4th Grade AMI Learning Packet

📚 This packet includes 5 days of tasks for:

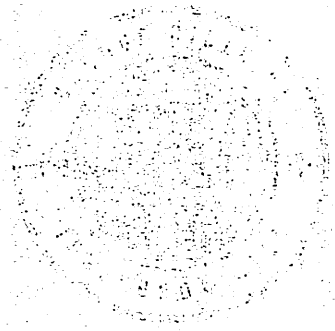
- ELA (English Language Arts) ✏️
- Math ➕
- Science 🔬

☑️ 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: _____



Day 1

17.4 TAKE-HOME

Morphology

un- and *non-*: Prefixes Meaning "Not"

Under each of the following sentences, write a new sentence using the word written in parentheses.

Example: Writing **fiction** lets me use my imagination. (nonfiction)

He reads nonfiction to learn about the real world.

1. Plants and animals are all **living** beings. (nonliving)

2. I like to give gifts, but I don't like to **wrap** them. (unwrap)

3. Playing cards with Grandpa is a **pleasant** way to spend an afternoon. (unpleasant)

4. Water is **essential** to staying alive, but is sometimes hard to find in the desert. (nonessential)

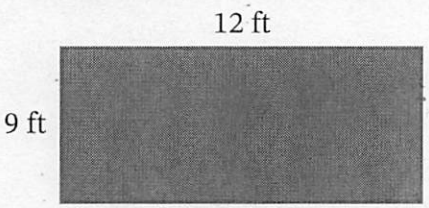
Day 1

19

Name _____ Date _____

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

1. A rectangular wall has a length of 12 feet and a height of 9 feet.



   a. What is the area of the wall?

   b. What is the perimeter of the wall?

2. Mia uses 58 inches of wood to frame her art. The art piece is 17 inches long.

   a. What is the width of the art piece?

   b. What is the area of the art piece?

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REMEMBER

3. Fill in the blanks to complete two statements that represent the equation $72 = 8 \times 9$.

_____ is _____ times as much as _____.

_____ is _____ times as much as _____.

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Day 1

4th Grade Science: AMI Packet #1 NAME: _____

Can you predict the motion of an object?

An engineer wanted to know if she could get a car to go faster down a ramp. She thought that the ramp height would make a difference. Below is a diagram showing how she tested her idea. First, she set the ramp the height of the bottom block (10 cm) and found the speed of the car going down the ramp. Then, she tested it again with ramp heights of 20, 30, and 40 cm. Figure 1 shows a diagram of her investigation. Table 1 shows the results.

Figure 1. Car on Ramp



Table 1: Results of Investigation

Ramp Height (cm)	Speed (cm/s)
0	0
10	25
20	50
40	100
50	125

1. Did the height of the ramp have an affect on the speed of the car? Circle your answer.

YES NO

2. What happened to the speed of the car the higher the ramp was positioned? Circle your answer.

The higher the ramp...

A. The faster the car went.
B. The slower the car went
C. Didn't make a difference on the car's speed.

3. What do you think would happen to the car's speed if the ramp was 60 cm? Circle your answer.

A. It would go 125 cm.
B. It would go slower.
C. It would go faster.

The engineer decided to do a second investigation. She had a cart as pictured to the right. There was a very heavy box that she wanted to put on the cart to move it. She wondered if adding wheels to the cart would make it easier to push. The cart started with 4 wheels. She decided to add 2 additional wheels for the first test, 4 for the second test, and 6 for the third test.



Go to the next page ⟶

Answer the following questions in regards to her investigation.

4. What is the engineer trying to test in this experiment? What is she trying to do?

5. What variable is going to change in each trial or test?

6. What two objects are going to exert a force on each other to create motion?

7. What is going to be measured in this investigation?

Day 2

2.7 TAKE-HOME

If You Were a Boy Serf

Read the following excerpt from "To the Manor Born" aloud to a caregiver and complete the activity that follows.

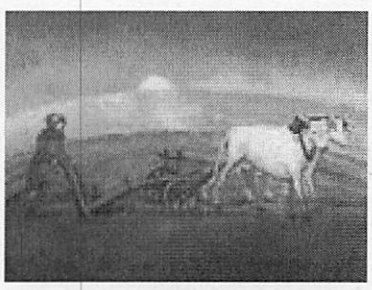
From an early age, you work a full day. You wake up just before sunrise and go to sleep when it is dark. For breakfast, you have rye bread and water, or perhaps watery ale. Even before the sun is fully risen, and regardless of the weather, you begin your work on the land. In springtime, you are busy plowing and planting seeds. You help the sheep and cows deliver baby lambs and calves. At midday, you walk home for a simple meal of rye bread and maybe a small piece of cheese. After lunch, you return to work, cutting logs for the lord's fire.

In the summer months, you tend to the crops you planted in the spring. You keep the hungry birds and insects away from the growing crops.

Autumn, the time to harvest crops, is perhaps the busiest time of all. You help your mother and sisters pick fruits and berries, which they preserve and store for the winter. Using a simple tool called a **scythe**, you harvest grain crops such as wheat, oats, rye, and barley. You help store the grain. A good harvest makes everyone, especially the lord, very happy. It means there is food to eat during the winter months. A good harvest is a time of celebration for all.

Nevertheless, you have to get used to having less food to eat in the wintertime, and to feeling hungry and cold more often than not. At times, your parents find it difficult to make ends meet. Even if ice and snow lay upon the frozen earth, you still have jobs to do. You have to feed and care for the livestock. You repair fences and barns. All the while, you continue to work on your family's strips of land. Each evening as the sun is setting, you return home quite exhausted. You end your day with a meal called pottage that your mother or sisters have prepared. Pottage is a vegetable stew with grain and a tiny piece of meat or fish in it. After a good night's sleep, you will wake up and do it all again!

Write one sentence for each of the four images to describe what the serf might be doing in each image. Refer to the text, "If You Were a Boy Serf," to find evidence to support your response. Incorporate vocabulary words from the text when possible and use complete sentences.









Day 2

8

Name _____ Date _____

Divide. Show or explain your method.

1. $816 \div 6 =$ _____

2. $1{,}236 \div 6 =$ _____

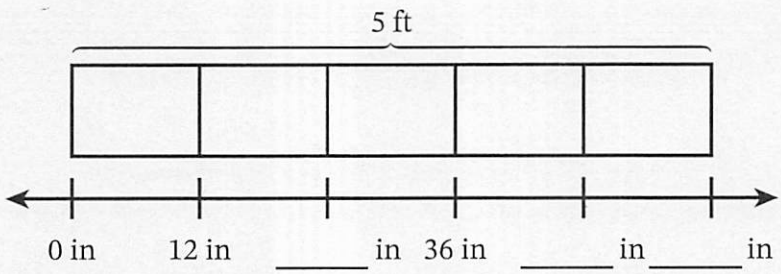
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3. $3{,}207 \div 3 =$ _____

$3\overline{)3{,}207}$

REMEMBER

4. Fill in the blanks to complete the number line and the statement.



There are _____ inches in 5 feet.

5. A rectangular garden is 20 meters wide. The perimeter of the garden is 110 meters. What is the length?

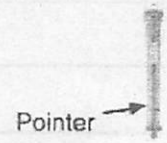
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Day 2

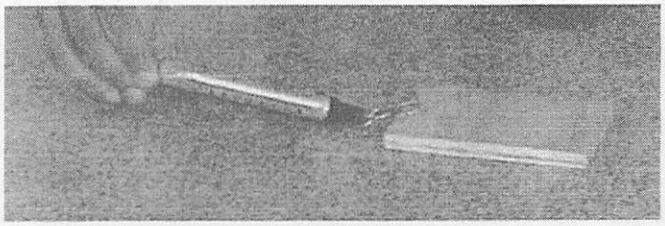
4th Grade Science:AMI Packet #2 NAME: _____

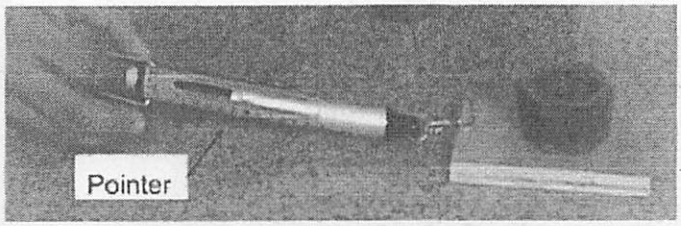
Does the type of surface matter?

Force, which is a push or a pull on an object, is measured in a unit called Newtons (N). To measure force in N, you need a device called a spring scale (see photo to the right). To use it, you attach an object to the hook and hold the handle at the other end. There is a spring attached to the pointer. When objects are on the hook, they pull the pointer down. The more force, the more the pointer in the column inside of it goes down towards the hook. The Newtons of force are written on the side of the spring scale next to the column.



Take a look at the two photos below. The first one is showing a spring scale measuring the force of dragging a block across a surface. The second photo shows a spring scale measuring the force of a block with a weight on top of it across a surface.

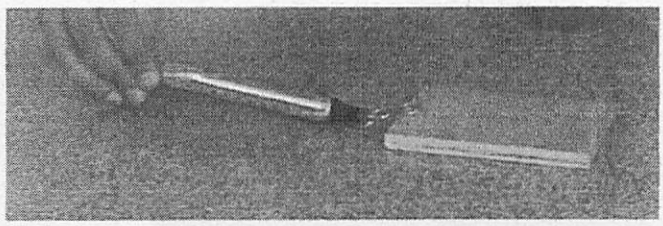




1. Which photo is showing a larger amount of force to pull to the object(s)? Circle your answer.
PHOTO 1 PHOTO 2

2. How do you know? Justify your answer in the box below.

A scientist wanted to know if pulling an object across different types of surface would change the force needed to move the object. They used the set up to the right, but for each experiment, they changed the surface (what the wood was dragged across). They pulled the same block in each trial. The surfaces they used were the countertop shown, rough sandpaper, flannel, and glass. The results of their experiment are shown in the table below.



Go to the next page →

How the Type of Surface Affects the Force of an Object	
Surface	**Average Force (N)**
countertop	0.5
sandpaper	2.1
felt	3.2
Cork	1.5

3. Which surface type required the least amount of force to pull the block? Circle your answer.
   A. Countertop
   B. Sandpaper
   C. Felt
   D. Cork

4. Which surface type required the most amount of force to pull the block? Circle your answer.
   A. Countertop
   B. Sandpaper
   C. Felt
   D. Cork

5. Fill in the blanks in the sentence below with either the word *smooth* or *rough*.

Surfaces that are _____ require MORE force to slide an object across them.

Surfaces that are _____ require LESS force to slide an object across them.

Morphology

en–: Prefix Meaning "to make"

Choose the correct word to complete the sentence.

1. I know we'll _____ our day at the beach.
   (joy, enjoy, courage, encourage)

2. The salesman hoped that smiling would _____ him to customers.
   (case, encase, dear, endear)

3. I packed an extra bottle of water to _____ that I would not be thirsty during the hike.
   (force, enforce, sure, ensure)

4. It took a lot of _____ for Emily to audition for the school play. (courage, encourage, circle, encircle)

5. The school _____ all the trophies behind glass.
   (sure, ensured, case, encased)

6. Hoping to _____ myself, I dug for gold in my backyard.
   (able, enable, rich, enrich)

Day 3

/ 10

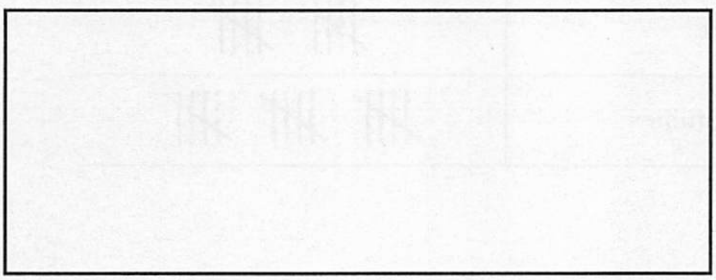
Name _____ Date _____

1. Find 2 × 3,468 by using the place value chart and area model.

   a. Place Value Chart

thousands	hundreds	tens	ones

   b. Area Model



Multiply. Show your method.

2. 3 × 3,142 = _____

3. 4 × 2,932 = _____

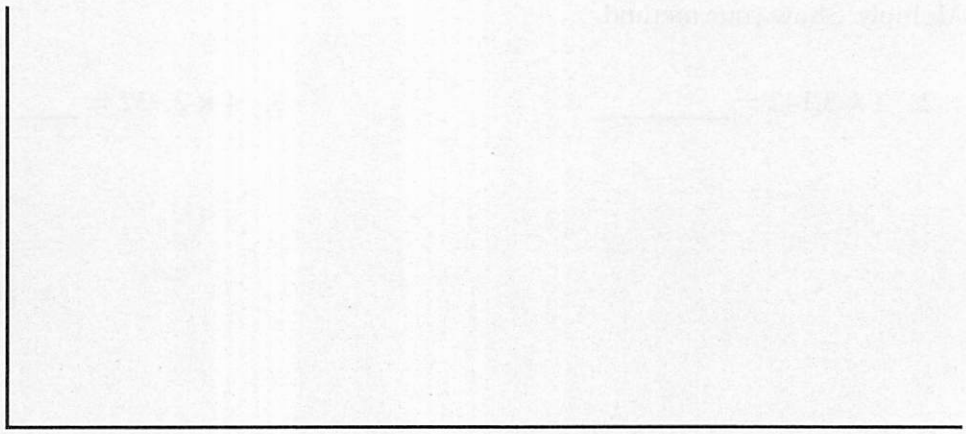
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REMEMBER

4. Miss Diaz surveys third grade students about their favorite subject. The tally chart shows the survey results. Use the data in the tally chart to draw a scaled picture graph.

Favorite Subjects of Third Grade Students

Subject	Number of Students
Science	𝍸
Reading	𝍸 𝍸 𝍸
Math	𝍸 𝍸 𝍸 𝍸
Art	𝍸 𝍸
Social Studies	𝍸 𝍸 𝍸



Each represents _____ students.

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Day 3

4th Grade Science: AMI Packet #3 NAME: _____

Are speed and energy related?

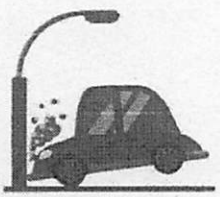
Moving objects have energy. The faster an object moves, the more energy it has. Take a look at the data table below. It shows the speeds of four toy cars, A, B, C, and D. The toy cars are all traveling on flat smooth surfaces.

Car Speeds	
Car	Speed (m/s)
A	15.9
B	9.6
C	16.8
D	8.2

1. List the cars in order with the car having the most energy first and the car with the least energy last. Put your answer in the box below.

2. What is the relationship between speed and energy? Put your answer in the box below.

3. Let's say that each of the cars kept their speed and crashed into a toy light post as seen in the picture to the right. Assuming the cars all had the same mass, which car do you think would get the most damage? _____



4. Which car would make the most noise hitting the metal pole? _____

5. Moving objects contain energy and that energy can be moved from place to place. In this case, the energy from the motion of the car was transferred into _____ energy when it crashed into the metal pole.

Go to the next page ⟶

Put your hands together as shown in the picture to the right. Very lightly (don't push hard) and slowly, rub your hands together. Then, rub your hands together again. This time, push your hands together hard and rub them together quickly.



6. In which case did you use more energy? Circle your answer.

SLOW MOVING HANDS FAST MOVING HANDS

7. What did you notice happening when you rubbed your hands each way? How were they different? Put your answer in the box below.

Day 4+5

NAME: _____ **PP.3** ACTIVITY PAGE

DATE: _____

Day 4

Adverbs and Adjectives

- *Draw a wiggly line under the verb.*
- *Then, change the adjective under the blank to an adverb by adding* –ly.
- *Write* adv. *above the adverb and draw an arrow from the adverb to the verb it describes. Then, answer the question after the sentence.*

Example: The honey bee darted quickly from one flower to another.

How did the honey bee dart? quickly

1. The phone rang _____ early one morning.
(loud)

   How did the phone ring? _____

2. Carlos waited _____ for his trip to the zoo.
(patient)

   How did Carlos wait? _____

3. Ms. Anderson carried the hot, steaming soup to the table _____.
(careful)

   How did Ms. Anderson carry the soup? _____

4. Miranda showed the picture to her mother _____.
(proud)

   How did Miranda show her mother the picture? _____

5. The kitten purred _____ while Jamie held it on his lap.
(soft)

   How did the kitten purr? _____

Write a sentence using each adverb. Remember, the adverb should describe the verb you choose to use in your sentence.

1. gently

2. softly

Day 5

Fill in the blank with an adjective or an adverb, depending on whether the word being described is a noun or verb.

soft	loud	fair	quick	loose	exact
softly	loudly	fairly	quickly	loosely	exactly

1. When baking a cake it is best to use the _____ measurements given in the recipe.

2. Andre ran down the street _____ after the escaping puppy.

3. Mrs. Esposito wrapped the baby in a _____ blanket.

4. The _____ fire alarm alerted everyone to leave the building.

5. When Tai tried on her older sister's sweater, it hung _____ off her shoulders.

6. The referee made sure everyone played the game _____.

7. Jim knew that his _____ tooth would fall out someday soon.

8. The teacher reminded the students not to talk too _____ in the library.

Day 4

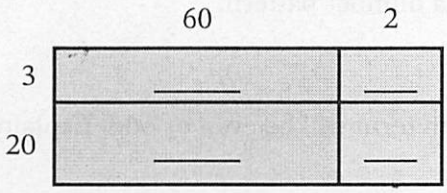
14

Name _____ Date _____

1. 23×62

   a. Complete the area model and the equation.

   $23 \times 62 =$ _____



   b. Multiply by recording the partial products in vertical form.

			6	2
×			2	3
+				

3 ones × 2 ones
3 ones × 6 tens
2 tens × 2 ones
2 tens × 6 tens

2. Draw an area model to represent the expression. Then multiply by recording the partial products in vertical form.

   32×24

		2	4
×		3	2
+			

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REMEMBER

3. Multiply.

   $23 \times 5 =$ _____

4. Think of the number 5.

   a. Starting at the number 5, use the rule add *3* to create a number pattern.

   _____, _____, _____, _____, _____, _____

   b. Without extending the pattern, decide whether the 50th term will be even or odd. Explain.

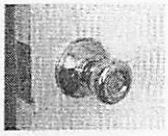
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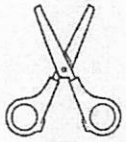
Day 4

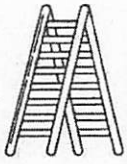
4th Grade Science: AMI Packet #4 NAME: _____

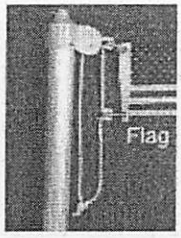
How do simple machines help us?

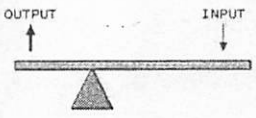
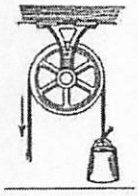
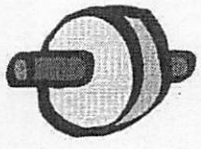
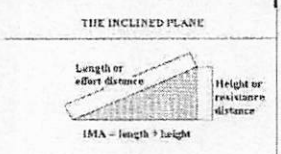
1. Simple machines help us to do work we can't easily do by ourselves. Read the descriptions of ech of the simple machines below in the chart. Match the following examples (doorknob, scissors, ladder, flagpole) to the correct simple machine by writing the name of the example in the example box. Each example is used one time.

Doorknob 

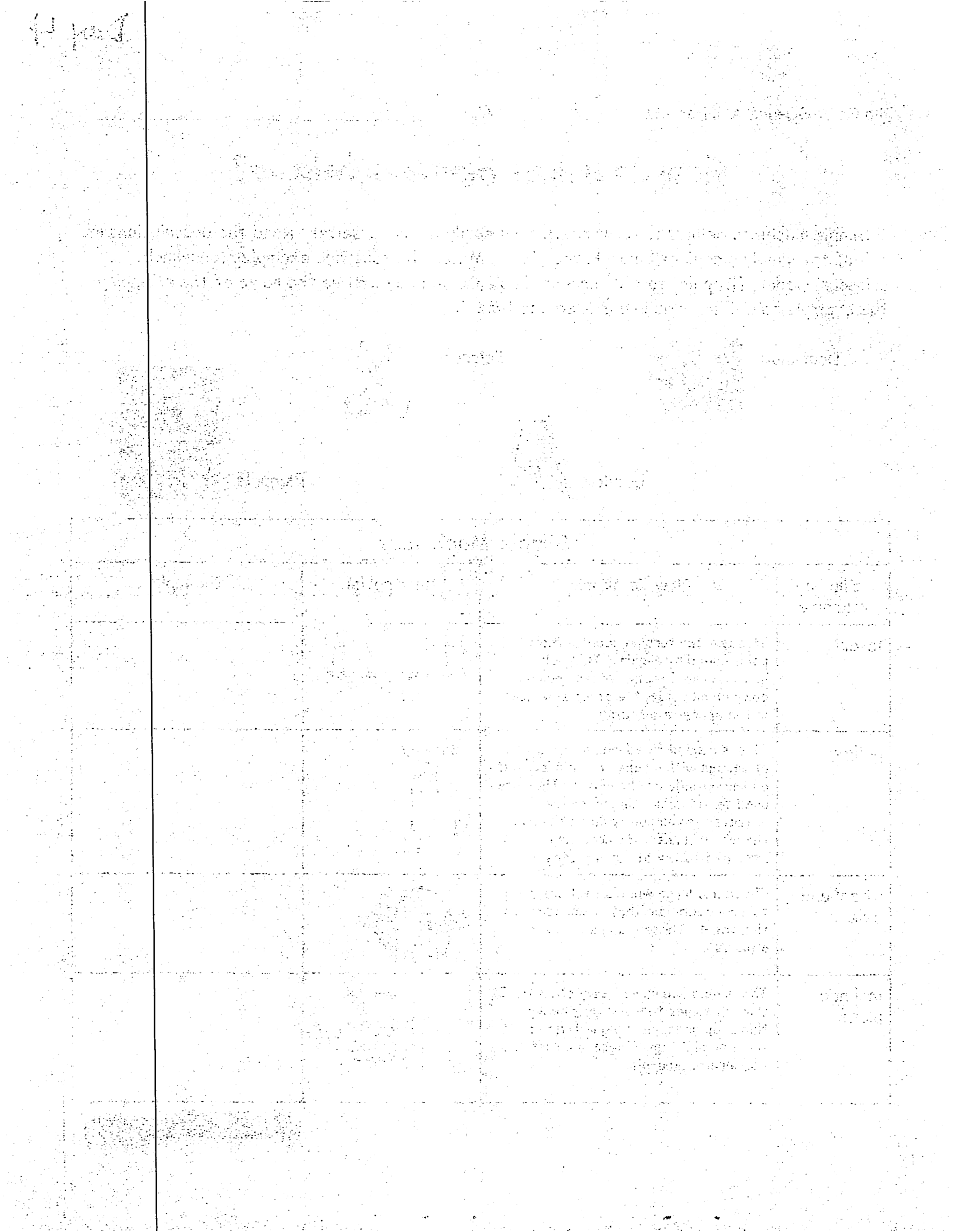
Scissors 

Ladder 

Flagpole 

Simple Machines			
Simple Machine	**How It Works**	**Illustration**	**Example**
lever	This is a bar turning about a fixed point called a fulcrum. This helps to move heavy objects. When you push down on one side, the other side goes in the opposite direction.		
pulley	This is a small fixed wheel or a group of wheels with a rope or chain located on the outside of the wheel. They are used to lift something up heavy objects. As you pull down on the rope, the wheel turns and whatever is attached to the other end goes up.		
wheel and axle	These are large wheels that are fixed to a rounded pole that is smaller than the wheel. These help move heavy objects.		
inclined plane	These help you move heavy objects. It is much easier to move very heavy things up an inclined plane than to lift them straight up. These are surfaces that are at an angle.		

[redacted]



Day 5

23

Name _____ Date _____

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

1. Deepa plants 441 flowers into pots. Each pot has 3 flowers.

   a. How many pots does Deepa use?



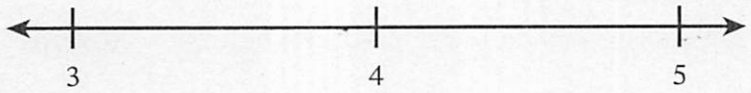
   b. Deepa sells all the pots of flowers. Each pot costs $5. How much money does Deepa earn?

2. Gabe has 55 red game pieces and 60 blue game pieces. All the pieces are shared equally among 4 players. How many game pieces does each player get? How many pieces are left over?

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REMEMBER

3. Use the number line to complete parts (a)–(c).



   a. Partition each whole number interval into fourths.

   b. Label all the fourths.

   c. Draw a box around each fourth that is equivalent to a whole number.

4. Write >, =, or < to compare the numbers. Draw a model to explain your thinking.

$$\frac{4}{6} ____ \frac{4}{3}$$

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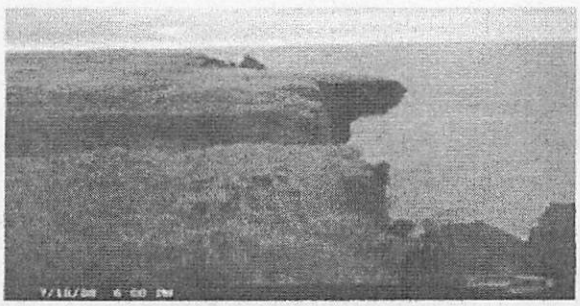
Day 5

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

What makes Earth's surface change?

Take a look at the photos in Set A below. It shows an area by the ocean near Drew Point, Alaska. The photo on the left was taken about one year before the photo on the right. Notice the large chunk of land falling into the ocean on the right hand photo.

Set A



BEFORE



AFTER

Look at Set B. This is a hill in Italy that had been eroding over time due to precipitation and wind hitting it. A company planted deep rooting plants all over the hill. The second photo on Set B to the right was taken a little over a year after the photo on the left.

SET B



1. Circle the best **2 choices** below that describe the process of erosion on the landforms shown in Set A as compared to Set B.

A. Both sets of photos show an equal amount of erosion.
B. The ocean waves on Set A eroded more because the waves are a daily occurrence, while the weather (rain and wind) on Set B doesn't happen as frequently.
C. The ocean waves on Set B eroded more because the wind and precipitation that hits the hill happen more frequently than the waves on the first set of photos.
D. Since the plants on Set B have a deeper root system than those on Set A, it had less erosion because it anchored the ground in place to keep it from eroding.
E. Since the land on Set A was made up of more rock than the land on Set B, it had less erosion because the rocks ancored the ground in place to keep it from eroding.

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Some scientists want to see if different types of surface materials would erode land faster than others. They set up the following experiment using grass, rocks/sticks, and soil as their materials. The first container had grass, the second rocks, and the third soil. They ran water from the back of the containers containing the materials to the front. A cup was hung at the end of each container to catch the water and any material that ran off. A picture of their set up and their results are shown below.

Erosion Investigation Set Up

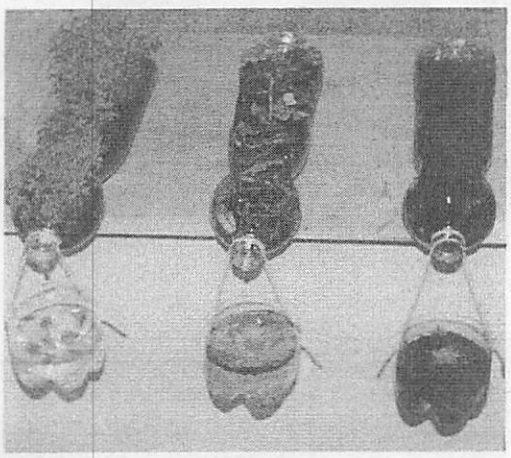


Table 1: Erosion Results

Material	Amount of Water Poured (mL)	Amount of Water Collected(mL)
Grass	709.8	295.7
Rock	473.2	236.6
Soil	236.6	88.7

2. The students came up with the following claim: *Grass eroded more than the water or the soil.* Do you agree with their claim? Why or why not? Backup your answer with evidence in the box below.

Do you agree? Circle your answer. YES NO Your evidence (use the photo and table as shown above):

3. Do you think that the students conducted a fair test to determine which eroded more? Explain your answer in the box below.

Do you agree? Circle your answer. YES NO Why or why not?: