5th Grade AMI Learning Packet

This packet includes 5 days of tasks for:

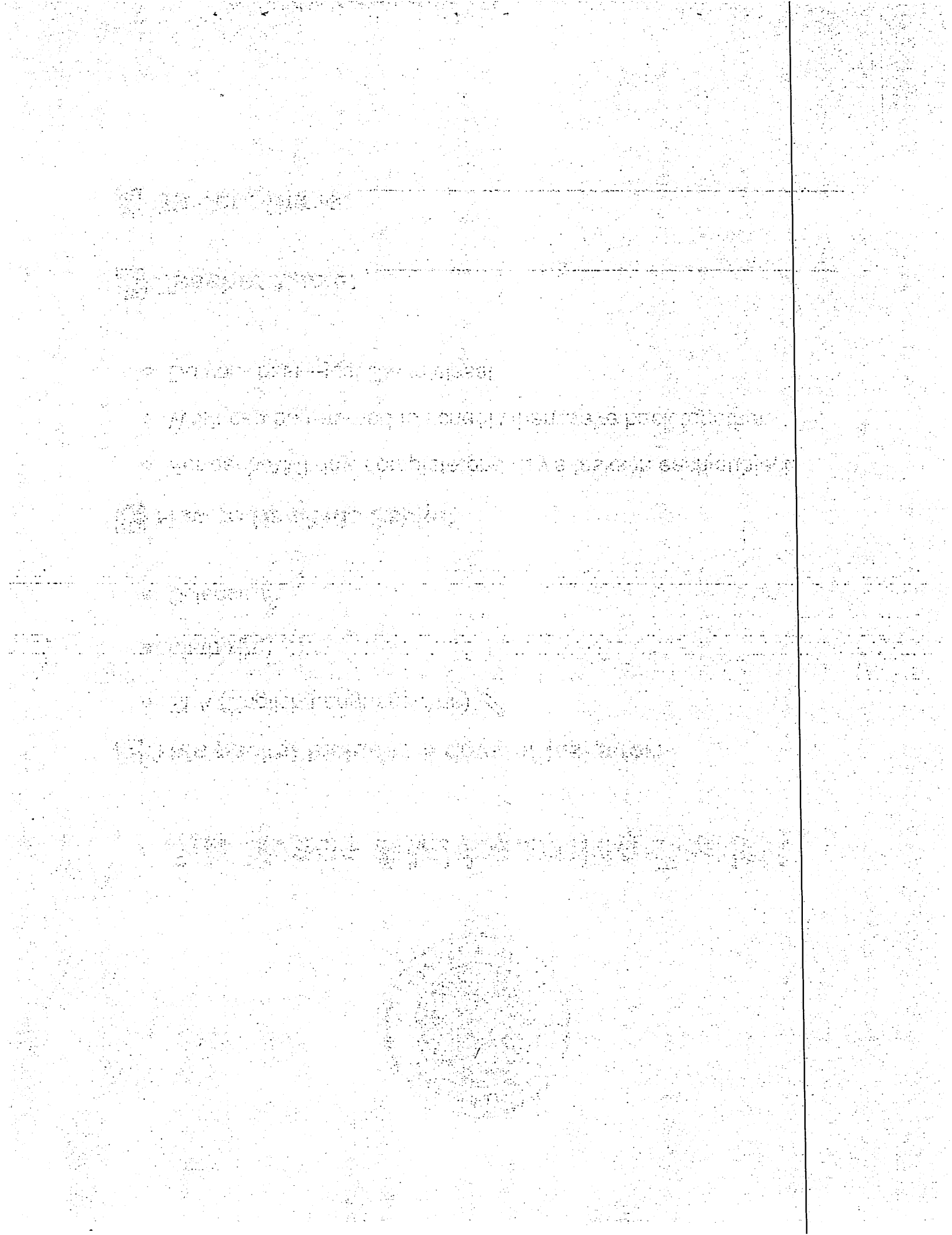
- ELA (English Language Arts)
- Math
- Science

How to Use This Packet

- For each AMI day, complete one day's tasks in each subject.
- Work can be returned to school when we're back together.
- Do your best—just like in class!

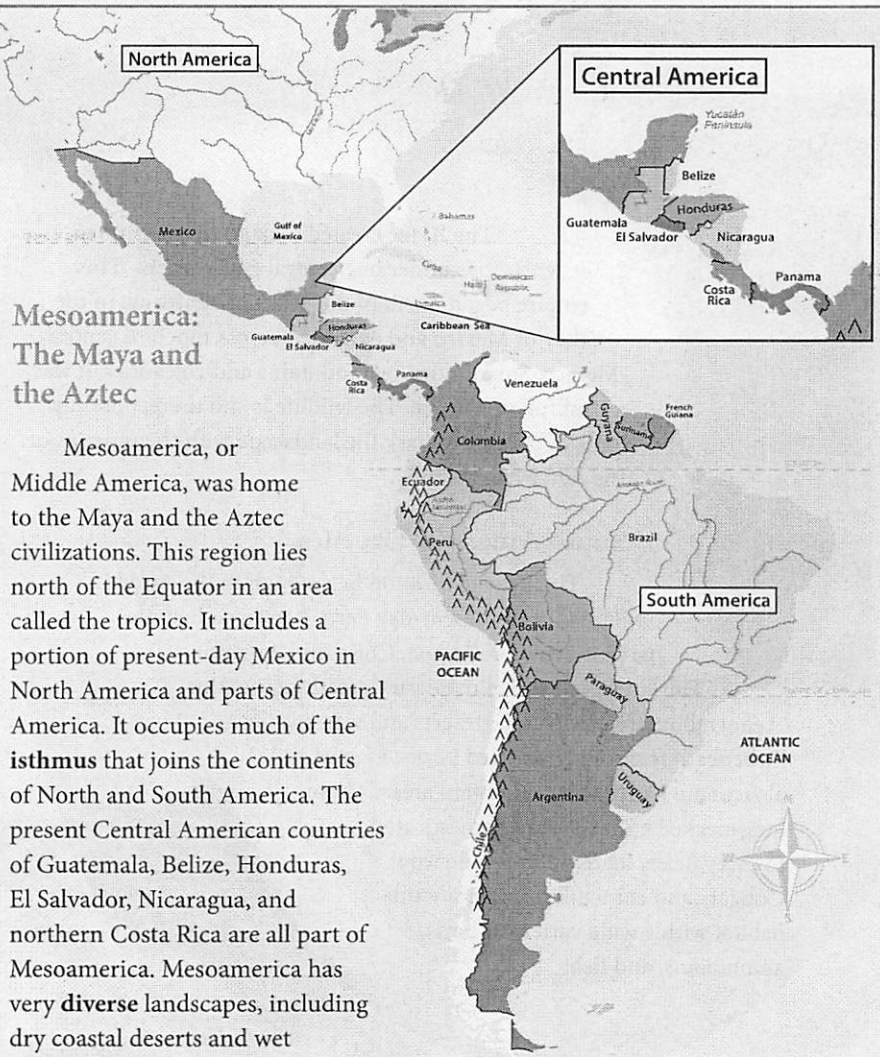
Teacher Name: _____

Student Name: _____



Excerpt from "The Rise of Early American Civilizations"

Read the excerpt and complete the activity that follows.

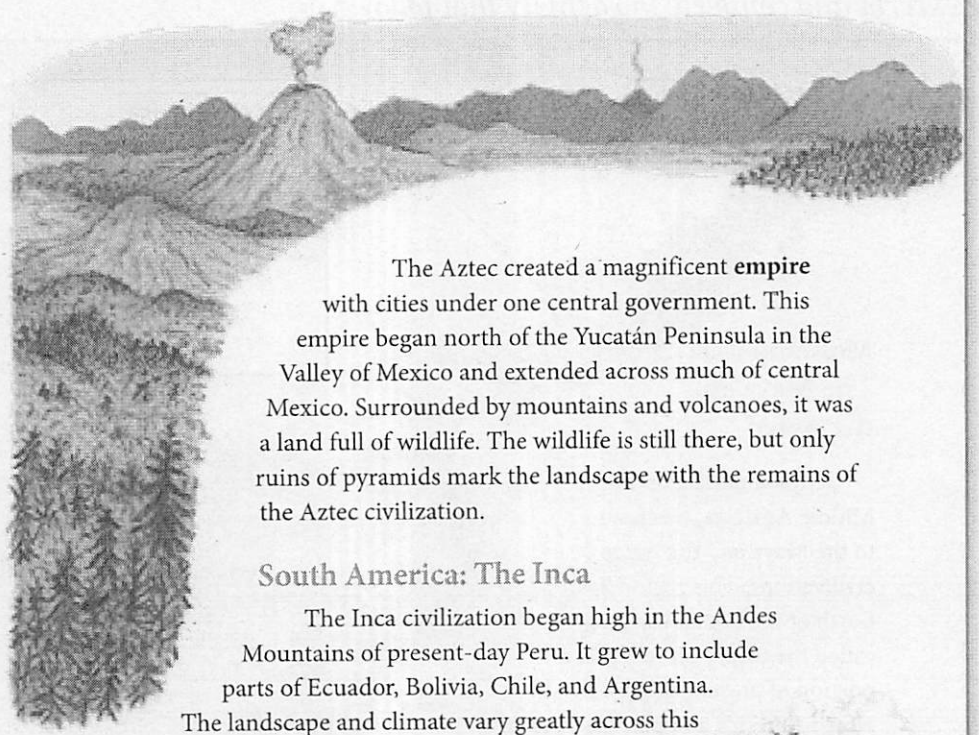


Mesoamerica: The Maya and the Aztec

Mesoamerica, or Middle America, was home to the Maya and the Aztec civilizations. This region lies north of the Equator in an area called the tropics. It includes a portion of present-day Mexico in North America and parts of Central America. It occupies much of the **isthmus** that joins the continents of North and South America. The present Central American countries of Guatemala, Belize, Honduras, El Salvador, Nicaragua, and northern Costa Rica are all part of Mesoamerica. Mesoamerica has very **diverse** landscapes, including dry coastal deserts and wet inland rainforests.

The Yucatán Peninsula is surrounded by water on three sides. It lies between the Gulf of Mexico and the Caribbean Sea, and was home to many Maya. Warm, humid rainforests cover the southern part of the peninsula. Its **lush** vegetation supports animals as varied as jaguars, snakes, bats, monkeys, toucans, and quetzal birds. The northern part of the Yucatán is drier and has no rivers, only lakes and swamps. The Yucatán's thousands of deep **cenotes** supply fresh water to the area—water needed in order for settlements to develop. Maya **descendants** are still there, living alongside the ruins of the ancient civilization.

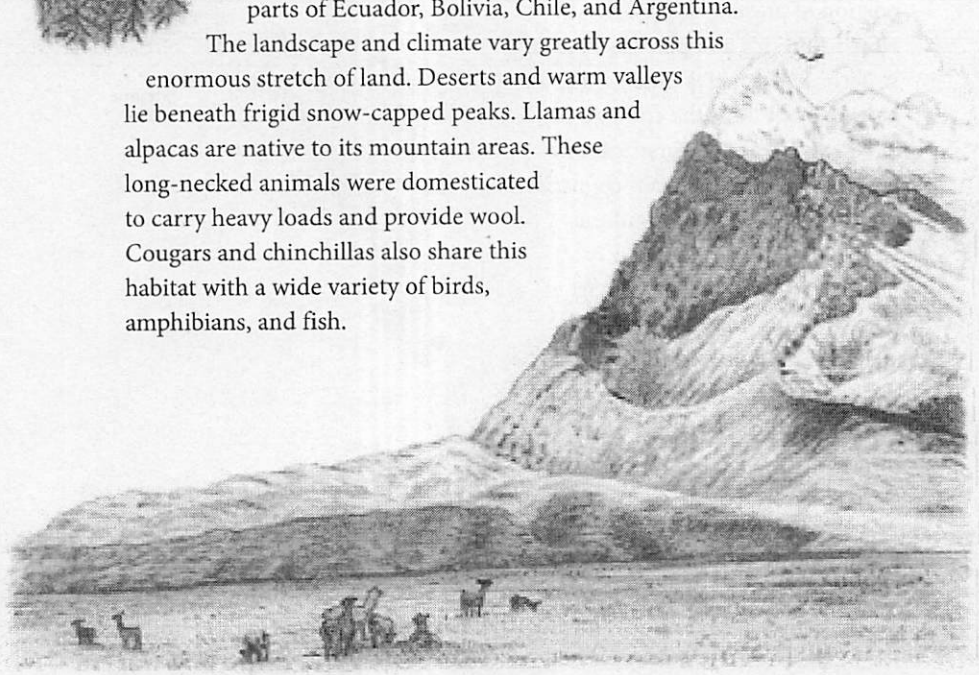
4



The Aztec created a magnificent **empire** with cities under one central government. This empire began north of the Yucatán Peninsula in the Valley of Mexico and extended across much of central Mexico. Surrounded by mountains and volcanoes, it was a land full of wildlife. The wildlife is still there, but only ruins of pyramids mark the landscape with the remains of the Aztec civilization.

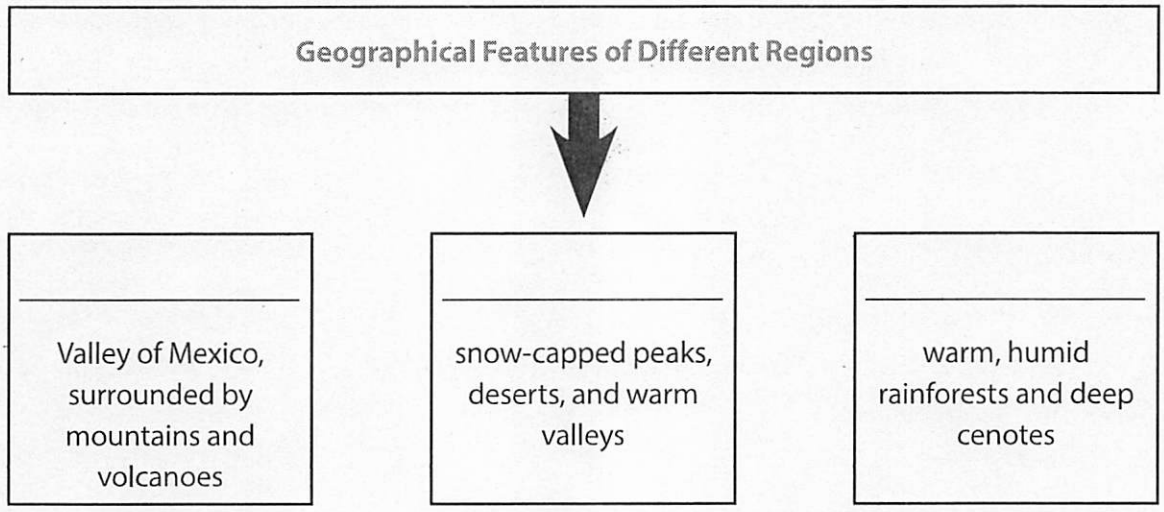
South America: The Inca

The Inca civilization began high in the Andes Mountains of present-day Peru. It grew to include parts of Ecuador, Bolivia, Chile, and Argentina. The landscape and climate vary greatly across this enormous stretch of land. Deserts and warm valleys lie beneath frigid snow-capped peaks. Llamas and alpacas are native to its mountain areas. These long-necked animals were domesticated to carry heavy loads and provide wool. Cougars and chinchillas also share this habitat with a wide variety of birds, amphibians, and fish.



The Rise of Early American Civilizations

Each box below contains a description of the geographical features of a region. On the line in each box, write the name of the early American civilization—Maya, Aztec, or Inca—which developed in the region described there.



Match the term with its description and write the letter on the line. Refer to the text in the excerpt to confirm your answers.

A. Andes Mountains

B. Yucatán Peninsula

C. Mesoamerica

D. Central America

E. Equator

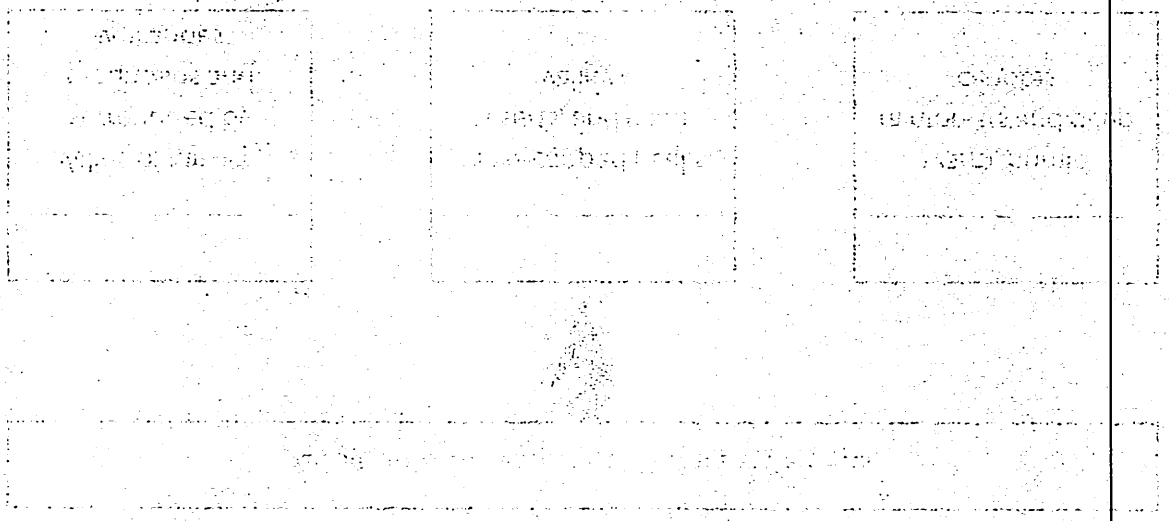
_____ The isthmus that joins North and South America

_____ Mesoamerica lies north of this imaginary line drawn on maps and globes

_____ The mountain range where the Inca civilization began

_____ Includes parts of present-day Mexico and Central America

_____ A part of southern Mexico surrounded on three sides by water



Day 1

4

Name _____ Date _____

1. Lacy cuts 3 feet of ribbon into 4 equal pieces to make hair bows. How many feet of ribbon does Lacy use for each hair bow?

   a. Draw a tape diagram to represent the problem.

   b. Is the quotient less than 1 or greater than 1?

   c. Write an equation to find the length of each piece. Then write a statement to answer the question.

   d. Use your answer from part (b) to explain how you know your answer for part (c) is reasonable.

Use the Read–Draw–Write process to solve each problem.

2. Noah makes 6 quarts of punch. He pours the punch equally into 4 pitchers. How many quarts of punch are in each pitcher?

3. Julie puts 26 cups of popcorn equally into 8 bags. How many cups of popcorn does Julie put in each bag?

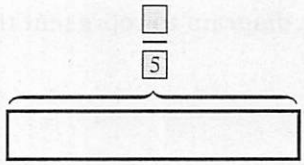
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REMEMBER

4. Complete the equation and statement. Then complete the tape diagram to represent the equation.

$\frac{4}{5} = \frac{1}{5} + \frac{1}{5} + \frac{1}{5} + \frac{1}{5}$

$\frac{4}{5} =$ _____ $\times \frac{\square}{\square}$



$\frac{4}{5}$ is the _____ multiple of _____.

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5. Multiply. You may draw a model to help you.

$5 \times \frac{3}{8} =$

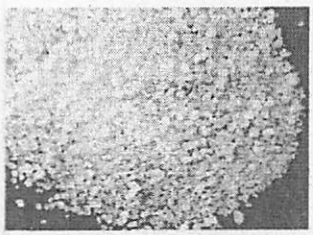
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Day 1

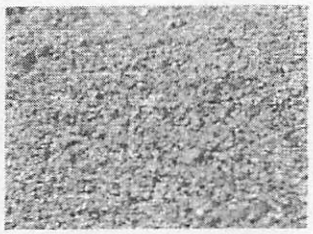
5th Grade Science: AMI Packet #1 NAME: _____

How can you separate a mixture?

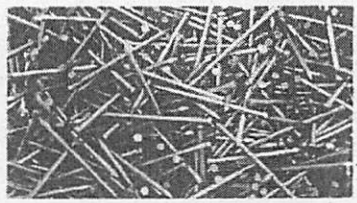
Some students were playing in a garage when all of a sudden, the shelving collapsed! In order to help out, they decided that they needed to come up with a plan to separate the large newly formed mixture. The items in the pile consisted of small iron nails, sand, and salt (for the driveway in winter).



Road Salt



Sand



Iron Nails

Each student came up with their own procedure to separate the items.

Student 1: "Let's get a screen so the salt and sand will fall through and leave the nails on top. Then, we can sort out the salt from the sand by hand."

Student 2: "Let's use a magnet to get out the nails. To separate the sand and salt, we can mix them in water so that only the salt dissolves. Then, we can pour the mixture over filter paper so the salt water goes through and leaves the sand behind. After the water evaporates, the salt will reappear."

Student 3: "Let's pick out the nails by hand. Then, we can separate the salt from the sand by placing them in water and letting it boil. The salt will dissolve in the water. After a while, the salt water will evaporate out of the pan and leave the sand behind."

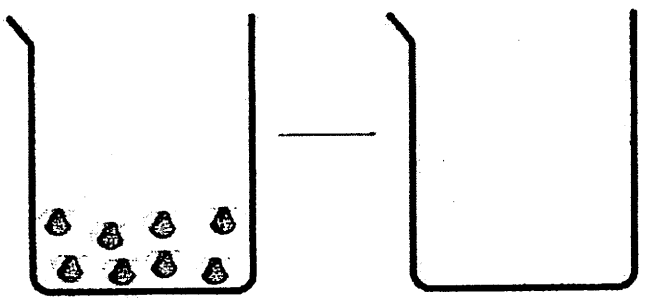
1. Which student do you think has come up with the best method to completely separate the items?
    a. Student 1
    b. Student 2
    c. Student 3

Go to the next page ⟶

2. Why do you think the student you choose had the best procedure? Backup your answer with two pieces of evidence. Put your answer in the box below.

3. Student 3 decided to try their procedure. When she got to the point where she was boiling the water, she got a phone call. When she came back after 30 minutes, she noticed that all of the water was gone. The sand still remained in the pot. What do you think happened to the water?
   a. The liquid water disappeared when it was boiled.
   b. The liquid water was absorbed into the sand.
   c. The liquid water turned into a gas from the heat.

4. What do you think is happening to the particles of water when they get warm? The first picture is a drawing of water at room temperature. Complete the model by drawing what the water would look like after it was heated in the empty beaker..



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Day 1

5. The students were curious about what happened to the salt when it was dissolved in water during Student 2's experiment. In order to test if the salt disappeared, they started with 10 grams of salt and put it in 100 ml of water. The mass of 100 ml of water is 100 grams. Each student made a prediction about the mass of the salt being dissolved in the water. Which student do you think had the best predicting and reasoning?
    a. Student 1 said that since there was 10 grams of salt and 100 grams of water, the mixture would have a mass of 110 grams because matter is conserved (not gained or lost).
    b. Student 2 said that since there was 10 grams of salt and 100 grams of water, the mixture would have a mass of only 100 grams because the salt disappears.
    c. Student 3 said that since there was 10 grams of salt and 100 grams of water, the mixture would have a mass of 90 grams because the 10 grams of salt canceled out 10 grams of water when it disappeared.

Excerpt from "Golden Age of the Maya"

Read the excerpt and answer the question that follows.

Feeding City-States: Wetlands, Mountains, and Rainforests

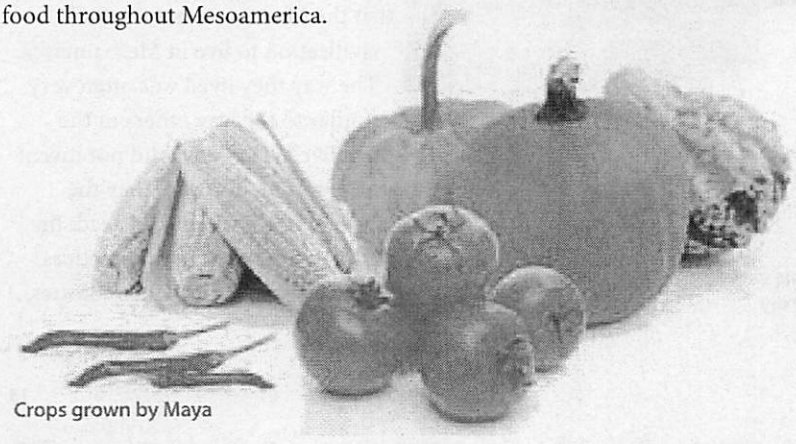
Maya farmers worked hard to supply food to the city-states. Rainfall and soil quality varied throughout Mesoamerica. The Maya found clever ways to meet the challenges of their diverse landscapes.



Maya canals and wetlands

Some lowland areas received heavy rains from May through December, followed by drought from January through April. Because of this inconsistent rainfall, the Maya developed ways of redirecting and reusing rainwater. They created canals in the lowlands. They built raised-earth platforms above the canals and created wetlands. Aquatic plants helped keep the water clean and provided shade for the fish in the canals. The fish, in turn, provided both food and fertilizer for the fields.

In highland areas, the Maya cut terraces into the slopes of mountains. They practiced multicropping on this flat land, planting and harvesting the land multiple times throughout the year. Their crops included beans, tomatoes, squash, chili peppers, and pumpkins. Maize, or corn, was the main food throughout Mesoamerica.

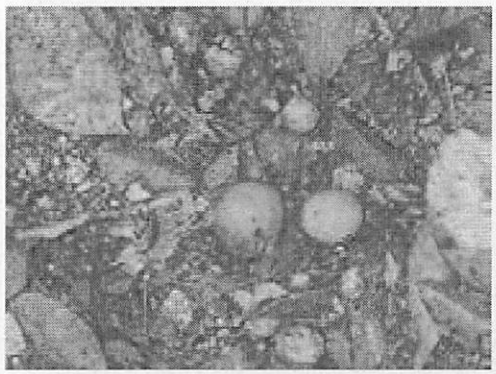


Crops grown by Maya

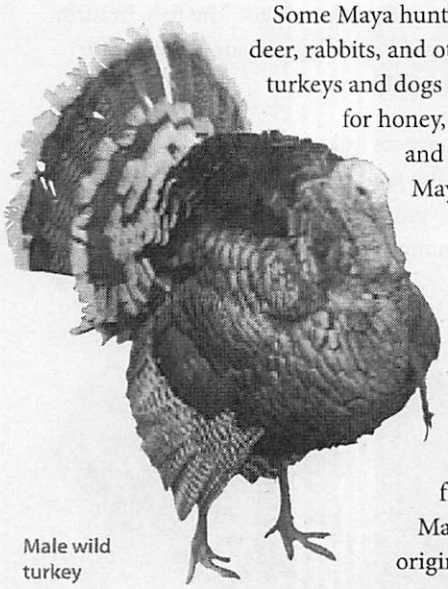
12

In forested areas, the Maya used a technique known as slash and burn. They slashed, or cut down, trees and then burned the area. Then they planted new crops. Ashes left from the fire added nutrients to the soil. After several years, the crops used up the nutrients in the soil. The Maya then repeated the process in another area.

The Maya also gathered tree crops. Fruit trees thrived in the rainforest. The Maya enjoyed the bountiful fruit of the breadnut tree. Similar to apricots in appearance, breadnut fruit has highly nutritious seeds. The Maya ate these seeds or ground them into flour. The Maya also used many rainforest plants for medicine.



Breadnut fruits



Male wild turkey

Some Maya hunted **game** in the forests, including deer, rabbits, and other small mammals. They raised turkeys and dogs for food. They raised stingless bees for honey, which they used to sweeten foods and drinks. In coastal communities, the Maya ate fish and turtles as well.

It is important to remember that the Maya were not the first civilization to live in Mesoamerica. The way they lived was often very similar to the way others in the area lived. The Maya did not invent the pyramid, nor were they the first to practice writing. Instead, the Maya often improved upon practices originally borrowed from other cultures.

The paragraphs in this excerpt describe a number of clever ways the Maya people met the challenges of their diverse landscapes to provide food for themselves. Which method or solution do you think was the most clever? Use specific details from the text to explain your answer.

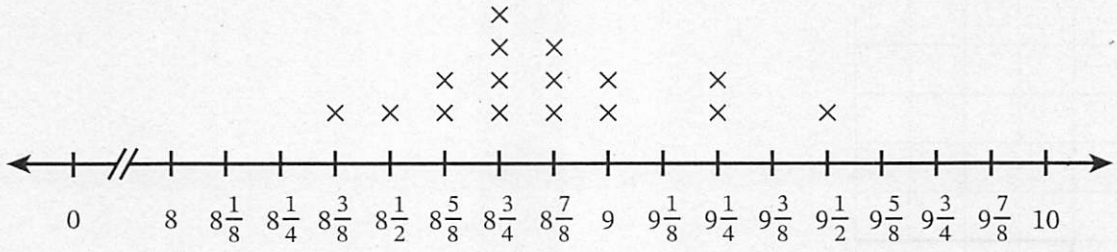
Day 2

16

Name _____ Date _____

Miss Song weighs the backpacks of all the students in her class. The line plot shows the weights of the backpacks.

Weights of Backpacks of Miss Song's Students



Weight (pounds)

1. How many students are in Miss Song's class? How do you know?

2. What is the most frequent weight of the backpacks?

3. What is the total weight of the two lightest backpacks?

4. What is the difference in weight between the heaviest and lightest backpacks?

5. Miss Song says that most of the backpacks weigh less than 9 pounds. Do you agree with Miss Song? Why?

6. Miss Song chooses two backpacks that have a total weight of 18 pounds. Based on the data in the line plot, what could be the possible weight of each backpack?

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REMEMBER

Divide by recording the partial quotients.

7. 9,452 ÷ 4 = _____

4	9,	4	5	2

8. 4 people equally share 3 gallons of water. How many gallons of water does each person get?

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Day 2

5th Grade Science: AMI Packet #2 NAME: _____

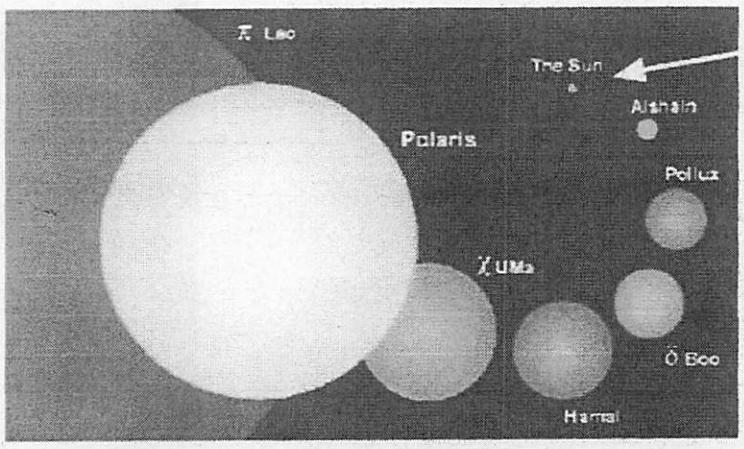
Why do stars look different in the night sky?

The Johnson family loved to go camping. The Johnsons have two children, Grace and Kesha. Normally, they go during the spring and summer. However, this year, they added a third trip in the winter.

One of their favorite activities is to look at the stars at night. Since they are far from the city lights, they can see more stars in the sky.

1. Right after sunset when it gets dark, the family loves to gaze at the stars. Since Kesha loves to stay up late. Which time of the year do you think she likes best and why?
   a. She likes the winter because the sun sets later in the day and she can stay up later.
   b. She likes the summer because the sun sets later in the day and she can stay up later.
   c. She doesn't have a preference because the sun sets at the same time each night.

2. One night, Grace wondered why some of the stars were brighter than others. She looked up the relative sizes of a few stars and found this diagram.



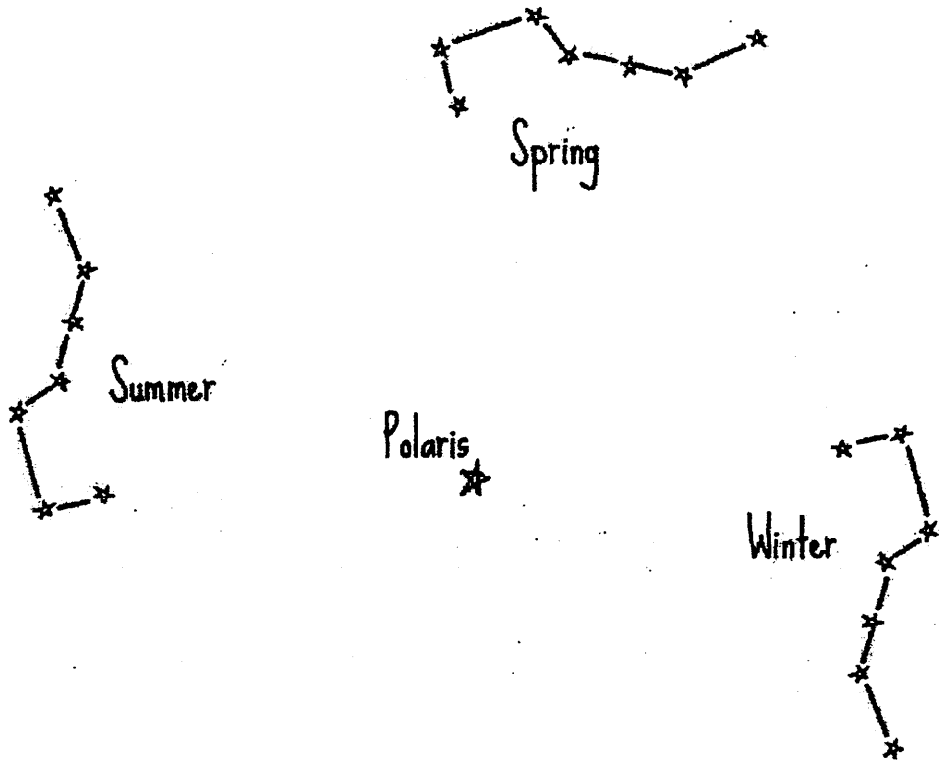
She wondered why the Sun looked so bright from Earth even though it was smaller than many other stars in the sky.

Which of the following do you think is the best explanation as to why the Sun looks so bright from Earth?

   a. Larger stars use a lot of energy to shine so they are not as bright.
   b. The Sun appears to be brighter because it is much closer to Earth than the other stars.
   c. Since the Sun supports life on Earth and is its main source of energy, it is the brightest.

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3. During each trip, Kesha likes to find the Big Dipper. She learned in school that the Big Dipper is an asterism and not a constellation. Asterisms are noticeable groups of stars that form patterns but are smaller than, or even part of, a constellation. The Big Dipper is actually an asterism in the constellation, Ursa Major or the Great Bear. Kesha decided to draw the Big Dipper as she saw it on each of her trips. She used the same drawing to add the Big Dipper as the year went on.



Where do you think that the Big Dipper would go and what would it look like in the fall? Draw **the Big Dipper on the diagram above in detail as it should look in the fall.**

4. Why does the Big Dipper appear differently in the night sky at different times during the night and at different times during the year?
   a. The Big Dipper rotates counterclockwise in the sky around the Earth throughout the year.
   b. The gravitational pull of Polaris causes the Big Dipper to rotate around it throughout the year and during the night.
   c. It seems like the Big Dipper moves, but it is really the Earth's rotation and revolution that causes us to see it differently.

Day 3

Suffix *–ness*

Write the correct word to complete each sentence. It may help to remember that words with the suffix –ness *are nouns, while the other choices without this suffix are adjectives.*

steady	greatness	drowsy	drowsiness
crispness	steadiness	crisp	bright

1. The _____ morning air helped me wake up even though it was very early and barely light outside.

2. It was incredible to watch the artist work with such _____ as he painted a picture of the river and its banks.

3. The baby's _____ caused him to yawn and rub his eyes.

4. She chose a _____ paint color for the kitchen to make it seem warm and inviting.

5. I appreciated the _____ of the bacon on my sandwich but everyone else said it was overcooked.

6. The heat was turned up high in the library, which made me feel _____ as I read, so I kept shifting in my seat to stay alert.

7. Write a sentence for each of the words not used from the box.

a.

b.

*Read each word and its meaning. Then, add the suffix–*ness *to the word. Determine the meaning of the new word and write a sentence using the new word.*

8. Root word: friendly
   Meaning: kind and helpful
   New word: _____
   Meaning: _____
   Sentence:

9. Root word: wild
   Meaning: uncontrolled and dangerous
   New word: _____
   Meaning: _____
   Sentence:

Day 3

17

Name _____ Date _____

Use the Read–Draw–Write process to solve each problem.

1. There are 20 students in the fifth grade. This is $\frac{1}{6}$ of the total number of students at the school. How many students are at the school?

2. Lisa needs to paint a total of 15 boards. She has already painted $\frac{1}{3}$ of the boards. How many boards has Lisa already painted?

3. A team of 5 students runs a $\frac{1}{2}$-mile relay race. Each student runs the same distance. How many miles does each student run in the race?

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REMEMBER

4. There are 2 quarts of olive oil shared equally by 4 cooks. What does the number $\frac{2}{4}$ tell you about the situation? Explain how you know.

Use the Read–Draw–Write process to solve the problem.

5. Noah has 5 pounds of gravel. He pours $4\frac{3}{8}$ pounds into his fish tank. How many **ounces** of gravel does Noah have left?

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Day 3

5th Grade Science: AMI Packet #3 NAME: _____

How much water is on the Earth?

1. Take a look at the two illustrations of Earth to the right. What claim could you make about the amount of water versus the amount of land on Earth? Put your answer in the box below. The black areas represent the continents.

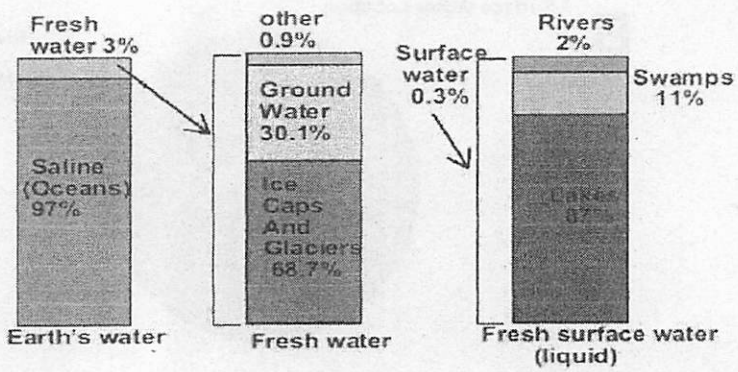




2. Look at the three diagrams below. Water on Earth can be found in two forms, saline (salt) water and freshwater. Which one is found the most on Earth? Circle your answer.

   a. Freshwater
   b. Saline water

3. What evidence do you have to support your answer? You can use the picture of the Earth in #1 and/or the model to the right. Put your answer in the box below.

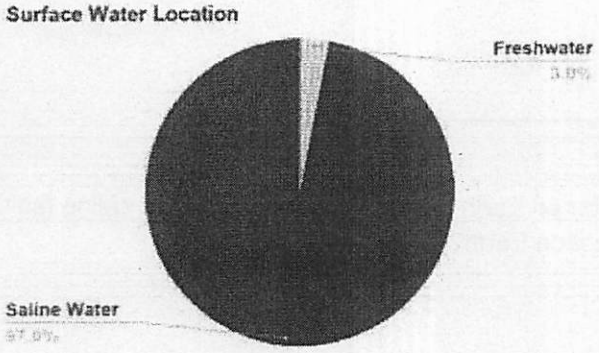


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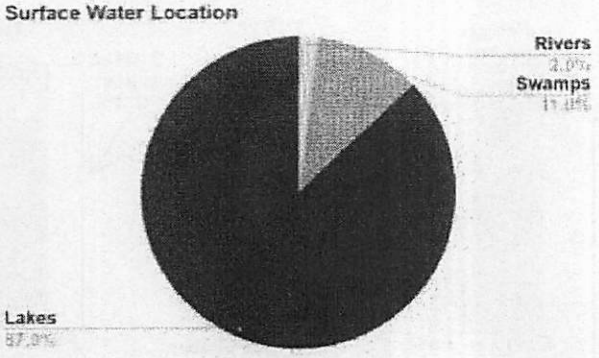
4. The majority of the Earth's saline (salt) water is found in the world's oceans. In fact 97% of all of the saline water on Earth is located in them, which means that only 3% of all the water on Earth is freshwater. Where is all of the freshwater found? List all of the places on Earth where freshwater can be found using the diagrams in question #3. Put your responses in the box below..

5. Of all of the freshwater on Earth, only 0.3% of it is found on the surface of the Earth. Circle the letter to the pie chart that best represents where the 0.3% of surface water is found? Use the diagram in question 3 to help you choose the correct answer.

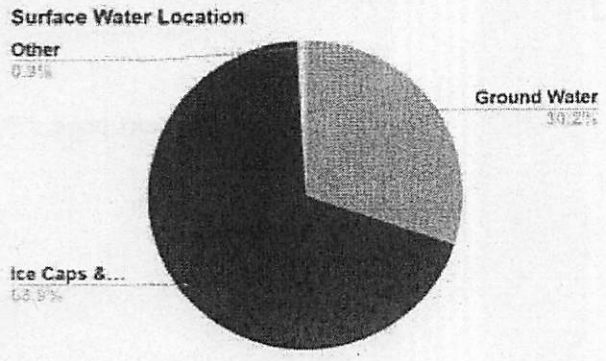
A



B



C



Day 4

2.3 TAKE-HOME

Subject and Predicate

For each sentence, draw a vertical line separating the subject and predicate. Circle the entire subject. Draw a wiggly line under the entire predicate.

Example: (Craftsmen) | lived in smaller homes.

1. Some Maya farmers cut terraces into the slopes of mountains.

2. The Maya used many rainforest plants for medicine.

3. The Spanish were in the Americas in search of riches.

4. The diverse landscape of Mesoamerica includes mountains, lowlands, and rainforests.

5. Maya used a barter system to trade goods.

6. The Maya were one of many groups of people who settled in Mesoamerica.

7. The Maya were not the first people to practice writing.

8. The Yucatán Peninsula has many cenotes, or natural wells.

9. All Maya city-states had centers of government and religion with stone pyramids and temples.

10. Powerful kings ruled the Maya city-states.

Day 4

19

Name _____ Date _____

Use the Read–Draw–Write process to solve each problem.

1. A container has $\frac{3}{4}$ quarts of milk. $\frac{1}{3}$ of the milk is poured into a bowl. How many quarts of milk are poured into the bowl?

2. Blake wants to fill bags of coffee that weigh $\frac{1}{2}$ pound each. He has 3 pounds of coffee. How many bags can Blake fill?

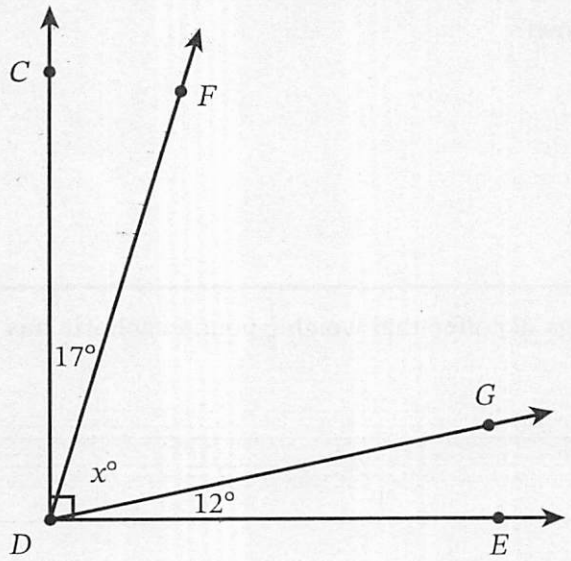
3. A florist spends $\frac{1}{3}$ hour making 4 flower bouquets. If each bouquet takes the same amount of time to make, what fraction of one hour is spent making each bouquet?

4. Write a word problem that can be solved by evaluating $\frac{3}{5} \times 5$. Then solve the word problem.

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REMEMBER

5. $\angle CDE$ is a right angle. Write and solve an equation to find the unknown angle measure.



The measure of $\angle FDG$ is _____.

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Day 4

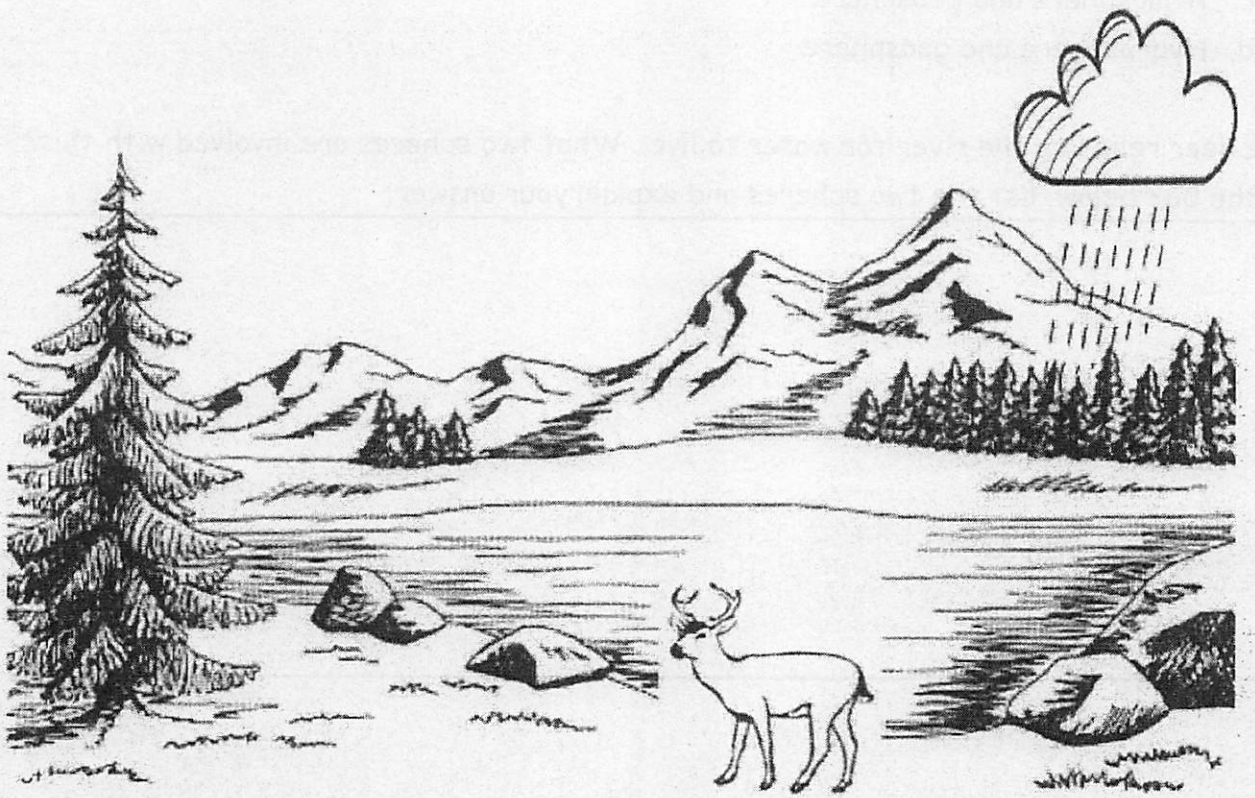
5th Grade Science: AMI Packet #4 NAME: _____

How do Earth's systems work together?

The Earth has four major systems that work together. All living things make up the biosphere. All landforms including the soil, rocks, mountains, and magma make up the geosphere. The atmosphere consists of wind and the air, while the hydrosphere consists of all the water and ice on Earth.

1. Take a look at the model below. In the following table, list two features of each sphere.

Sphere	2 Features
Geosphere	
Hydrosphere	
Biosphere	
Atmosphere	



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2. The interaction of what two systems causes the rain? In the box below, list the two systems and explain your answer.

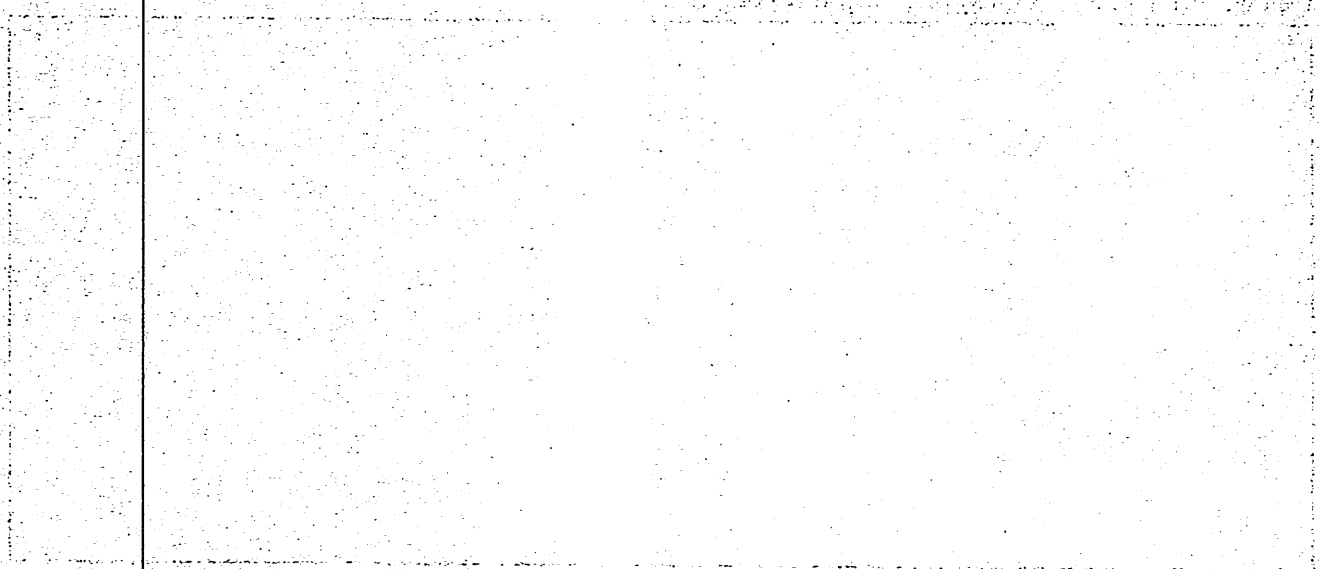
3. Looking at the model, what two systems cause the water to come down off the mountains to supply the river with water? Circle the best answer.
   a. Hydrosphere and atmosphere
   b. Biosphere and hydrosphere
   c. Atmosphere and geosphere
   d. Hydrosphere and geosphere

4. The deer relies on the river for water to live. What two spheres are involved with this? In the box below, list the two spheres and explain your answer.

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Day 4

5. What other sphere(s) may have been a factor in the shape of the mountains. In the box below, list the system(s) and explain your answer.



Day 5

NAME: _____ **4.3** TAKE-HOME

DATE: _____

Sentences

Read the following paragraph carefully. Correct errors by making sure all sentences are complete and adding capitalization and punctuation where needed. Then, copy the edited paragraph on the lines below.

in highland areas. The Maya cut terraces into slopes of mountains they practiced multicropping on this flat land planting and harvesting. The land multiple times throughout the year. Their crops included beans, tomatoes, squash, chili peppers, and pumpkins Maize, or corn, was the main food throughout Mesoamerica.

Rewrite the following run-on sentences into two simple sentences. Remember to include correct capitalization and punctuation.

1. Maya medicine was a combination of science and religion the Maya used natural remedies to cure ailments

2. Spanish is the official language of Mesoamerica today there are also more than twenty-one Maya dialects spoken in Guatemala alone

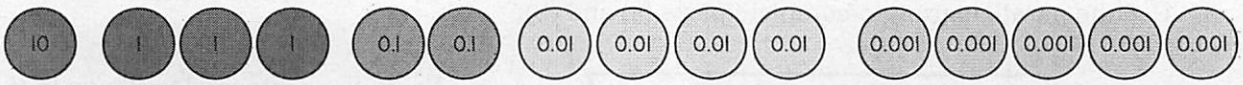
3. many modern Maya women wear the same style of colored tunic as their ancestors each community has its own distinct designs

Day 5

Name _____ Date _____

3

1. Use the place value disks shown to complete parts (a)–(f).



a. The place value disks represent the number _____.

b. The digit ____ is in the tens place. It has a value of _____.

c. The digit 3 is in the _____ place. It has a value of ____.

d. The digit ____ is in the tenths place. It has a value of _____.

e. The digit 4 is in the _____ place. It has a value of _____.

f. The digit ____ is in the thousandths place. It has a value of _____.

2. Use the place value chart to complete parts (a)–(e). Express the value of each digit in decimal form.

tens	ones	tenths	hundredths	thousandths
2	4	6	1	7

a. The digit ____ is in the tenths place. It has a value of _____.

b. The digit 4 is in the _____ place. It has a value of ____.

c. The digit ____ is in the tens place. It has a value of _____.

d. The digit ____ is in the thousandths place. It has a value of _____.

e. The digit 1 is in the _____ place. It has a value of _____.

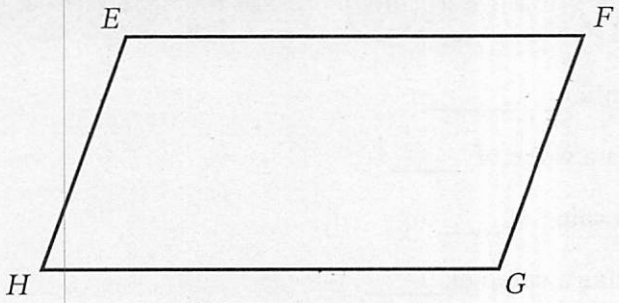
3. Represent 2.963 in expanded form two ways.

4. Represent 48.036 in expanded form two ways.

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REMEMBER

5. Use the parallelogram to complete parts (a) and (b).



a. Name the acute angles shown in the parallelogram.

b. Name the obtuse angles shown in the parallelogram.

---

6. Multiply. You may draw a model to help you.

$8 \times \frac{5}{6}$

Use the Read–Draw–Write process to solve the problem.

7. Jada puts 8 ice cubes in her water bottle. Each ice cube weighs $\frac{9}{10}$ grams. How many grams of ice does Jada put in her water bottle?

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Day 5

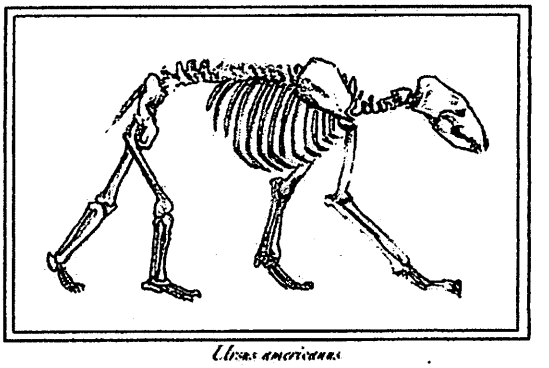
5th Grade Science: AMI Packet #5 NAME: _____

How do the major organ systems of different vertebrates compare?

Most animals in the world can be classified as an invertebrate (no backbone) or a vertebrate (has a backbone). Most of the world's vertebrates share the following characteristics: have an endoskeleton (covering; ie. scales, skin, fur, etc.) and an internal skeleton, they breathe in oxygen (use respiration), have an advanced nervous system accompanied by a brain, and they have paired limbs (feet, arms, fins, etc.).

The following illustrations show the skeletal systems of a deep sea angler fish and a polar bear.





Ursus americanus

1. Name two characteristics that both animals' skeletons have in common. Put your answer in the box below.

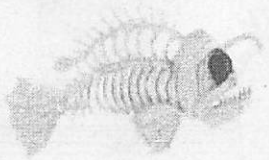
2. Name two characteristics that are unique to each animal's skeleton. Put your answer in the box below.

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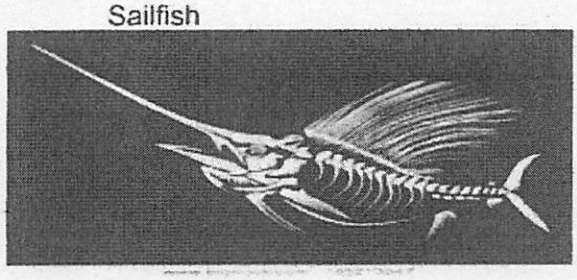
3. Name another body system that the anglerfish and the polar bear have in common besides the skeletal system. Put your answer in the box below.

Even in the same class, there are similarities and differences in skeletons. Look at the skeletons below of an anglerfish and a sailfish.

Angler Fish



Sailfish

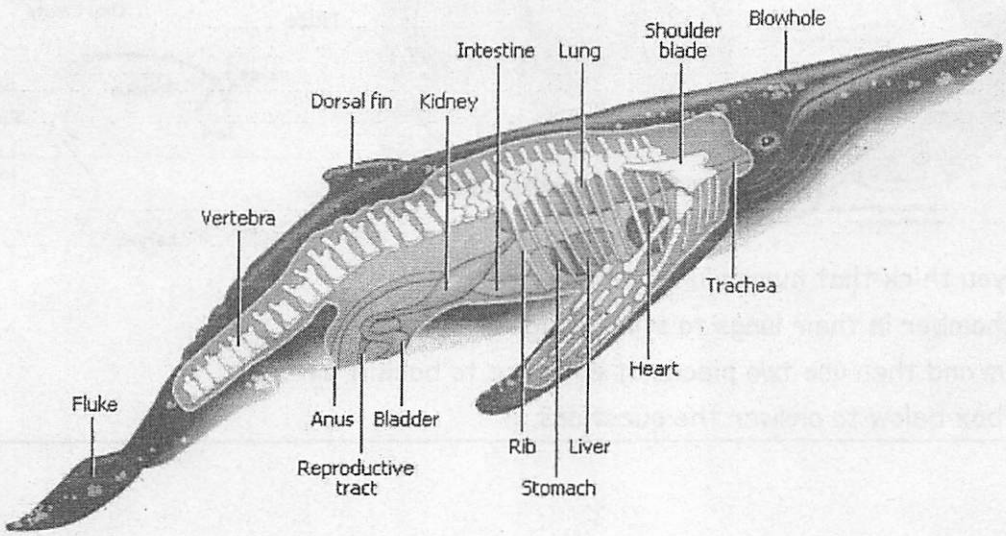


4. Which fish do you think is more likely to eat large fish and eels? List the name of the fish and give two pieces of evidence to support your answer.

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5. Which fish do you think can swim the fastest? List the name of the fish and give one piece of evidence to support your answer.

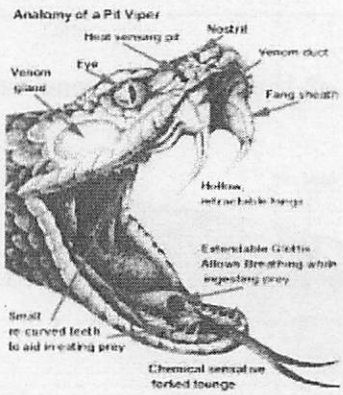
6. Humpback whales are fascinating creatures. Take a look at the diagram of one below.

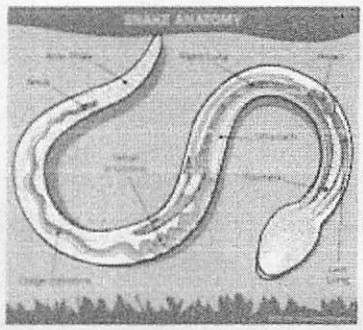


What organs do you think that the humpback whale needs to have working together in order to breathe? To help answer this question, think about what works together in your body to help you breathe. You may want to think about what happens when you are running. List at least three of the whale's organs that work together to help it breathe in the box below.

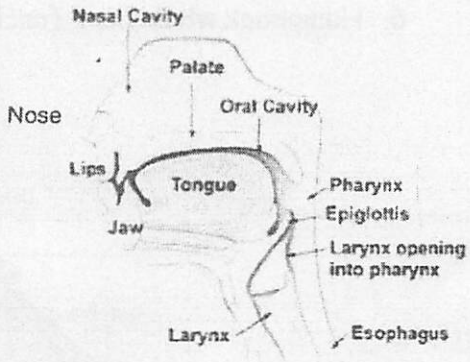
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7. Most snakes typically have only one fully functioning lung. However, the working lung has two separate chambers. The first is the same as a human's lung. The second chamber, not found in human lungs, is for storing oxygen. In fact, the additional air stored in the second chamber helps a snake survive without breathing for up to two hours. Snakes use something called a glottis to breathe. First, air comes in through their nostrils. Then, the glottis, which is attached to their lower jaw, moves the air to their lungs. If there is something like food in their mouth, the air coming in through their nostrils is blocked from getting to the glottis, and thus, their lungs.





Human Nasal Cavity



Why do you think that human lungs do not have a second chamber in their lungs to store oxygen? State your claim and then use two pieces of evidence to back it up. Use the box below to answer the questions.