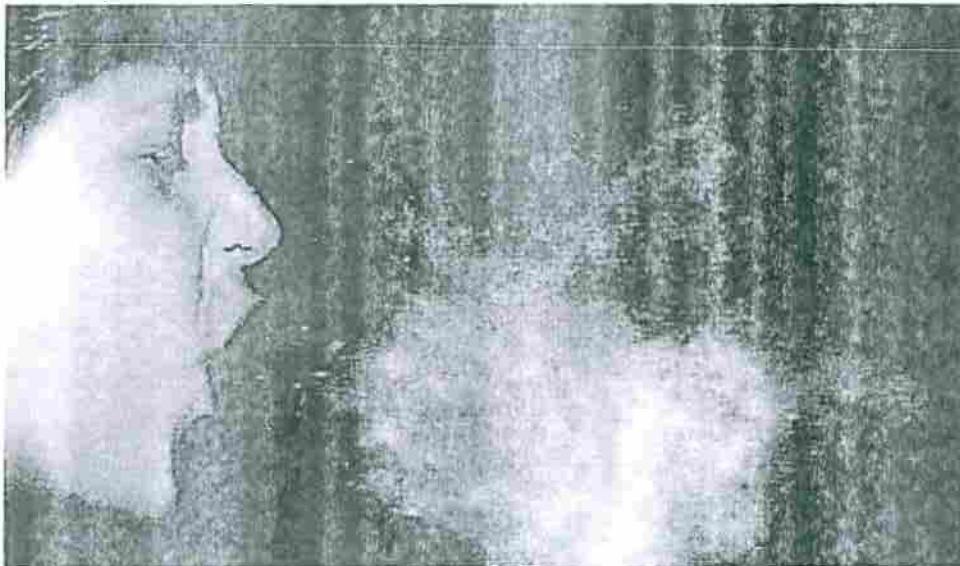
4. Subtract $78,305 - 56,419$. Explain how to use estimation to check that your answer is reasonable.

Got Allergies?

More people in the United States have allergies today compared with decades ago. Allergies are bad reactions to things around you or that you eat.

In 2010, more than half of Americans were sensitive to at least one allergen. That was the finding of one survey by the National Institutes of Health. Allergens are things that set off allergies. Many allergens-such as dust and mold-are found in the air.

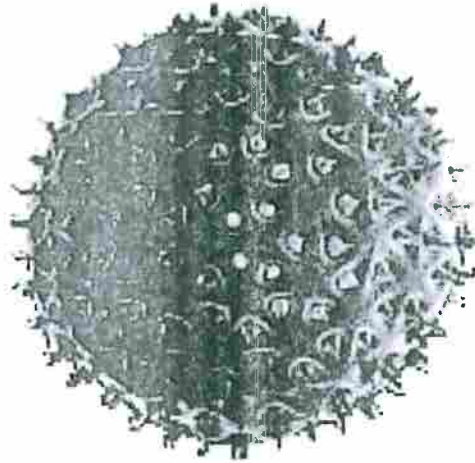
"Allergies [are] increasing over time," said Andy Nish. He is a doctor from Georgia.



Corbis

Allergens in the air aren't the only problem. Kids' food allergies have risen too. Between 1997 and 2007, the number of kids with food allergies jumped 18 percent. Eating milk products and eggs can give some children rashes. Those foods can even cause some people to have trouble breathing.

What's behind the spread of allergies? Some scientists think our immune systems don't have enough to do. Immune systems help our bodies fight germs. But many kids today come in contact with fewer germs than their grandparents did. That's in part because they grow up in environments with fewer germs such as cleaner homes and smaller families. Experts say that when our immune systems have fewer germs to fight, they can get confused. They attack other things, such as milk that we drink, instead.



Getty Images

Other scientists say hotter temperatures are to blame. They say the weather is warmer for longer periods now, so plants bloom longer. Plants release pollen, which is a common allergen.

Doctors do not know for sure what's making allergies increase. But they do know how to treat them with medicine. "There is very good treatment for allergies," Nish says. "No one should suffer with symptoms."

Take Cover!

Dust and other allergens that float into your nose are in for a blast—a cough or a sneeze, that is! Both are natural reflexes, or responses, to help keep you from getting sick. Here's a look at the big bursts.

Sneeze



Alamy

Sneezes start at the back of your throat. Each quick burst can force out up to 40,000 droplets of saliva. The tiny droplets travel at up to 300 miles per hour.

Cough



iStock

Coughs come out of your lungs. Each blast can push out 3,000 saliva droplets as fast as 50 miles per hour. Enough air comes out to almost fill a two-liter bottle.

Vocabulary

burst

noun

definition: A burst of something is a sudden beginning or explosion of something.
With every burst of lightning, the sky looked as if it could crack open.

Spanish: explosión, reventón, estallido

immune

adjective

definition: When you are immune to a disease, you will not get sick from it. This is because your body has built up natural protection from it or because doctors have given you something called a vaccine that prevents you from getting that disease. Our bodies have something called an immune system. This is the system in our bodies that fights illness and helps us become immune to diseases.

Humans are immune to many diseases that affect cats and dogs.

Spanish: inmune

reaction

noun

definition: A reaction is a feeling or action that comes immediately after something else and is caused by it. When some people suddenly see a big spider, their reaction is to scream or jump away. When someone touches a poisonous plant, their skin's reaction is usually to become itchy, very hot, or painful.

Spanish: reacción

sensitive

adjective

definition: When you are sensitive to something, you have a reaction to it. If you are sensitive to cigarette smoke, you might get a headache from it or maybe your eyes start to hurt.

Spanish: sensible, sensitivo

Name: _____ Date: _____

1. According to the text, what are increasing in the United States?

- A. allergens
- B. germs
- C. allergies
- D. reflexes

2. Which of the following best describes the solution proposed in the text for people who suffer from allergies?

- A. The solution is to stay away from dust and mold.
- B. The solution is to stop eating milk products and eggs.
- C. The solution is to hide from anything that causes allergies.
- D. The solution is taking medicine to help with allergy symptoms.

3. Allergies can affect someone's everyday life.

What evidence can be used to support the statement?

- A. "More people in the United States have allergies today compared with decades ago."
- B. "Allergens in the air aren't the only problem."
- C. "Those foods can even cause some people to have trouble breathing."
- D. "But kids today come in contact with fewer germs than their grandparents did."

4. What can be concluded from the passage?

- A. A person with allergies is sick and needs to see a doctor.
- B. A person who sneezes and coughs often may have allergies.
- C. A person who drinks milk and eats eggs will definitely get allergies.
- D. A person who lives in a place with hot weather will never get allergies.

5. What is the main idea of this article?

- A. Allergies are increasing, but simple steps can be taken to cope with them.
- B. Our own human nature has produced more allergies than ever.
- C. Everyday foods have caused a higher proportion of allergies than ever.

D. Coughs and sneezes are reflexes to allergens.

6. Read the sentences:

"There is very good treatment for allergies,' Nish says. 'No one should suffer with **symptoms.**'"

As used in the text, what does "**symptoms**" mean?

- A. changes in the body that are signs that a person is sick
- B. changes in temperature that give people allergies
- C. changes in medicine to treat people when they are sick
- D. changes in people's immune systems that cause allergies

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

Kids come into contact with fewer germs today, _____ their immune systems get confused and **attack** other things.

- A. if
- B. after
- C. although
- D. so

8. What can be concluded from the evidence that coughs and sneezes are natural reflexes and from the evidence that our immune system attacks allergens?

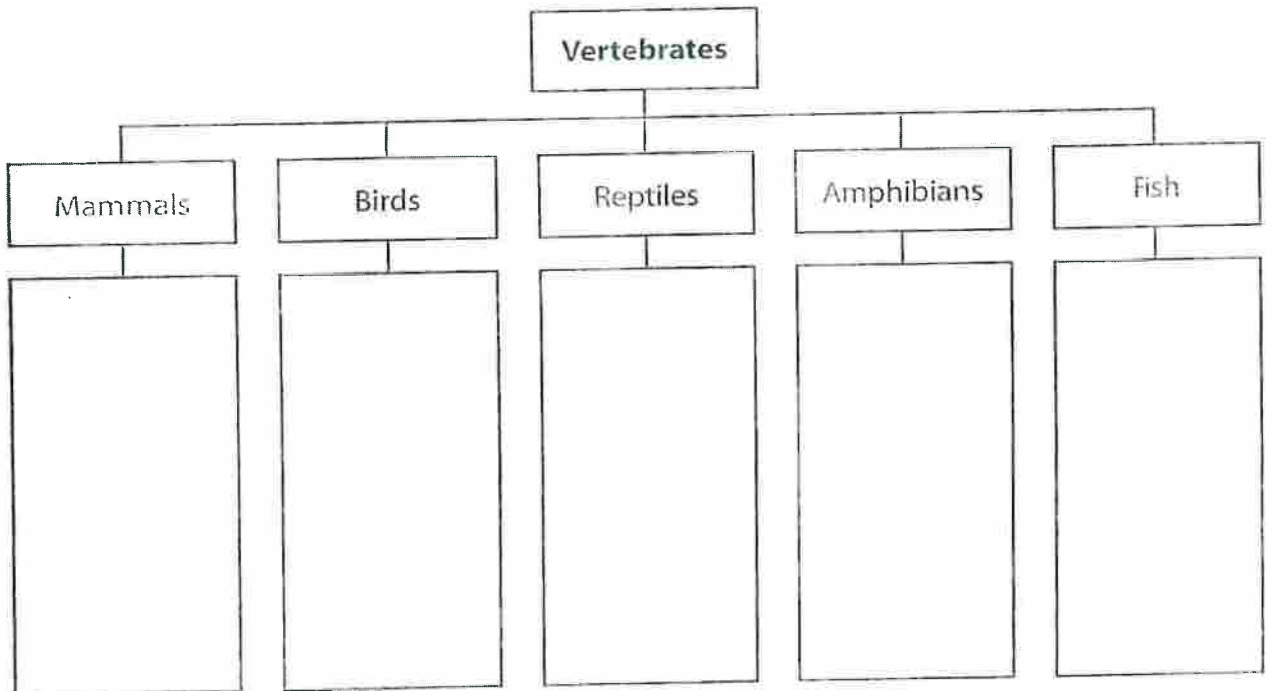
9. What two possible reasons for the increase in allergies are explained in the passage? Use evidence from the text to support your answer.

10. What can be concluded about the increase of allergies in the future? Use the evidence from the text to support your answer.

Name: _____ Date: _____

Directions: Study the list of animals. Complete the chart by writing each animal in the correct category.

- | | | | |
|-------|-----------|------------|---------|
| lion | jellyfish | ant | salmon |
| eagle | cow | alligator | catfish |
| snake | raven | salamander | dog |
| frog | turtle | spider | |



Invertebrates

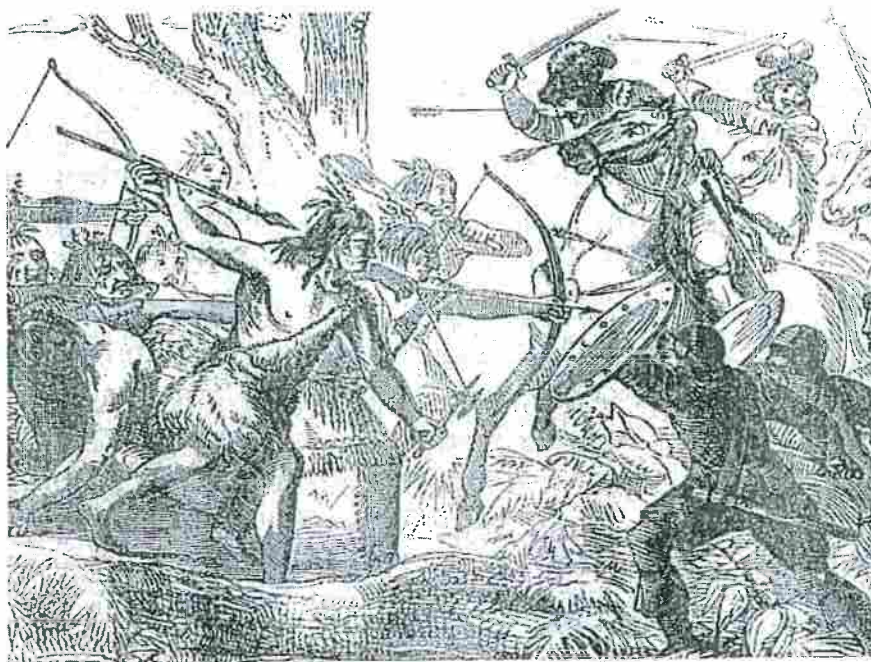
Communicating Results



Name: _____ Date: _____

Directions: Look at the picture, and read the text. Answer the question.

In 1492, the American Indians had never seen Europeans. They had never left North America. Not all Europeans were friendly. They wanted the Indians' furs and land. Some Europeans killed American Indians to get these things. The Europeans came with swords and guns. The American Indians only had bows and arrows.



Europeans arrive in North America.

1. What were some of the problems the American Indians faced when the Europeans arrived?



Colonel NTI Packet

2025 – 2026

4th Grade

Day 6

Table of Contents

Subject	Assignment
Math	Reteach to Build Understanding 3 - 1
Language Arts	When Lightning Strikes
Science	Week 3, Day 1 (Physical Science)
Social Studies	Week 4, Day 1 (Economics)

AZ Vocabulary

1. The **Associative Property of Multiplication** states that factors can be grouped differently and the product remains the same. Changing the grouping of the factors changes the factors that are multiplied first.

Use the Associative Property of Multiplication to find 2×30 .

$$2 \times 30 = 2 \times (3 \times 10)$$

Break apart 30.

$$= (2 \times \underline{\quad}) \times \underline{\quad}$$

Group the factors of the basic fact.

$$= \underline{\quad} \times 10$$

Multiply the factors inside the parentheses.

$$= \underline{\quad}$$

Find the product.

2. A **multiple** is the product of a given factor and any whole number.

Find the next three multiples in each number pattern.

Multiples of 10: 10, 20, 30, _____, _____, _____

Multiples of 100: 100, 200, 300, _____, _____, _____

Use place value and the Associative Property of Multiplication to find the product.

3. $4 \times 600 = 4 \times \underline{\quad}$ hundreds

Use place value.

$$= (\underline{\quad} \times \underline{\quad}) \underline{\quad}$$

Group the factors in a different way.

$$= \underline{\quad} \times 100$$

Find the product inside the parentheses.

$$= \underline{\quad}$$

Find the final product. Think: 24×1 , and then write final product.

Use place value to find the product.

4. $6 \times 50 = 6 \times 5$ tens

5. $6 \times 6,000 = 6 \times 6$ _____

$$= 30$$

$$= 36$$

$$=$$

$$=$$

On the Back!

6. Explain how you can use the basic fact $4 \times 8 = 32$ and place value to help find 4×80 , 4×800 , and $4 \times 8,000$.

When Lightning Strikes

Thunder provides a wake-up call to head indoors.



World Almanac for Kids

"When thunder roars, go indoors," says meteorologist Ron Holle.

Scientists say lightning strikes the surface of Earth about 100 times each second. Thunderstorms are most frequent during the spring and summer. Experts warn people to be especially aware of the dangers of lightning during those seasons.

Forces of Nature

Lightning is the flash of light that occurs when electricity moves between clouds or between a cloud and the ground. The huge spark of electricity is like the tiny kind you get when you run a comb through your hair or scuff your feet on a carpet—only much stronger.

A lightning bolt that crackles through the air can reach a temperature of 60,000 degrees Fahrenheit. That is about five times hotter than the sun! The intense heat from lightning causes the surrounding air to expand, resulting in the loud sound known as thunder.

Thunder is nature's warning to head indoors. As meteorologist Ron Holle from Tucson, Arizona told *Weekly Reader*, "When thunder roars, go indoors." A meteorologist is a scientist who studies weather.

Holle also recommends following the 30-30 rule. If you hear thunder fewer than 30 seconds

after you see lightning, head indoors-the storm is only about 6 miles away. After the storm ends, wait 30 minutes before going outside. To determine how far away lightning is, count the seconds between the flash and the thunder. Every 10 seconds equals 2 miles.

Play It Safe

Lightning strikes the ground in the United States about 25 million times each year! Although getting hit by lightning is unlikely, it is important to stay safe. In the United States, about 60 people are killed each year by lightning.

To stay safe, follow the golden rule-head for cover. "There is no place outside that is safe from lightning," Holle said firmly. "There are two safe places-inside a [permanent] building or a metal-topped vehicle."

Lightning Safety Tips

Lightning expert Ron Holle shared the following tips with *Weekly Reader*.

- Find shelter in a building or a metal-topped vehicle (not a convertible), and close the windows.
- If you're caught outdoors, stay away from open spaces, and avoid standing near tall objects, such as trees.
- Avoid using electrical equipment, such as computers, TVs, and phones. (Cell phones are safe to use.)
- Stay away from sinks and showers. Lightning can travel through water pipes.
- Wait 30 minutes after the last sound of thunder or flash of lightning before going outside.

Vocabulary

electricity

noun

definition: Electricity is a kind of energy that is used to produce light and heat and to make certain things work. Electricity makes computers run and light bulbs shine. Electricity also makes cars start.

We didn't have electricity after the storm, so we used candles for light.

Spanish: electricidad

intense

adjective

definition: When something is intense, it is strong. There is a lot of it, usually within a small amount of time or space.

The rain outside was so intense that it was hard to see through it.

The heat is very intense in the middle of the day in the desert.

These special lamps give out an intense light.

Spanish: intenso

recommend

verb

definition: When you recommend doing something, you tell others that it is something they should do. A dentist usually recommends that patients brush their teeth at least twice a day.

Spanish: recomendar

forms: recommended, recommending, recommends

shelter

noun

definition: When something gives shelter, it protects you and makes you safe. In a storm, people look for shelter.

The cave offered shelter from the wind.

Spanish: refugio, protección

Name: _____ Date: _____

1. What is the golden rule of lightning safety?

- A. Don't stand under trees.
- B. Avoid using electronics.
- C. Stay away from open spaces.
- D. Head for cover.

2. What does the author describe at the end of the passage?

- A. how to stay safe from lightning
- B. how lightning is created
- C. how thunder is created
- D. what a meteorologist is

3. The time between a lightning strike and thunder indicates the distance of the storm. What evidence from the passage supports this conclusion?

- A. "Thunder is nature's warning to head indoors."
- B. "Count the seconds between the flash and the thunder. Every 10 seconds equals 2 miles."
- C. "Wait 30 minutes after the last sound of thunder or flash of lightning before going outside."
- D. "If you hear thunder fewer than 30 seconds after you see lightning, head indoors."

4. "Find shelter in a building or a metal-topped vehicle (not a convertible), and close the windows."

Based on this safety tip, what can you conclude about the safety of cars during lightning?

- A. All cars, regardless of type, will protect you from lightning.
- B. B Cars are less safe than buildings during lightning.
- C. The rubber tires of a car protect you from lightning.
- D. The metal roof of a car protects you from lightning.

5. What is this passage mostly about?

- A. why lightning storms are dangerous
- B. the relationship between thunder and lightning
- C. facts about lightning and safety tips
- D. how meteorologists study the weather

6. Read the following sentence: "The intense heat from lightning causes the surrounding air to expand, resulting in the loud sound known as thunder."

What does the word "resulting" mean?

- A. to allow someone to do something
- B. to become smaller
- C. to make a quiet noise
- D. to cause something to happen

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

It is important to stay safe during thunderstorms, _____ it is unlikely that you will be struck by lightning during your lifetime.

- A. initially
- B. moreover
- C. in summary
- D. even though

8. Define lightning.

9. What is the 30-30 rule?

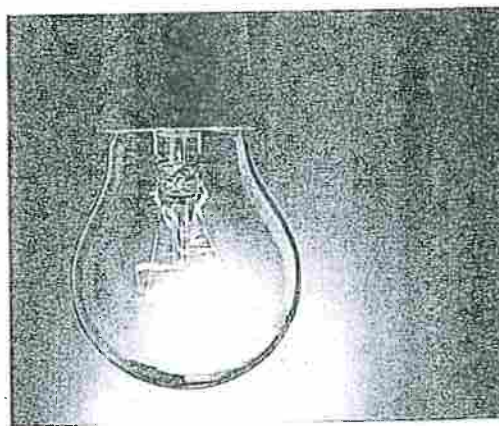
10. Explain how the timing between lightning and thunder can help you stay safe during a thunderstorm.

Name: _____ Date: _____

Directions: Read the text, and answer the questions.

Why Do Light Bulbs Get Hot?

Energy can't be created or destroyed. It can only change or move between objects. A light bulb is a good example of how electrical energy changes to light and heat. Light and heat are both types of energy. Some light bulbs are made of a glass bulb with a piece of wire inside, called a filament. When one of these light bulbs is turned on, electricity flows through the filament. It then heats up until it is bright enough to make light.



1. What is a filament?
 - a. wire
 - b. glass
 - c. electricity
 - d. heat
2. Which is not a type of energy?
 - a. electricity
 - b. light
 - c. heat
 - d. glass
3. Electrical energy changes into _____ and _____ in a light bulb.
 - a. light and sound
 - b. heat and sound
 - c. light and heat
 - d. sound and electricity

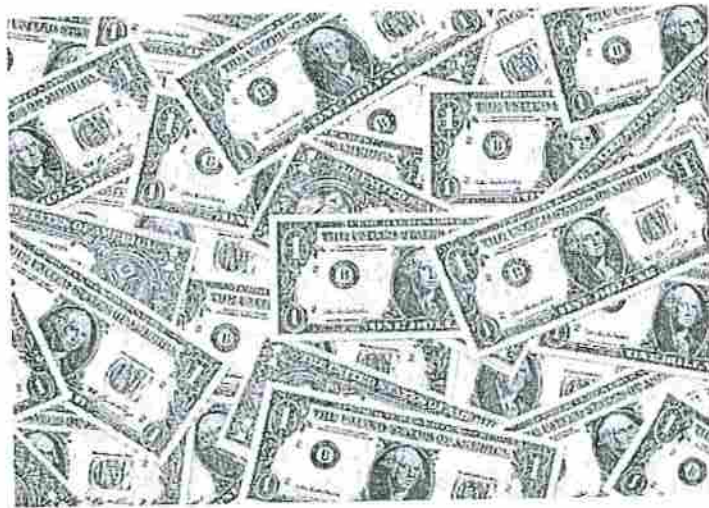
Name: _____ Date: _____

Directions: Look at the picture. Then, read the text, and answer the questions.

Economics is the system of how money is made and used. There are two ways people can earn money:

- Buy and sell goods.
Goods are things that you can buy and sell, such as clothes, shoes, and food.
- You can also sell a service.
For example, a hairstylist cuts our hair, a mechanic fixes our car, or a chef cooks a meal for us. They provide a service.

Consumers are people who buy goods and services. When people make money from selling goods or services, they can buy things they want or need.



1. What are goods?
 - a. things someone does
 - b. things you buy and sell
 - c. your homework
 - d. your needs and wants
2. What are services?
 - a. what a taxi driver does
 - b. what a plumber does
 - c. what a house painter does
 - d. all the above
3. Based on the text, what do consumers do?
 - a. make things
 - b. give things
 - c. buy things
 - d. paint things
4. What does *economics* mean?
 - a. how we make and use money
 - b. how we make and use toys
 - c. how we pay people
 - d. how we buy goods

Colonel NTI Packet

2025 – 2026

4th Grade

Day 7

Table of Contents

Subject	Assignment
Math	Reteach to Build Understanding 3 - 4
Language Arts	Recycling & Conservation: Why Recycle?
Science	Week 3, Day 2 (Physical Science)
Social Studies	Week 4, Day 2 (Economics)

Vocabulary

1. A **numerical expression** contains numbers and at least one operation.

Which of the following are numerical expressions? Write Yes or No.

$5,178$ _____ 6×80 _____

$26 - 15 + 4$ _____ $77 = 77$ _____

2. The **Distributive Property** says that multiplying a sum (or difference) by a number is the same as multiplying each number in the sum (or difference) by that number and adding (or subtracting) the products.

Use the Distributive Property to rewrite 3×546 .

$$3 \times 546 = 3 \times (500 + \underline{\quad} + \underline{\quad})$$

Break apart 546.

$$= (3 \times \underline{\quad}) + (3 \times \underline{\quad}) + (3 \times \underline{\quad})$$

Distribute the 3 to each addend.

3. $4 \times 613 = 4 \times (\underline{\quad} + \underline{\quad} + \underline{\quad})$ Break apart 613.
- $$= (\underline{\quad} \times 600) + (\underline{\quad} \times 10) + (\underline{\quad} \times 3)$$
- Distribute the 4.
- $$= \underline{\quad} + \underline{\quad} + \underline{\quad}$$
- Multiply. Then add.
- $$= \underline{\quad}$$

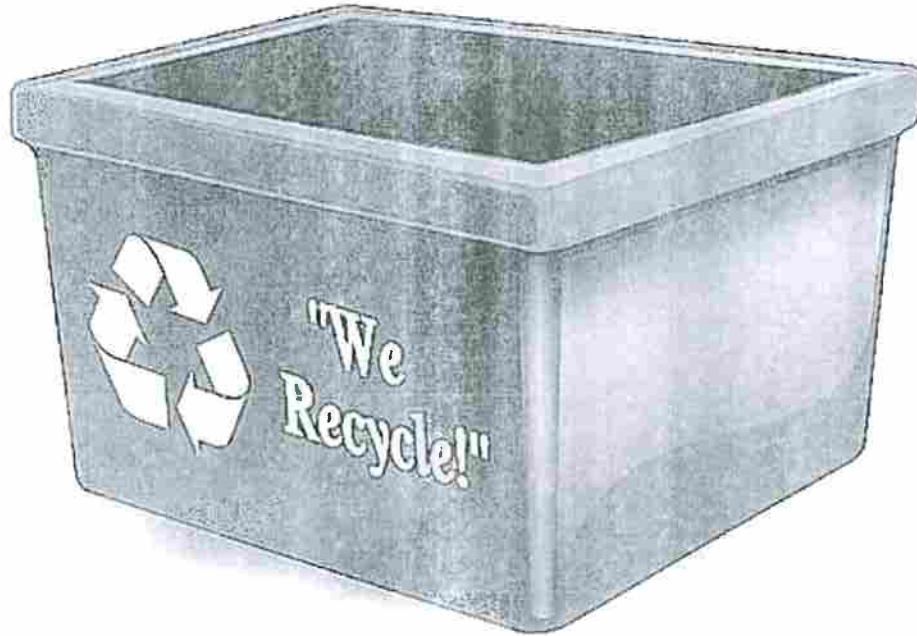
4. $5 \times 792 = 5 \times (800 - \underline{\quad})$ Use compatible numbers.
- $$= (5 \times \underline{\quad}) - (5 \times \underline{\quad})$$
- Distribute the 5.
- $$= \underline{\quad} - \underline{\quad}$$
- Multiply. Then subtract.
- $$= \underline{\quad}$$

On the Back!

5. Use the Distributive Property to find 6×296 .

Recycling & Conservation: Why Recycle?

by ReadWorks



Recycling is a process where something is reused rather than thrown away. Common items that are recycled include aluminum and steel cans, glass, and newspapers. Recycling can be time-consuming and dirty work. For example, recyclable objects have to be sorted from trash. Then the objects have to be cleaned. Afterwards, the objects are turned into materials that can be used by people and companies. Why should people bother to recycle even though it takes a lot of work?

Recycling helps protect the earth. Recycling means less garbage in landfills. These are places where garbage is taken and buried. Recycling also helps conserve the earth's resources. For example, factories use less energy by recycling steel cans than by making new ones. Recycling paper saves trees from being cut down. Trees are used to make paper.

Every time you are about to drop a plastic bottle in the garbage, stop and think. Is it worth harming the earth? Your actions now can help preserve the environment for generations to come. All you have to do is throw that bottle into a recycling bin.

Get in the habit. Be proud of recycling. Encourage others to recycle. You can make a difference!

Vocabulary

conserve

verb

definition: When you conserve something, you try not to use too much of it. You try not to waste it so that you will have enough of it in the future.

My teacher says we should conserve paper because many trees have to be cut down to make it.

Spanish: ahorrar

forms: conserved, conserves, conserving

preserve

verb

definition: When you preserve something, you protect it from being hurt or harmed, or you keep it from changing.

A lot of people in our town want to preserve the old buildings instead of building new ones.

Spanish: proteger, conservar, mantener, preservar

forms: preserved, preserves, preserving

protect

verb

definition: When you protect a person or animal, you keep them safe from danger or harm. When you protect a thing, you prevent it from being damaged or lost.

A fence protects us from our neighbor's mean dog.

If people don't protect tigers, someday soon there will be no more tigers.

I wear a hat to protect my face from the sun.

Spanish: proteger

forms: protected, protecting, protects

Name: _____ Date: _____

1. What is recycling?

- A. a process where something is reused
- B. a process where something is thrown away
- C. a process where something is taken and buried
- D. a process where something harms the earth

2. How does the author organize the information in this passage?

- A. The author explains the problems with recycling and suggests different solutions.
- B. The author describes similarities and differences between recycling and throwing things away.
- C. The author lists information about recycling in order of importance, from most to least important.
- D. The author describes recycling and shares an argument about why it's important.

3. Read these sentences.

"... recyclable objects have to be sorted from trash. Then the objects have to be cleaned."

These sentences can be used to support which conclusion below?

- A. "... the objects are turned into materials that can be used by people and companies."
- B. "Recycling can be time-consuming and dirty work."
- C. "Recycling helps protect the earth."
- D. "Be proud of recycling."

4. What can be concluded from this passage?

- A. The author works for a recycling plant.
- B. The author does not believe in recycling.
- C. The author believes that all you have to do to save the environment is throw a bottle in a bin.
- D. The author believes that everyday people can help the earth.

5. What is the main idea of this passage?

- A. Recycling helps protect the earth and conserve its resources.
- B. Many people avoid recycling because it is too difficult.
- C. People must make decisions what to recycle.
- D. Only certain things can be recycled.

6. At the end of paragraph one, the author asks, "Why should people bother to recycle even though it takes a lot of work?" Why does the author include this question?

- A. to transition the reader to the next paragraph, which answers the question
- B. to question the reader's knowledge about recycling
- C. to summarize the major points in paragraph one
- D. to allow the reader to demonstrate understanding

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

Recycling takes work, _____ it is good for the environment.

- A. instead
- B. before
- C. so
- D. but

8. What does the author suggest you do when you are about to throw a plastic bottle in the garbage?

9. What examples does the author provide to show that recycling helps conserve the earth's resources?

10. Read these sentences from the text.

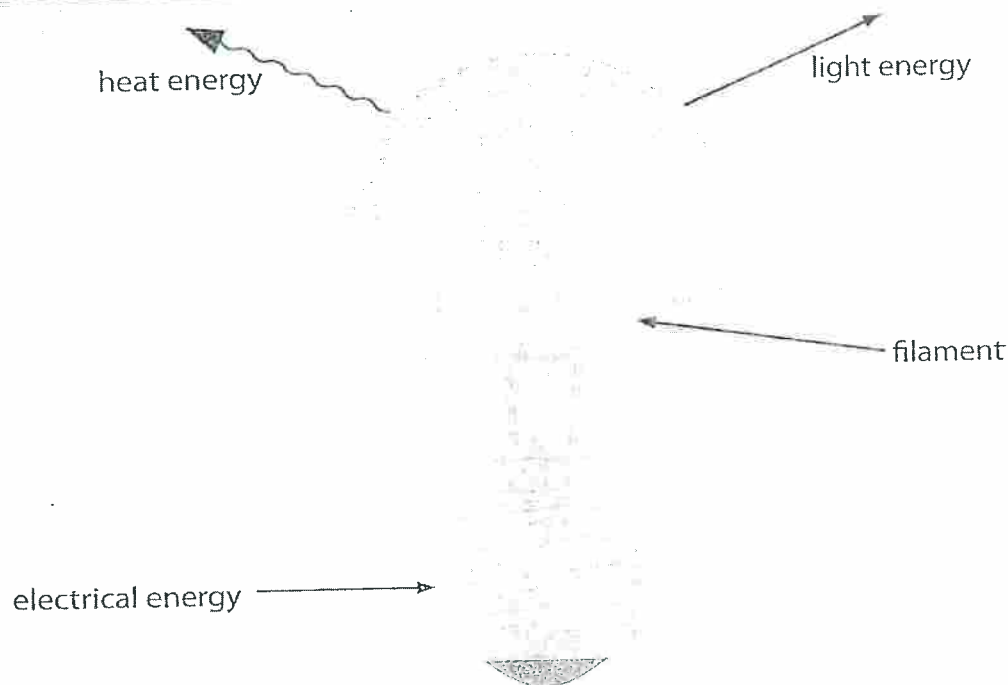
"Get in the habit. Be proud of recycling. Encourage others to recycle."

How can these actions make a difference? Use evidence from the text to support your answer.

Name: _____ Date: _____

Directions: Read the text, and study the diagram. Then, answer the questions.

When you use a light bulb, electrical energy enters the filament. The filament heats up and creates light. The purpose of the light bulb is light, so the heat energy is wasted.



Analyzing Data

1. When the electricity enters the light bulb, what happens?

a. The filament would create dim light.	b. The filament would create bright light.
c. The filament would not create light.	d. The filament would break.

2. If there was no electrical energy, what would happen?

a. The filament would create dim light.	b. The filament would create bright light.
c. The filament would not create light.	d. The filament would break.

3. Which object would use the heat from a light bulb?

a. floor lamp in an office	b. flash light at a campsite
c. food warming lamp at a restaurant	d. refrigerator lamp in an office

Name: _____ Date: _____

Directions: Look at the picture. Then, read the text, and answer the questions.



To earn money, you need to sell goods or services to someone. To earn money to buy yourself a new toy, you could do yard work for your neighbor (service). Or you could sell your old toys (goods).

People can also sell things called *natural resources*. Natural resources are things that people do not make but can be sold. For example, wind, water, and diamonds are natural resources.

People turn natural resources into something useful. For example, water is cleaned before you drink it. People who do the work to produce goods and services are called *human resources*.



1. Which is NOT an example of a natural resource?

- a. water
- b. TV
- c. coal
- d. wind

2. Which is an example of a human resource?

- a. cars
- b. miner
- c. sugar cane
- d. sheep

3. What services could you do to earn extra money?



Colonel NTI Packet

2025 – 2026

4th Grade

Day 8

Table of Contents

Subject	Assignment
Math	Reteach to Build Understanding 3 - 7
Language Arts	The Inventors of YouTube
Science	Week 3, Day 3 (Physical Science)
Social Studies	Week 4, Day 3 (Economics)

Vocabulary

1. A **product** is the answer to a multiplication problem. Use the Distributive Property to solve the problem in smaller pieces.

$$5 \times 6,839 = 5 \times (\underline{\hspace{2cm}} + 30 + 9)$$

$$= (5 \times 6,000) + (5 \times \underline{\hspace{2cm}}) +$$

$$(5 \times \underline{\hspace{2cm}}) + (5 \times \underline{\hspace{2cm}})$$

$$= \underline{\hspace{2cm}} + 4,000 + \underline{\hspace{2cm}}$$

$$= \underline{\hspace{2cm}}$$

Rewrite the greater number in expanded form.

The Distributive Property means that you can multiply first, then add, and not change the value.

Multiply.

Add.

2. Use estimation to check if your answer above is reasonable.

Estimate the product of $5 \times 6,839$.

Round 6,839 to the nearest thousand. _____

Estimate the product:

$$5 \times \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$$

3. Is your answer to Exercise 1 reasonable? Explain.

4. Find the product of $9 \times 4,235$.

5. Use estimation to check if your answer above is reasonable.

Estimate the product:

$$9 \times \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$$

6. Is your answer to Exercise 4 reasonable? _____

On the Back!

7. Find the product of $4 \times 1,875$. Estimate to check if your answer is reasonable.

The Inventors of YouTube

by Caitlyn Meagher



If you've ever watched a video on the internet before, chances are you've used YouTube. YouTube is a website with all sorts of videos created by millions of different people. Anyone can upload a video to YouTube. People create and share video content about many topics including animals, music, celebrities, and more! But who created YouTube?

YouTube was founded by three people: Steve Chen, Chad Hurley, and Jawed Karim. They are all around the same age, but their childhood years were spent in different countries.

Steve Chen was born in Taiwan in 1978. He immigrated to the United States when he was 15. After studying computer science at the University of Illinois at Urbana-Champaign, Chen was hired at a finance technology company called PayPal.

The year before Chen was born in Taiwan, Chad Hurley was born on the other side of the world. Hurley was born in the United States in 1977. He grew up in the state of Pennsylvania and went to college in his home state, where he studied fine art. His first job out of college was at PayPal.

While Chen was in Taiwan and Hurley was in the U.S., Jawed Karim was born in Germany in 1979. As a young teenager, he immigrated to Minnesota in the United States. Like Chen, Karim studied computer science at University of Illinois at Urbana-Champaign. Soon

afterward, he went on to work in PayPal.

Steve Chen, Chad Hurley, and Jawed Karim met while working in PayPal. They had a dream of starting their own company. And they did!

When they first began developing YouTube, the three men worked in someone's garage. They started from very humble beginnings. Chen, Hurley, and Karim uploaded the first YouTube video on April 23, 2005. Once YouTube hit the internet, it grew rapidly! By the middle of 2006, YouTube had over 100 million video views per day. Now, it is one of the most popular websites on the internet.

Chen, Hurley, and Karim no longer work in YouTube today, but each of them invests in different companies and industries. Chen invests in other technology companies. Hurley has invested in some U.S. sports teams, like the Golden State Warriors and the Los Angeles Football Club. Karim founded Y Ventures with two other people. Y Ventures invests in many growing companies that have new great ideas.

Although Chen, Hurley, and Karim are no longer in YouTube, they are still often best known as the inventors of YouTube. Can you imagine what the internet might be like today without the invention of YouTube?

Vocabulary

found

verb

definition: When someone finds something, they create a new and big thing that did not exist before. Things that are founded are things like cities, universities, big libraries, and hospitals.

This college was founded over a hundred years ago.

Spanish: fundar

forms: founded, founding, finds

immigrate

verb

definition: to come to live permanently in a country where one was not born.

My parents immigrated to the United States from Mexico.

Spanish: inmigrar

forms: immigrated, immigrates, immigrating

technology

noun

definition: Technology is a particular method that comes from science and industry that helps people solve problems in the world, or it is an invention or set of inventions that help people solve problems.

Their homes are heated with the newest solar technology.

Spanish: tecnología

forms: technologies

Name: _____ Date: _____

1. What is YouTube?

- A. a website that sells homemade products
- B. a website with videos created by different people
- C. a website where you can order groceries
- D. a website where you can play video games

2. The text draws a comparison between the ages and first jobs of Chen, Hurley, and Karim. What is one part of their lives that the text draws a contrast in?

- A. the countries where they were born and spent their childhood years
- B. the companies their parents worked at when they were growing up
- C. the types of trips they liked to take after their success with YouTube
- D. the musical instruments they learned to play in elementary school

3. Read the following sentences from the text.

"When they first began developing YouTube, the three men worked in someone's garage. They started from very humble beginnings. Chen, Hurley, and Karim uploaded the first YouTube video on April 23, 2005. Once YouTube hit the internet, it grew rapidly! By the middle of 2006, YouTube had over 100 million video views per day. Now, it is one of the most popular websites on the internet."

What conclusion can you draw from this evidence?

- A. Chen, Hurley, and Karim borrowed money to start YouTube.
- B. YouTube started off as a video game website but changed.
- C. Chen, Hurley, and Karim did not work together as a team.
- D. YouTube started off small but did not stay that way for long.

4. How do Chen, Hurley, and Karim support other people who are like them?

- A. They continue to invest their own money into YouTube so they can support everyone working there.
- B. They invest in different companies and industries like technology, sports, and companies with new ideas.
- C. They donate to young college students studying technology in Taiwan, the United States, and Germany.
- D. They volunteer to help YouTube so it can grow even though they do not work there anymore.

5. What is the main idea of this text?

- A. Steve Chen, Chad Hurley, and Jawed Karim are immigrants that moved to the United States as teenagers and changed the way people shop forever.
- B. The creators of YouTube, Steve Chen, Chad Hurley, and Jawed Karim, met each other for the first time while working at a company called PayPal.
- C. Companies and industries in technology and sports are very thankful for the support that Steve Chen, Chad Hurley, and Jawed Karim give them today.
- D. YouTube, one of the most popular websites on the internet and a place where people can share videos, was created by Steve Chen, Chad Hurley, and Jawed Karim.

6. Read the following sentences from the text.

"When they first began developing YouTube, the three men worked in someone's garage. They started from very **humble** beginnings."

As used in this excerpt, what does the word "**humble**" most closely mean?

- A. bright and colorful
- B. clean and neat
- C. simple and small
- D. quick and hurried

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

Chen, Hurley, and Karim grew up in different countries, _____ they later came together in the United States to fulfill their dream of starting their own company.

- A. but
- B. so
- C. next
- D. soon

8. How did YouTube grow from when the first video was uploaded in 2005 until today?

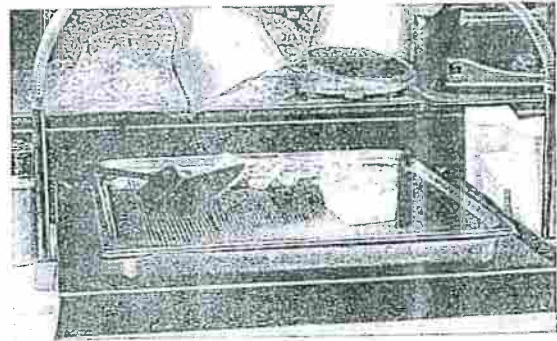
9. After founding YouTube, Karim founded Y Ventures with two other people. What does Y Ventures do?

10. Why might the inventors of YouTube want to spend their time and money investing in new and growing companies? Use evidence from the text to support your answer.

Name: _____ Date: _____

Directions: Read the text, and answer the questions.

Wes goes to a restaurant with his family, and they sit near the kitchen. He sees that the cooks set plates of food under lights called heat lamps. The plates sit under the heat lamps until the servers pick them up.



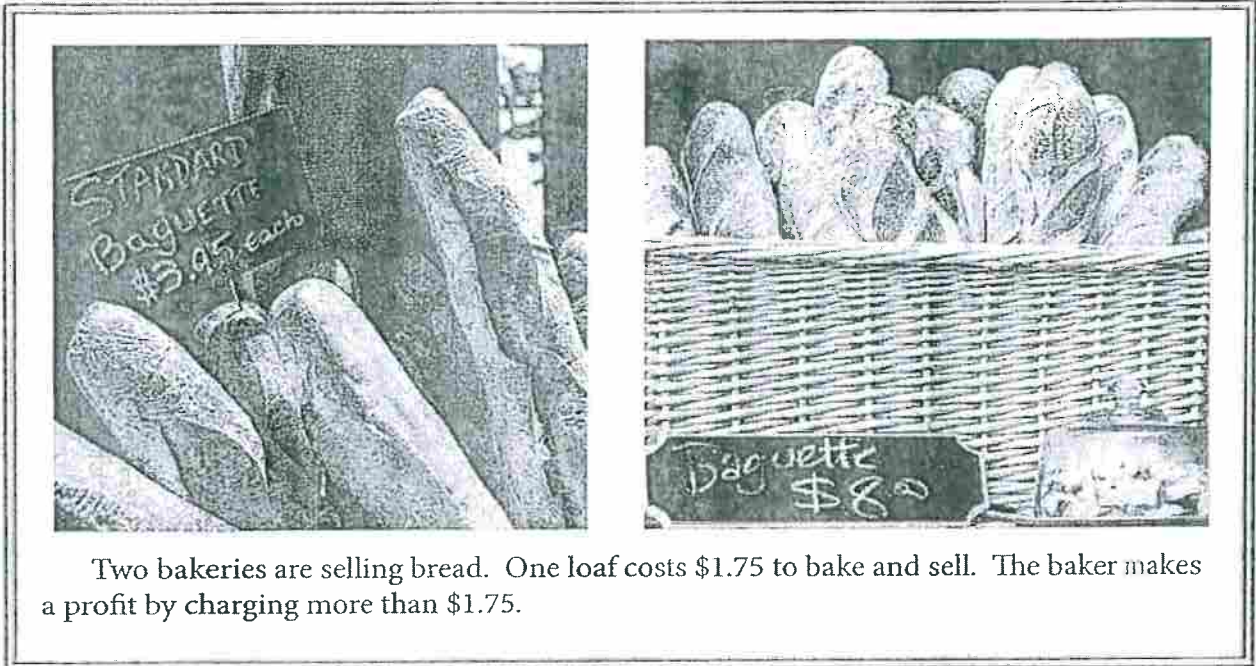
1. What are the lights probably doing to the food?
 - a. Cooling it off.
 - b. Keeping it warm.
 - c. Showing the waiters where it is.
 - d. Making it look delicious.
2. Is the heat energy from the lights being wasted?
 - a. Yes, there is no use for the heat.
 - b. Yes, the heat is only warming the air around the lamp.
 - c. No, the heat is keeping the food warm.
 - d. No, the heat is keeping the cooks warm.
3. What might Wes ask about the food sitting under the lights?

4. What is the benefit of heat lamps in restaurants?



Name: _____ Date: _____

Directions: Look at the pictures. Then, read the text, and answer the questions.



1. What is the first bakery's (picture on the left) profit for one loaf of bread?
 - a. \$1.95
 - b. \$2.05
 - c. \$2.20
 - d. \$2.50

2. How can the second baker (picture on the right) compete with the first baker and sell more bread? Circle all that apply.
 - a. by charging more for a loaf of bread
 - b. by charging less for a loaf of bread
 - c. by offering better tasting bread
 - d. by making bigger loaves of bread

3. Consumers think about the price they have to pay. They look for the best price they can find. However, when consumers buy goods they don't just think about price. What would your family think about when picking a loaf of bread to buy?



Colonel NTI Packet

2025 – 2026

4th Grade

Day 9

Table of Contents

Subject	Assignment
Math	Reteach to Build Understanding 4 - 1
Language Arts	Reefs at Risk
Science	Week 3, Day 4 (Physical Science)
Social Studies	Week 4, Day 4 (Economics)

Vocabulary

1. A **product** is an answer to a multiplication problem.

Find each product.

$3 \times 8 = \underline{\quad\quad}$ $7 \times 6 = \underline{\quad\quad}$ $2 \times 5 = \underline{\quad\quad}$

2. **Factors** are the numbers that are multiplied together to give a product.

Find each missing factor.

$9 \times \underline{\quad\quad} = 54$ $\underline{\quad\quad} \times 4 = 12$ $\underline{\quad\quad} \times 6 = 30$

Each of the multiplication sentences above is an example of a basic fact.
You can use basic facts and place value to multiply multiples of 10.

Remember that ten tens or 10×10 equals one hundred.

3. $3 \times 6 = 18$ ← Basic fact

$$\begin{array}{r} 30 \\ \uparrow \end{array} \times \begin{array}{r} 60 \\ \uparrow \end{array} = \begin{array}{r} 1,800 \\ \uparrow \end{array}$$

$3 \text{ tens} \times \underline{\quad\quad} \text{ tens} = 18 \text{ hundreds}$

4. $4 \times 5 = 20$ ← Basic fact

$$\begin{array}{r} 40 \\ \uparrow \end{array} \times \begin{array}{r} 50 \\ \uparrow \end{array} = \begin{array}{r} 2,000 \\ \uparrow \end{array}$$

$\underline{\quad\quad} \text{ tens} \times \underline{\quad\quad} \text{ tens} = \underline{\quad\quad\quad\quad}$

Use a basic fact and place value to multiply.

5. $6 \times 7 = 42$

$60 \times 7 = \underline{\quad\quad}$

$60 \times 70 = \underline{\quad\quad}$

6. $8 \times 9 = \underline{\quad\quad}$

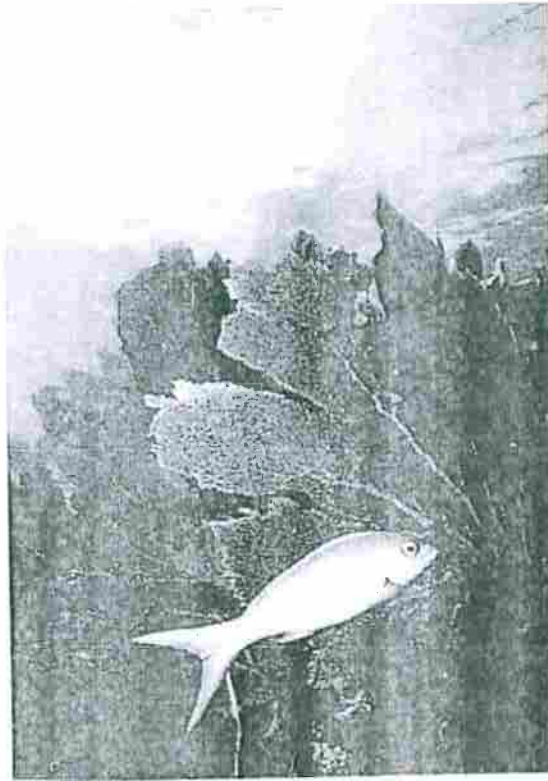
$80 \times 9 = \underline{\quad\quad}$

$80 \times 90 = \underline{\quad\quad}$

On the Back!

7. Use basic facts and place value to find 30×30 .

Reefs at Risk



NOAA

Coral reefs are home to thousands of ocean plants and animals.

Hundreds of clownfish dart in and out of the gaps in coral reefs. The reefs are home to thousands of ocean plants and animals. Along with fish, those animals include crabs, turtles, and sea horses.

Those ocean creatures may have no place to live in the future. Many coral reefs around the world have been destroyed, and many more are being destroyed. Some scientists say more than half of the world's reefs may be gone by the year 2030.

What is causing coral reefs to disappear? Scientists say people are largely to blame. Ships and fishing nets often damage the reefs. Other threats include pollution, storms, and disease.

It's Alive!

Coral reefs may look like rocks, but they are actually living structures. They are made up of tiny sea animals. Those tiny creatures are called coral polyps.

The polyps build hard shells around themselves. When a polyp dies, it leaves behind its shell. Young polyps attach themselves to the old shells. Over many years, the polyps form a coral reef.

Saving the Reefs

Scientists are working hard to protect coral reefs. They are mapping and studying the reefs. Many protected areas are being widened. Fishing is not allowed in those areas. Solving the coral reef problem is a challenge, said one scientist. "It requires us to understand what's going on much better than we do."

Vocabulary

damage

verb

definition: When you damage something, you harm it or hurt it. If a storm damages a tree, it breaks it or hurts it in some way.

They damaged the piano when they tried to move it into the house.

Insects damaged the crops.

Spanish: dañar, estropear

forms: damaged, damages, damaging

pollution

noun

definition: Dirty material in air, water, or soil is called pollution. When there is pollution, water may not be healthy to drink. Air may be bad to breathe. People may not be able to use the soil for growing things.

The beach was closed because there was too much pollution on it.

Spanish: contaminación, polución

threat

noun

definition: When something is a threat, it is a thing that causes or is likely to cause harm or injury.

Some snakes are a threat to humans, but others are not.

Plastic pollution is a threat to fish and other sea animals.

As human beings take over the land, they are threat to the animals living there.

Name: _____ Date: _____

1. What are coral reefs?

- A. rocks
- B. clownfish
- C. ships
- D. living structures

2. How does the author introduce the topic of coral reefs?

- A. by describing their importance to ocean plants and animals
- B. by warning that more than half of them may be destroyed by 2030
- C. by quoting a scientist who explains why solving the coral reef problem is a challenge
- D. by discussing the reasons that coral reefs are disappearing

3. Read these sentences from the text.

Scientists say people are largely to blame [for coral reefs disappearing]. Ships and fishing nets often damage the reefs. Other threats include pollution, storms, and disease.

Based on this evidence, what can you conclude about how coral reefs get damaged?

- A. People are working hard to protect the coral reefs from damage.
- B. There are several different ways in which humans damage coral reefs.
- C. Storms are the most damaging threat to coral reefs.
- D. Fishers try to catch the coral reefs in their nets to sell.

4. Based on the text, what would be best for clownfish?

- A. for the destruction of coral reefs to stop
- B. for coral reefs around the world to disappear
- C. for fishers to get rid of sea horses
- D. for coral reefs to look less like rocks

5. What is this text mostly about?

- A. why spending too much time around coral reefs is risky
- B. coral reefs, how they are damaged, and how to protect them
- C. the differences between coral reefs and other sea animals
- D. a project to help make coral reefs grow on land

6. Read this sentence from the text.

Hundreds of clownfish **dart** in and out of the gaps in coral reefs.

In this sentence, what does the word "**dart**" most nearly mean?

- A. fill up
- B. move quickly
- C. look at
- D. are caught in

7. Choose the word that best completes the sentence.

Lots of animals live in coral reefs, _____ fish, crabs, turtles, and sea horses.

- A. after
- B. so
- C. and
- D. including

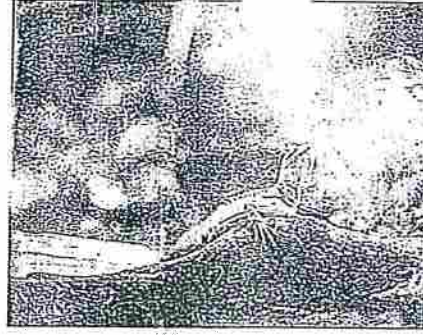
8. What are some animals that live in coral reefs?

9. Why might some people think that coral is not made up of living things?

Name: _____ Date: _____

Directions: Read the text, and answer the questions.

Lindsey goes to the pet store to pick out a pet. She chooses a lizard. The pet store clerk tells her that she has to use a heat lamp to provide the lizard with light and heat.



1. Which types of energy are created by a heat lamp?
 - a. heat
 - b. light
 - c. chemical
 - d. both a and b
2. What is another way Lindsey could give her lizard light and heat energy?
 - a. Put the cage in the sunlight.
 - b. Put the cage in the closet.
 - c. Put the cage in the basement.
 - d. Put the cage in a shadow.
3. How can Lindsey test what kind of heat lamp is the best for her lizard?

4. What are some other ways that Lindsey could use the heat from a light bulb?

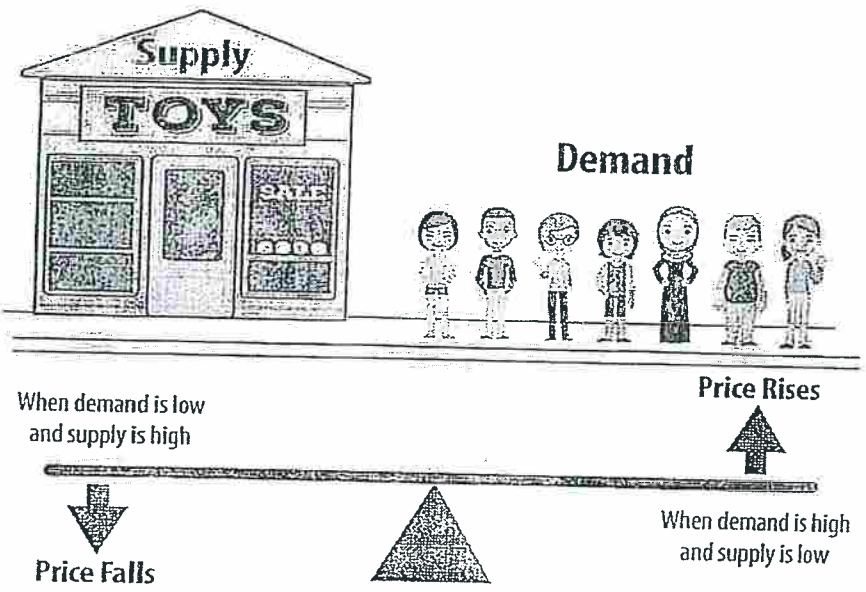


Name: _____ Date: _____

Directions: Look at the picture. Then, read the text, and answer the questions.

Supply is the amount of a product that is available. Demand is how much the product is wanted.

Your local toy store has a sale on four super bounce balls, but seven of you want the ball. This means the demand is greater than the supply. You may have to pay more at another store so you can each have your own ball.



1. When there is a lot of supply, what happens to the price?
 - a. It goes up.
 - b. It goes down.
 - c. It stays the same.
 - d. none of the above
2. What happens to the price when everyone wants to have something but there is not enough?
 - a. It goes up.
 - b. It goes down.
 - c. It stays the same.
 - d. none of the above
3. You have a garage sale. You are trying to sell each toy for \$3, but no one wants to buy from you. What could you do to sell more toys?



Colonel NTI Packet

2025 – 2026

4th Grade

Day 10

Table of Contents

Subject	Assignment
Math	Reteach to Build Understanding 4 - 5
Language Arts	Tiger Tale
Science	Week 3, Day 5 (Physical Science)
Social Studies	Week 4, Day 5 (Economics)

Vocabulary

1. The **Distributive Property** states that multiplying a sum by a number is the same as multiplying each number in the sum by that number and adding the products.

Rewrite 36×15 using the Distributive Property.

$$\begin{aligned} 36 \times 15 &= (30 + 6) \times (10 + 5) \\ &= (30 + 6) \times 10 + (30 + 6) \times 5 \\ &= (30 \times \underline{\quad}) + (6 \times \underline{\quad}) + (30 \times \underline{\quad}) + (6 \times \underline{\quad}) \end{aligned}$$

2. Use the area model and the Distributive Property to find 24×19 .

Break apart 24 and 19.

$$24 \times 19 = (\underline{\quad} + 4) \times (\underline{\quad} + 9)$$

Multiply $(20 + 4)$ by 10. Multiply $(20 + 4)$ by 9.

$$= (20 + 4) \times \underline{\quad} + (20 + 4) \times \underline{\quad}$$

Distribute both the 10 and the 9.

$$\begin{aligned} &= (20 \times \underline{\quad}) + (4 \times \underline{\quad}) + (20 \times \underline{\quad}) + (4 \times \underline{\quad}) \\ &= \underline{\quad} + \underline{\quad} + \underline{\quad} + \underline{\quad} \\ &= \underline{\quad} \end{aligned}$$

	10	9
20	20×10	20×9
4	4×10	4×9

3. Draw an area model and use the Distributive Property to find 32×21 .

$$32 \times 21 = \underline{\quad}$$

4. Use the Distributive Property to find 19×19 .

$$19 \times 19 = \underline{\quad}$$

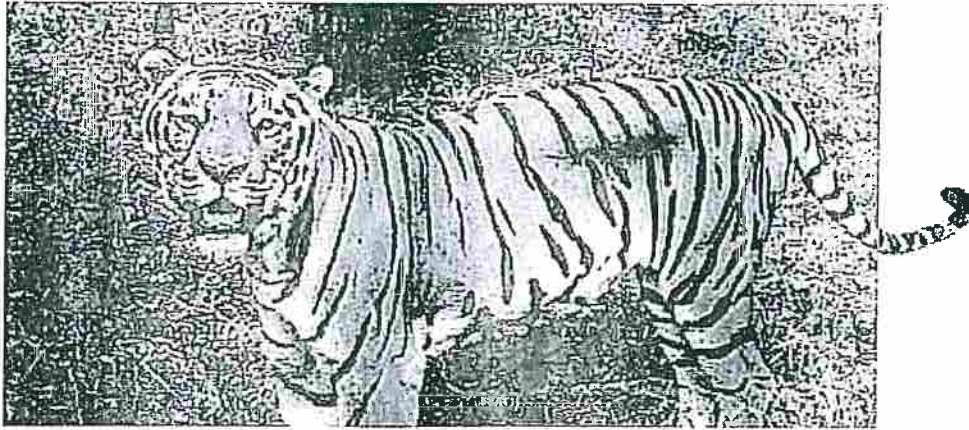
On the Back!

5. Draw an area model and use the Distributive Property to find 13×28 .

Tiger Tale

What dangers do the big cats face?

Tigers rule! With their powerful bodies and sharp claws, the mighty cats run the jungle. However, the felines may not be large and in charge for long. A feline is a cat.



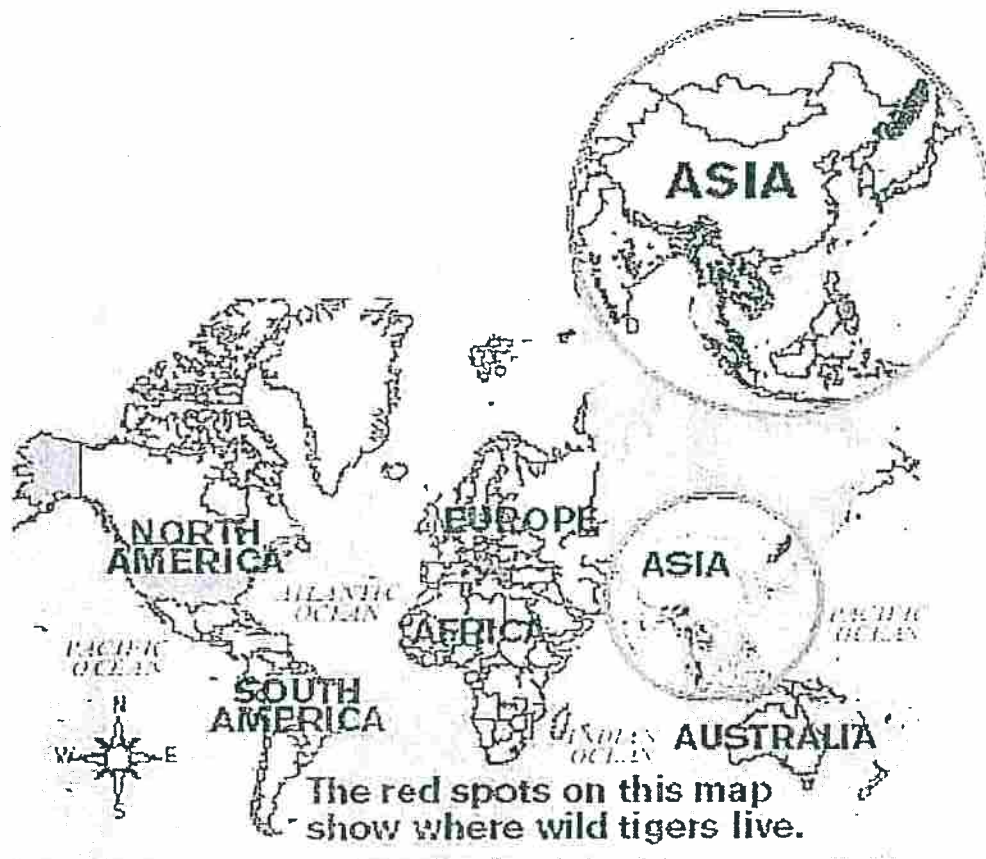
AP Images

World leaders are helping to protect this mighty kitty.

Wild tigers could become extinct, or gone completely, according to experts. In 2010, only about 3,200 of the big cats were left in the wild in the world. That's a big change from 1910. Back then, about 100,000 wild tigers roamed the planet.

One threat, or danger, the felines face is habitat loss. Tigers live in Asia. Loggers there cut down trees in the forests to make paper and other items people buy. Less forest means less room for the animals to roam and search for food. Another threat is poaching. That is illegal hunting. Tigers are poached for their fur and bones.

In 2010, officials roared to action to help save the big cats. World leaders met to discuss the felines' future. "[Saving the] tigers is a very important issue," said Suwit Khunkitti. He was an official from Thailand. That is a country in Asia where tigers live.



Leigh Haeger

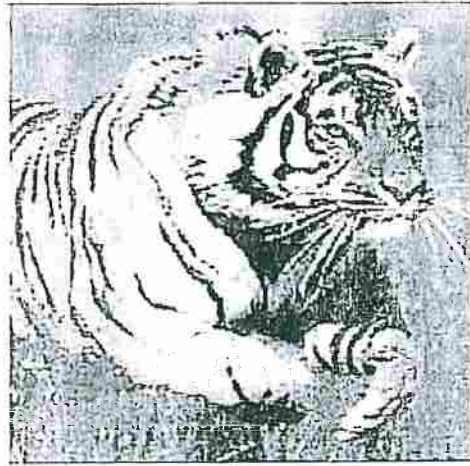
The leaders set a goal to double the number of wild tigers by 2022. They put together a plan to help protect the animals. One of their first steps is to make people aware of the dangers the cats face, explains Barney Long. He is a wildlife expert. Leaders also planned ways to stop poachers.

"If we can solve these problems, the future is very, very bright [for tigers]," Long told *WR News*.

In April 2016, it was reported that the wild tiger population increased to about 3,900 wild tigers. This was the first increase after decades of decline.

Tiger Trivia

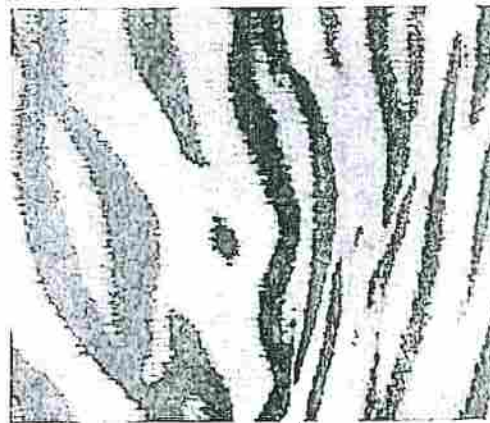
These big cats are some of the fastest, largest, and strongest felines in the wild. Read to learn more about tigers.



Amazing Animals

Hungry Hunters

Running through the jungle makes tigers work up an appetite. They can eat up to 88 pounds of meat at a time.



iStock

One of a Kind

Each cat's stripes are unique, like human fingerprints. No two tigers have the same pattern.



Corbis

Sleepyheads

Don't let their size fool you. Even adult tigers can sleep like babies. They spend up to 18 hours a day in dream land.

Vocabulary

protect

verb

definition: When you protect a person or animal, you keep them safe from danger or harm. When you protect a thing, you prevent it from being damaged or lost.

A fence protects us from our neighbor's mean dog.

If people don't protect tigers, someday soon there will be no more tigers.

I wear a hat to protect my face from the sun.

Spanish: proteger

forms: protected, protecting, protects

roam

verb

definition: When you roam, you move or travel around, but you don't go to any particular place. When you roam, you wander.

Our neighbor's dog got out of their yard and is roaming around the neighborhood again.

Spanish: vagar, deambular

forms: roamed, roaming, roams

threat

noun

definition: When something is a threat, it is a thing that causes or is likely to cause harm or injury.

Some snakes are a threat to humans, but others are not.

Plastic pollution is a threat to fish and other sea animals.

As human beings take over the land, they are threat to the animals living there.

wildlife

noun

definition: When we talk about wildlife, we are talking about animals that live in a natural way in their natural places. They do not live with humans and they are not controlled by humans. Sometimes humans count them, though, and try to protect them.

In the winter, we see much less wildlife on our hikes through the woods.

Spanish: fauna, vida silvestre

Name: _____ Date: _____

1. What is the goal of the world leaders' plan to help the tigers?

- A. The goal is to help tigers move to forests that are not being cut down.
- B. The goal is to study the stripes of tigers and learn why they are unique.
- C. The goal is to stop poachers from killing tigers for their fur and bones.
- D. The goal is to double the number of wild tigers by 2022.

2. The author describes the problem of tigers being an endangered species. What solution is described in the text?

- A. One solution is to end the poaching of tigers.
- B. One solution is to teach tigers to climb trees.
- C. One solution is to feed tigers more meat.
- D. One solution is to let tigers sleep more.

3. Read these sentences from the text.

In 2010, only about 3,200 of the big cats were left in the wild in the world. That's a big change from 1910. Back then, about 100,000 wild tigers roamed the planet.

Based on this evidence, what can you conclude about tigers?

- A. Tigers began to die off because of a mysterious illness.
- B. There were no more tigers in the wild because they were all put in zoos.
- C. For some reason, a large part of the tiger population was wiped out.
- D. People killed off all of the tigers in 100 years.

4. What does the author imply in the text?

- A. World leaders need to work together to create zoos for tigers.
- B. People need to learn how to sleep like tigers do.
- C. People are more of a threat to tigers than tigers are to people.
- D. Tigers will never become completely extinct.

5. What would be another good title for this text?

- A. How to Catch a Tiger
- B. World Leaders and Tigers
- C. Problems for Tigers
- D. Tigers and How They Hunt

6. Read these sentences from the text.

In 2010, only about 3,200 of the big cats were left in the wild in the world. That's a big change from 1910. Back then, about 100,000 wild tigers **roamed** the planet.

In these sentences, what does the word "**roamed**" mean?

- A. destroyed
- B. disappeared
- C. wandered
- D. lived

7. Choose the word that best completes the sentence.

Loggers cut down trees in the forests where tigers live, _____ tigers are losing their homes.

- A. however
- B. because
- C. so
- D. but

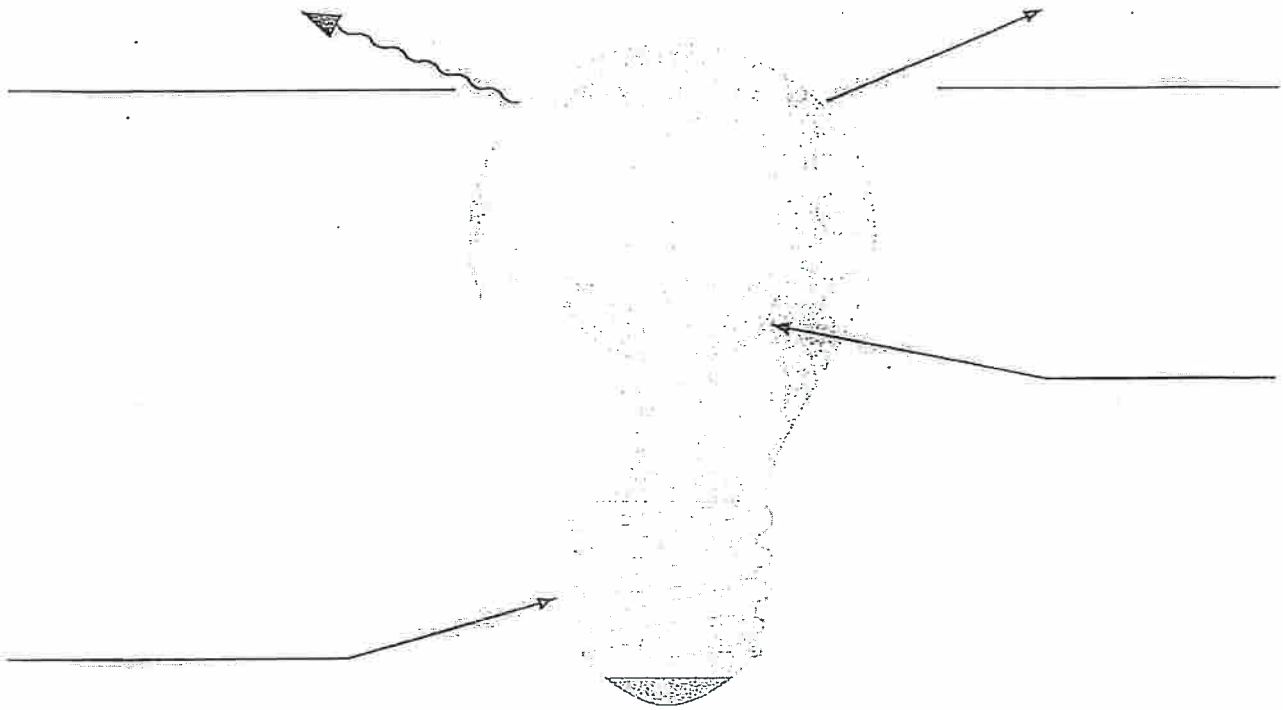
8. What are two threats to tigers?

9. How might awareness among people of the problems facing tigers make a difference for tigers?

Name: _____ Date: _____

Directions: Label the diagram using words from the bank. Then, answer the questions.

filament electrical energy light energy heat energy



1. Explain how energy is transferred in an electric light bulb.

2. If a light bulb is off, how can you tell that it has been recently used?

3. List three objects in which a light bulb would be used.

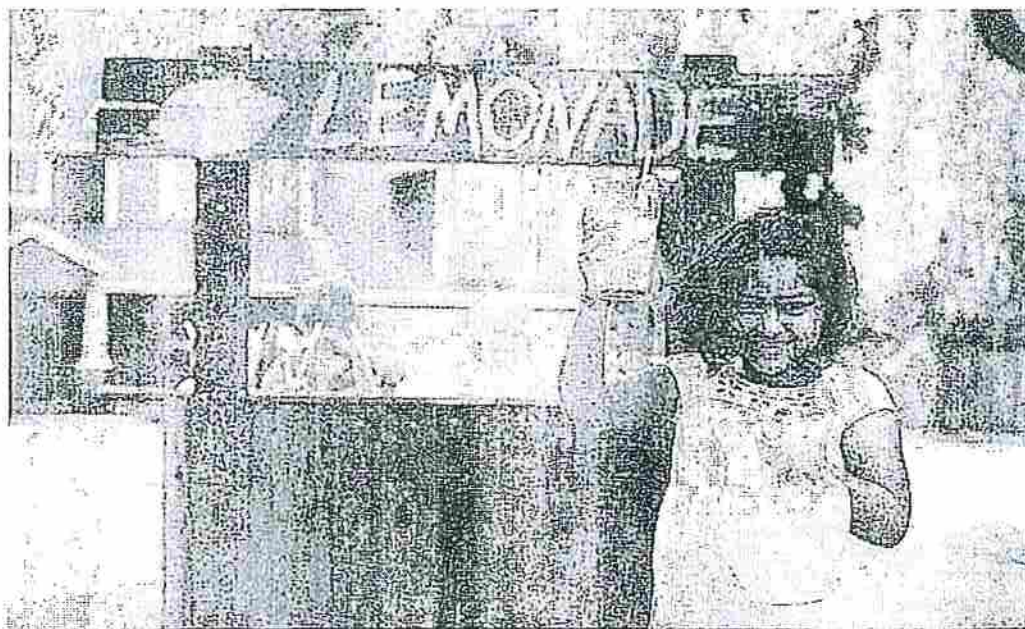
ABC

Communicating Results

Name: _____ Date: _____

Directions: Look at the picture. Then, answer the question.

Lemonade Stand



1. How well would a lemonade stand work to earn money in your community?

2. What other ideas do you have for making money? What would you need to do to make this work?
