STUDENT FIRST & LAST NAME:_____

SCHOOL:_____ **GRADE:**_____ **ID# / LUNCH#**_____

Christina School District Assignment Board

Grade Level: 2

Week 11 (6.15.20)

	Day 1	Day 2	Day 3	Day 4	Day 5
ELA	Read *The Beach.* Write a new ending to the story..	Read *The Beach* again to increase fluency. Answer questions 1-3.	Read *The Beach a*gain to increase fluency. Answer questions 4-6.	Draw a scene to match the story, *The Beach.* Be sure to include details from the story.	Start a Summer Bucket List with all of the fun activities you want to do this summer!
Math	**Missing Numbers Page 1** *Please complete the attached activity called Missing Numbers Page 1*	**Missing Numbers Page 2** *Please complete the attached activity called Missing Numbers Page 2*	**Place Value on Wheels Page 1** *Please complete the attached activity called Place Value on Wheels Page 1*	**Place Value on Wheels Page 2** *Please complete the attached activity called Place Value on Wheels Page 2*	**Facts & Shapes Page 1** *Please complete the attached activity called Facts & Shapes Page 1*
Science	**Inventions and Engineering:** Think about, draw and write your best answer to the following: What kinds of inventions do you think we will have when you are a grown up?	**Save Bobby (part 1):** The story of every invention is filled with trying and failing again and again and again. But each time inventors learned from their mistakes and were not afraid to try again and again. You are going to be an inventor and try to invent a way to "Save Bobby": Activity: Get your supplies. You will need bobby pins or paper clips, scissors, and paper, plus the attached handout. Slide bobby pin (or paper clip) onto a piece of paper.	**Save Bobby (part 2):** Draw an idea for your "Bobby Dropper" (something to help the bobby pin or clip fall much slower". Write or label why you think it will work. Take a new piece of paper and make your first Bobby Dropper. You may cut, fold, or tear. Then slide on a bobby pin (clip). Test your invention. Hold a Bobby Dropper in one hand and your Fall Fast in the other. Make sure the pin/clip is at the top. You may want a helper to be your "Expert Eye" and	**Save Bobby (part 3):** Make and test another Bobby Dropper. Make sure to use new paper because you want to keep your original one. Test the new Bobby Dropper against the Fall Fast AND the original Bobby Dropper to see which one works better. Test 3 times, holding your invention with the pin/clip starting in 3 different orientations. Complete 2nd handout with new Bobby Dropper. Draw/write your best	**Fireworks::** Read the article. Highlight and/or underline something(s) you learned from the article that you want to remember.

STUDENT FIRST & LAST NAME:_____

SCHOOL:_____ **GRADE:**_____ **ID# / LUNCH#**_____

Christina School District Assignment Board

		Carefully crumple paper around clip. You have made a "Fall Fast". Hold it up as high as you can and drop it. It should fall fast. Think of things that float or fall slowly. Draw a picture of 2-3 things, then think and write: What do you notice about these things? What do you see that might help them float or fall, slowly? (Hint: examples might include leaves, dandelion seeds, etc.) **[Keep Fall Fast for next part]**	watch the drop. Pay attention to how the Bobby Dropper drops. Notate what happens on your handout. If you worked with a helper, make sure to switch so you can also see the drop. Circle the path it takes on the handout. Now test again, but make sure to hold the Bobby Dropper so the pin/clip is NOT straight up. Repeat investigation and circle path on handout. Try a 3rd time, holding it yet another way. Think and write: Did something fail in one of your drops? What did you learn from that? **[Keep Fall Fast and Bobby Dropper for next part]**	answers to the following: Which one worked better? Why do you think that? Is there something in real life that is similar to your Bobby Dropper that gave you that idea? Congratulations! You are an inventor!	
Social Studies	Complete Activity 1 from the document titled, "Resources."	Review Activity 1 from the document title, "Resources." If you have index cards, complete the "Idea!" Make sure you understand the terms.	Complete Activity 2 from the document titled, "Resources"	Review Activities 1 & 2 from the document titled, "Resources"	Complete Activity 3 from the document titled, "Resources" AND Have a happy, healthy, and safe summer!

STUDENT FIRST & LAST NAME:_____

SCHOOL:_____ **GRADE:**_____ **ID# / LUNCH#**_____

Christina School District Assignment Board

Week 12 (6.22.20)

	Day 6	Day 7	Day 8	Day 9	Day 10
ELA	Read *Splash into Summer.* Write to tell what you learned.	Read *Splash into Summer* again to increase fluency. Answer questions 1-3.	Read *Splash into Summer* again to increase fluency. Answer questions 4-6.	Verbs are words used to describe actions. Circle all of the verbs in *Splash into Summer.*	Finish your Summer Bucket List and have a safe and happy summer!!
Math	**Facts & Shapes Page 2** *Please complete the attached activity called Facts & Shapes Page 2*	**Sorting Quadrilaterals Pages 1 & 2** *Please complete the attached activity called Sorting Quadrilaterals pages 1 and 2*	**Three Dimensional Shape Hunt Pages 1 & 2** *Please complete the attached activity called Three Dimensional Shape Hunt Pages 1 & 2.*	**Play the Game: Last Shape In Wins!** *Play the Game Last Shape In Wins! Play more than once! What strategies did you use?*	**Play the Game: Last Shape In Wins!** *Play the Game Last Shape In Wins! Play more than once! What strategies did you use? Have a great Summer! Play games like Uno and Sorry! Or any of the others given out! Make up your own!*
Science	**Making Rock Candy:** Enjoy the attached investigation. What do you notice? What do you observe? What do you wonder?	**The Pepper and Soap Experiment:** Enjoy the attached investigation. What do you notice? What do you observe? What do you wonder?	**How to Make Invisible Ink:** Enjoy the attached investigation. What do you notice? What do you observe? What do you wonder?	**Make a Walking Water Rainbow:** Enjoy the attached investigation. What do you notice? What do you observe? What do you wonder?	**Make a Lava Lamp:** Enjoy the attached investigation. What do you notice? What do you observe? What do you wonder?
Social Studies	Review Activities 1, 2, & 3 from the document titled, “Resources”	Complete Activity 4 from the document titled, “Resources”	Review Activities 1, 2, 3, & 4 from the document titled, “Resources”	Complete Activity 5 from the document titled, “Resources”	Review Activities 1, 2, 3, 4, & 5 from the document titled, “Resources”

The Beach

Jessica rubbed sunscreen on her arms. The hot summer sun beat down on her skin. The sand felt warm under her toes. Jessica loved the summer. It felt great to be outside.

She leaned back in her beach chair. The blue ocean stretched out in front of her. It seemed to go on and on forever. The waves made a soothing sound as they lapped against the shore.

Jessica opened her cooler bag. She took out a peanut butter sandwich and a bottle of water. As soon as she unwrapped the sandwich, a seagull flew in. It stared at her sandwich. Jessica laughed.

"Sorry, it's all mine," she said.

A cool breeze floated off of the ocean. Jessica closed her eyes. She felt so peaceful, like she could fall asleep any minute. Then she felt a tap on her shoulder.

"Hey, Jess." It was her cousin Brandon. "Let's go to the arcade."

"Okay," Jessica said.

She pulled on shorts and a t-shirt over her bathing suit. She followed Brandon across the sand. The arcade sat on the boardwalk above the beach.

A blast of ice-cold air conditioning hit her face as they walked inside. It was very dark in the arcade. The only light came from the flashing video screens. The loud noise from the machines made Jessica's ears hurt.

"Sorry, Brandon," Jessica said. "I'm going back to the beach."

Name: _____ **Date:** _____

1. What are two words in the story that describe how Jessica feels at the beach?

2. Where does Jessica go with Brandon?

3. What makes Jessica's ears hurt?

4. Does Jessica like the beach or the arcade more? Why?

5. The question below is an incomplete sentence. Choose the word that best completes the sentence.

Brandon taps Jessica on the shoulder _____ he wants her to come with him to the arcade.

A. because

B. so

C. but

6. Which picture shows a soothing place?

Splash into Summer!

Summer is just around the corner. It is a time when many kids swim and play outdoors. Follow these simple steps to stay safe and have fun this summer.

1. Be Water-Wise

Pools, lakes, and oceans are great places to beat the summer heat. While you swim and play, make sure to follow water-safety rules.

photos.com

Always swim with a buddy.

Quick Tips

- Always swim with a buddy, never alone.
- Be sure an adult is watching you while you swim.

2. Stay Sun-Safe

Being outside in warm, fresh air is fun during the summer. Although the sun feels nice, it can be harmful. Sun can burn your skin even in a short time.

Quick Tips

· Always use sunscreen. Remember to rub it in evenly.
· Wear a hat or sunglasses to protect your eyes.

3. Act Wheel-Smart

In-line skating, biking, and riding a scooter are good ways to stay fit. It is important to follow road rules and be wheel-safe.

photos.com

Always wear a helmet when you ride.

Quick Tips

· Always wear a helmet when you ride and skate.
· Use wrist guards, knee pads, and elbow pads while in-line skating.

Summer Safety Checklist

- Drink plenty of water while playing outdoors.
- Play only in safe places, away from streets.
- Stay away from hot grills and open fires.
- Follow all playground rules.
- Use bug spray to prevent insect bites.

Name: _____ **Date:** _____

1. Who should be with you when you are swimming?

2. What are three things you should put on your body to protect yourself from the sun?

3. Why is it important to stay away from grills and open fires?

4. What is the main purpose of this passage?

5. The question below is an incomplete sentence. Choose the word that best completes the sentence.

_____ sunlight can damage your skin, you should put on sunscreen before playing outside in the summer.

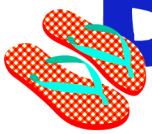
A. So

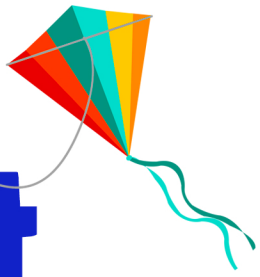
B. Because

C. But

6. What is something you can use to prevent people from stealing your stuff?

Summer Bucket List





○ _____	○ _____
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○ _____	○ _____
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NAME | DATE

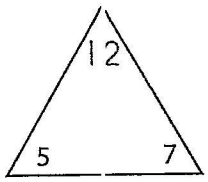
Missing Numbers page 1 of 2

1 One number from each family is lost! Write the missing number in the triangle. Use the pictures to help. Then write 2 addition and 2 subtraction equations to match.

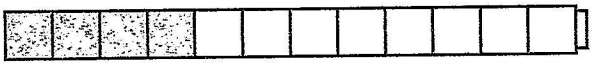
ex

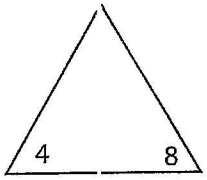
$5 + 7 = 12$ $12 - 5 = 7$

$7 + 5 = 12$ $12 - 7 = 5$

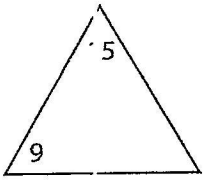


a

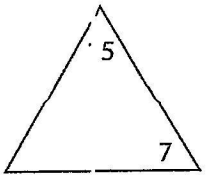




b



c



2 Fill in the missing numbers to solve these equations.

$6 + 7 + 3 =$ _____ $8 + 1 +$ _____ $= 18$ $5 +$ _____ $+ 2 = 13$

$13 -$ _____ $= 8$ $12 -$ _____ $= 7$ $12 - 4 =$ _____

3 **CHALLENGE** Fill in the missing numbers to solve these equations.

$40 + 18 + 23 =$ _____ $60 + 47 +$ _____ $= 126$ _____ $+ 67 + 26 = 131$

(continued on next page)

NAME _____ | DATE _____

Missing Numbers page 2 of 2

4 Draw a line to match each problem with its equation. Then find the answers.

a	The pet shop owner had 14 hamsters. She sold 5 of them on Monday and 3 of them on Tuesday. How many hamsters does she have left?	9 – 2 – 8 = _____
b	There were 12 puppies in the pen. The pet shop owner sold some of them. Now there are 7 puppies in the pen. How many puppies did she sell?	14 – 5 – 3 = _____
c	The pet shop owner got 9 rabbits yesterday. A family came in and bought 2 of them. Then the shop owner got 8 more rabbits. How many rabbits does she have now?	6 + _____ = 13
d	There were 16 fish in the big tank. The shop owner moved some of them. Now there are only 9 fish in the big tank. How many did the shop owner move?	12 – _____ = 7
e	The shop owner had 6 kittens. Then she got some more kittens. Now she has 13 kittens. How many kittens did she get?	16 – _____ = 9

5 **CHALLENGE** Solve these equations.

2 + 5 – 4 + 8 = _____ 8 + 12 + 34 = _____ 20 + 30 – _____ = 30 – 5

90 + 170 + 64 = _____ 30 – 20 + _____ = 25 123 + 48 – _____ = 123 – 5

_____ + 5 = 21 250 + 48 + 2 = _____ 350 + 118 + 6 = _____

NAME | DATE

Place Value on Wheels page 1 of 2

1 Read each number. Then write it in expanded form.

ex fifty-six 56 = 50 + 6	**a** thirty-two	**b** seventy-five
c eighteen	**d** seventy-four	**e** twenty-eight
f ninety-three	**g** forty-five	**h** sixty-seven

2 Find each sum.

60 + 8 = _____ 20 + 3 = _____ 50 + 9 = _____

70 + 15 = _____ 40 + 17 = _____ 10 + 18 = _____

60 + 14 = _____ 50 + 13 = _____ 50 + 19 = _____

30	60	20	40	80	40	70
+ 19	+ 16	+ 17	+ 14	+ 11	+ 15	+ 12

3 Circle the correct answer.

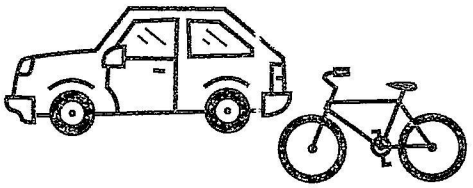
a The 5 in 581 is in the	ones place	tens place	hundreds place
b The 5 in 358 is in the	ones place	tens place	hundreds place
c The 5 in 205 is in the	ones place	tens place	hundreds place
d The 5 in 502 is in the	ones place	tens place	hundreds place

(continued on next page)

NAME | DATE

Place Value on Wheels page 2 of 2

4 There are 10 bikes and 6 cars in the school parking lot. How many wheels in all? Show your work.



There are _____ wheels in the parking lot.

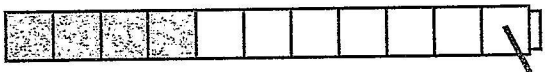
5 **CHALLENGE** Ben saw some wagons and trikes on the playground. In all, he saw 27 wheels. How many wagons and how many trikes did he see? There are two possible answers. Can you find both of them? Show your work.

_____ wagons and _____ trikes	_____ wagons and _____ trikes

NAME | DATE

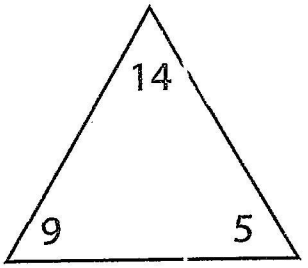
Facts & Shapes page 1 of 2

1 Match each Unifix train to its fact family triangle. Then write 2 addition and 2 subtraction equations to match. Write them under the train.

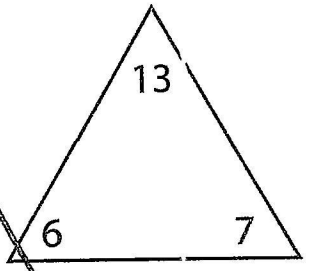
ex 

4 + 7 = 11 7 + 4 = 11

11 − 4 = 7 11 − 7 = 4



a 



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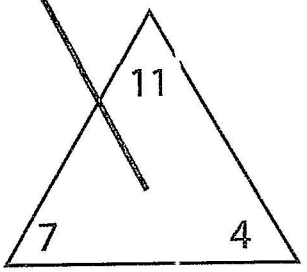
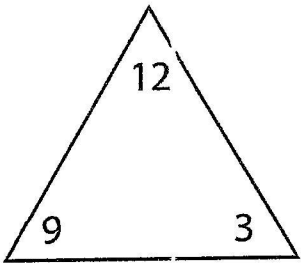
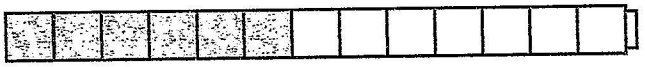
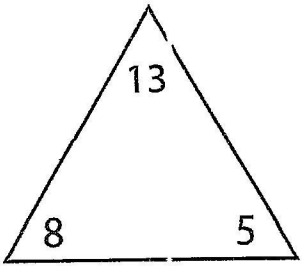


c 



d 



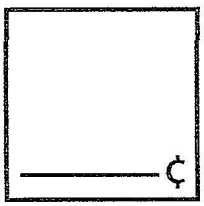
(continued on next page)

NAME | DATE

Facts & Shapes page 2 of 2

2 Count the money to find out how much each shape is worth. Write the price on the shape.

a



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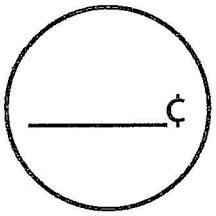

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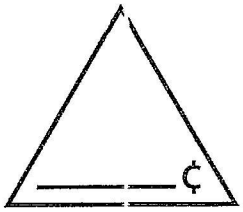
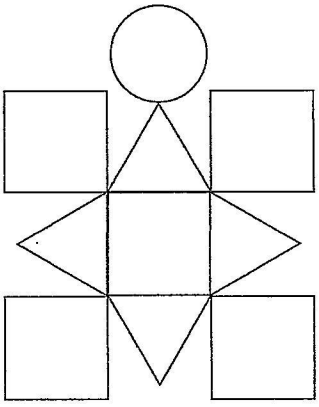


3 Maria bought some shapes at the Shapes Shop. She used all her shapes to make this picture. How much money did she spend? Show your work.



4 Use squares, circles, and triangles to make a picture worth 48¢. Label your work to prove it.

NAME | DATE

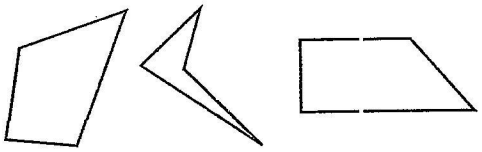
Sorting Quadrilaterals page 1 of 2

Note to Families

This Home Connection Activity involves sorting quadrilaterals. Although some of these shapes are pretty strange-looking, they're all related in that they each have 4 sides and 4 corners. Your child may have many different ideas about how to sort the quadrilaterals on the next page, but if he or she runs out of steam, it's okay for you to mention things like right angles, parallel lines, and symmetry. Have fun!

Cut out the shape cards on the next page. Some of the shapes may look a little strange to you, but they are all quadrilaterals. That is, they all have 4 sides. Look carefully and you'll find that it's true! Work with someone in your family to find as many ways to sort these shapes as possible, and list your ideas below.

"These all have at least 1 line of symmetry."



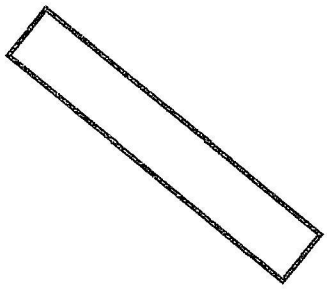
"None of these are symmetrical."

symmetrical

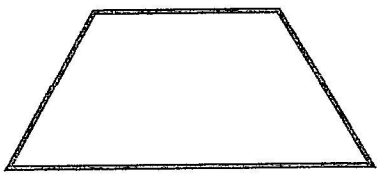
not symmetrical

NAME | DATE

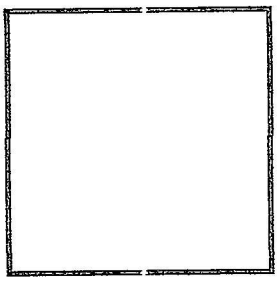
Sorting Quadrilaterals page 2 of 2



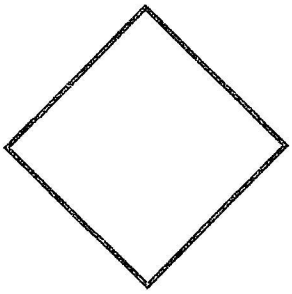
rectangle



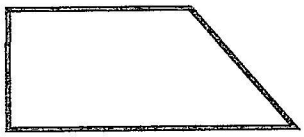
trapezoid



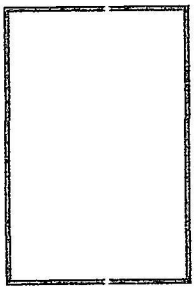
square



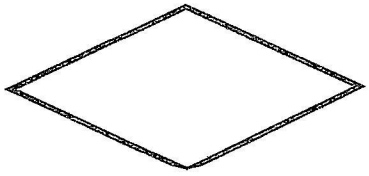
square



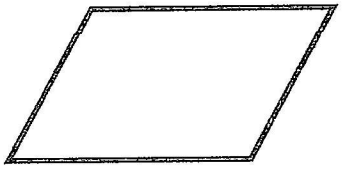
quadrilateral



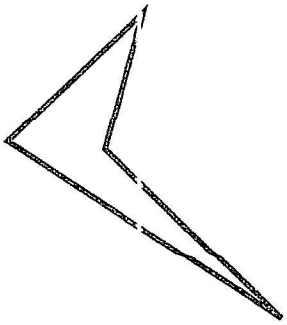
rectangle



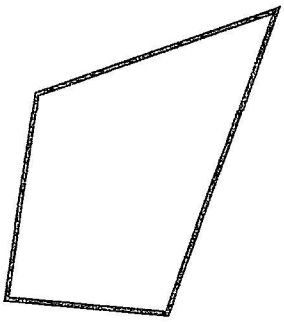
rhombus



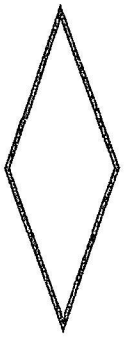
parallelogram



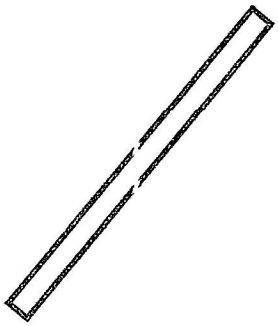
quadrilateral



quadrilateral



rhombus



rectangle

NAME | DATE

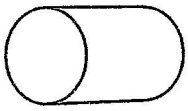
Three-Dimensional Shape Hunt page 1 of 2

Note to Families

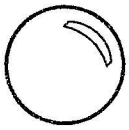
We recently started a new unit on geometry. We are using pattern blocks, geoboards, and paper shapes to investigate many different two- and three-dimensional shapes. Besides learning to recognize and name these shapes, we'll explore how they're alike and different and what happens when we cut them up, put them together and move them around by sliding, turning, and flipping them. We'll learn how to measure the area of some of them, and how to use others to create symmetrical designs. We'll also consider the shapes that are all around us, both human-made and those occuring in nature. This assignment reinforces what we are learning about geometry.

Have you ever thought about why things are the shape they are? Ever wondered why a cup is round and the rooms in most houses are square or rectangular instead of round? Why dice and ice are cube-shaped and why we eat ice cream out of cones instead of pyramids? Shapes are fun to find and fun to think about! This week, you're going to go on a three-dimensional shape hunt. All you have to do is search around your house for things that are shaped like cubes, spheres, cylinders, and rectangular prisms (boxes), and list them below. Happy hunting!

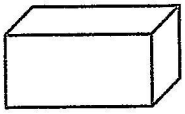
Here are some of things we found that are cylindrical:



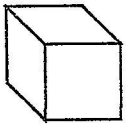
Here are some of things we found that are spherical:



Here are some of the things we found that are shaped like rectangular prisms:



Here are some of the things we found that are shaped like cubes:



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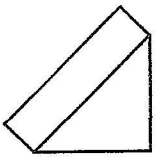
NAME | DATE

Three-Dimensional Shape Hunt page 2 of 2

Note to Families



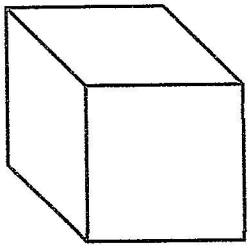
This exercise asks your child to count and sketch the faces of two different three-dimensional shapes. "Face" is the term mathematicians use for a flat surface on a three-dimensional shape. The triangular prism pictured to the left has 5 faces: 2 triangles and 3 rectangles. Your child will need a cube and a rectangular prism to do this exercise. One of a pair of dice and a cereal box would be great.

Materials

- Three-Dimensional Shape Hunt, page 2
- a cube, such as one of a pair of dice
- a rectangular prism, such as a cereal box

Instructions

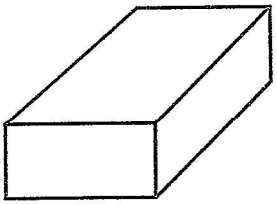
Take a good look at some of the shapes you found to answer the following questions.



How many faces does your cube have? _____

Are they all the same shape? _____

Make a sketch of each of the cube's faces right here:



How many faces does your rectangular prism have? _____

What shape(s) are they? _____

Please sketch each of the rectangular prism's faces here:

NAME | DATE

Last Shape In Wins page 1 of 2

Note to Families

Last Shape In Wins is an easy and fun strategy game that gives children a chance to see the results of combining some familiar shapes. We play it at school with pattern blocks, but you'll be coloring in the shapes instead. Have fun!

Materials

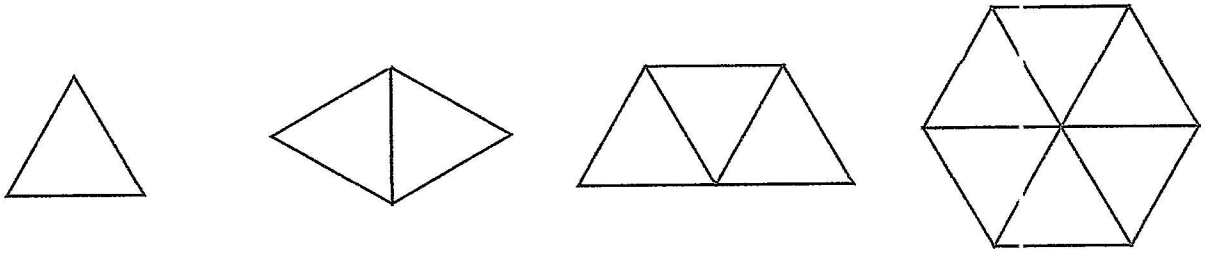
- Last Shape In Wins, pages 1–2
- crayons, markers, or colored pencils in the following colors: yellow, green, blue, and red

Instructions

1 With your partner, decide who will go first and who will go second.

2 Take turns coloring in shapes on the first game board.

a You may color in one or more triangles to form one of the shapes shown below.



a triangle
color it green

a rhombus
color it blue

a trapezoid
color it red

a hexagon
color it yellow

b You can color in any one of the four shapes anywhere on the game board each time it's your turn. It is a good idea to outline the shape first before you start coloring.

c You must take your turn every time.

3 The winner is the player who gets to complete filling in the game board (the big hexagon) by coloring in the last shape.

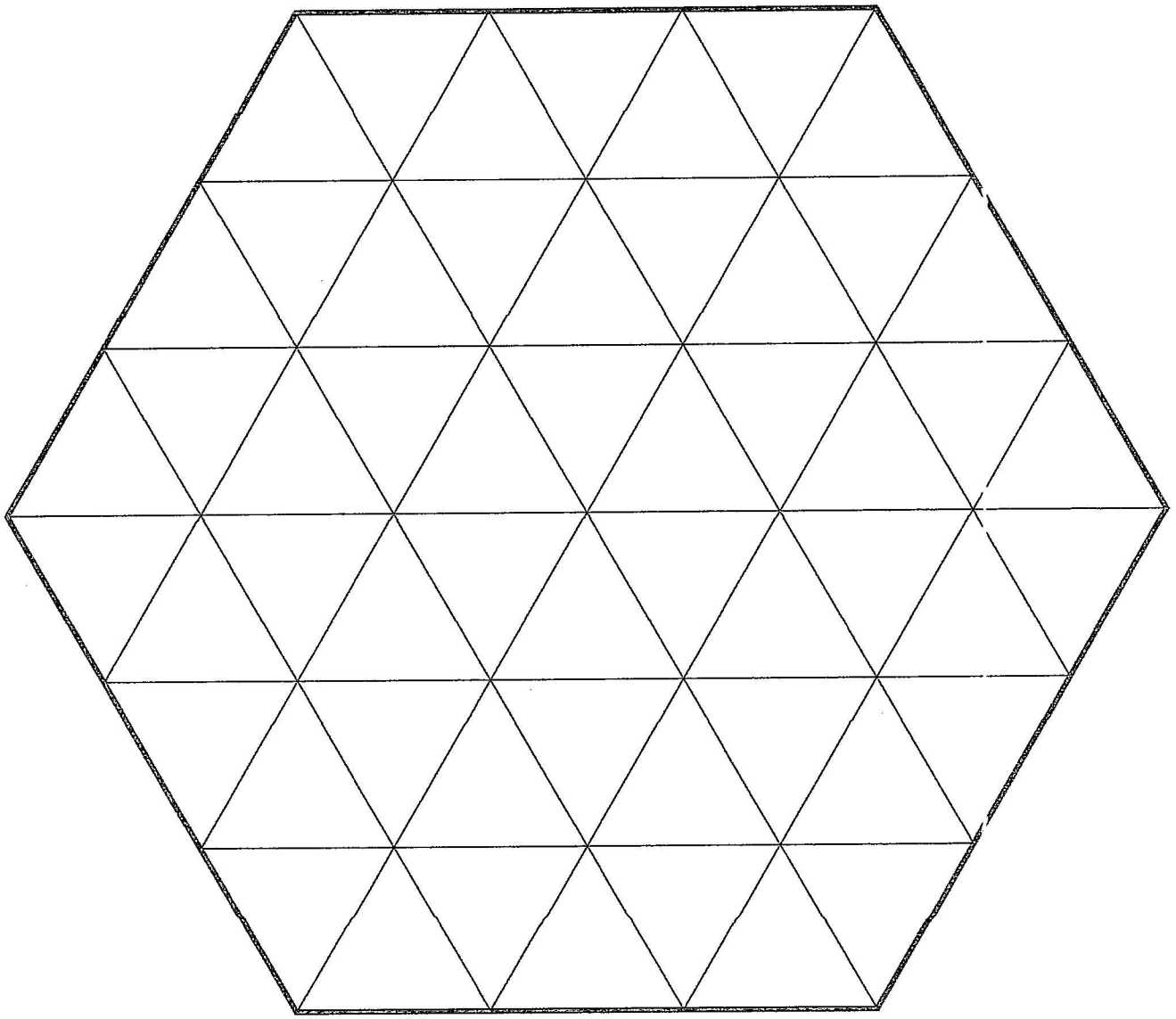
4 **CHALLENGE** Try to use the fewest number of shapes to fill in the big hexagon. See if you can use even fewer the second time you play.

5 When you have time, play the game a second time.

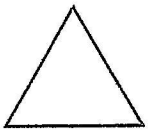
(continued on next page)

NAME | DATE

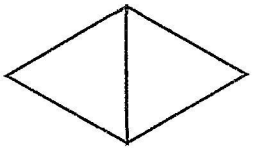
Last Shape In Wins page 2 of 2



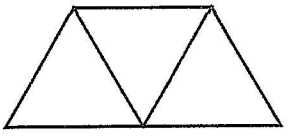
Shapes



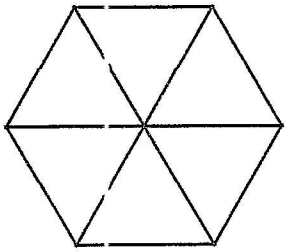
a triangle
color it green



a rhombus
color it blue



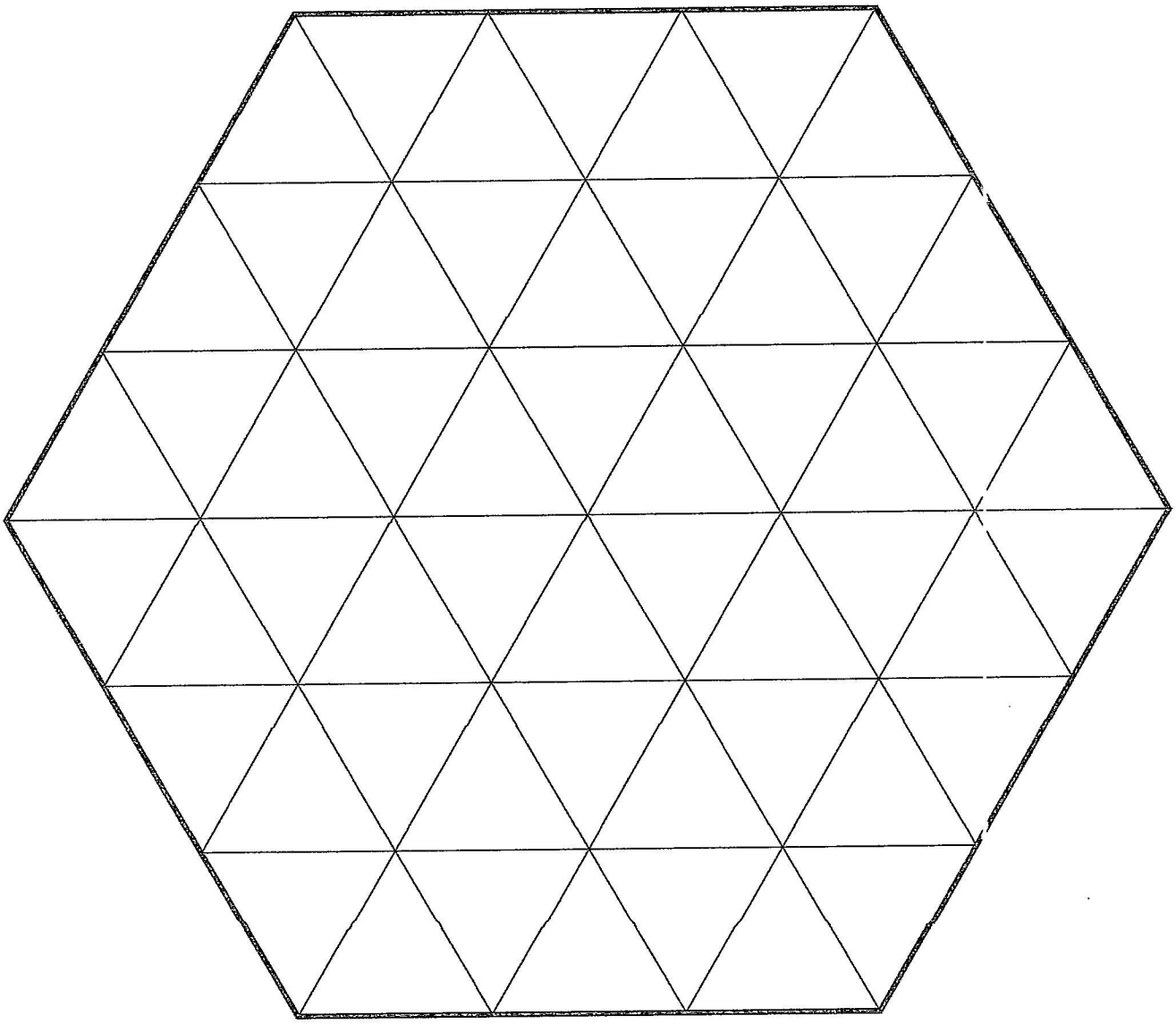
a trapezoid
color it red



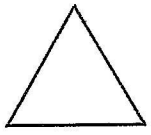
a hexagon
color it yellow

NAME | DATE

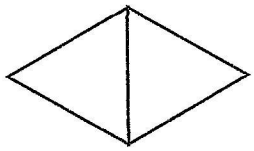
Last Shape In Wins page 2 of 2



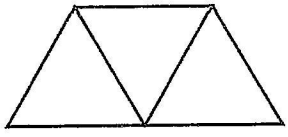
Shapes



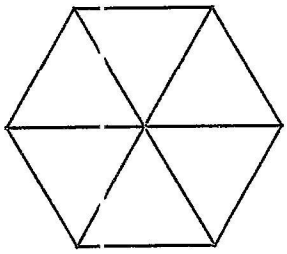
a triangle
color it green



a rhombus
color it blue



a trapezoid
color it red



a hexagon
color it yellow

 Name: _____

Inventing a Bobby Dropper

Draw your ideas here:

Congratulations on your failed inventions!

Inventors experiment, test their invention, then try to make it better. Keep track of your discoveries below.

Draw your Bobby-Dropper (and the Bobby pin):	Circle the path that shows how it fell.	Results:
Version 1	 other (draw it)	It worked well It didn't work well
Version 2	 other (draw it)	It worked well It didn't work well
Version 3	 other (draw it)	It worked well It didn't work well
Version 4	 other (draw it)	It worked well It didn't work well

If you want to keep inventing, keep taking notes on the back.

 Name: _____

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Version 4	 other (draw it)	It worked well It didn't work well

If you want to keep inventing, keep taking notes on the back.

Fireworks

by ReadWorks

Photograph of fireworks

Have you ever seen fireworks before? They are often used to entertain people at celebrations and parties. They were invented thousands of years ago in China. Some people believe that fireworks were invented in 200 BC. At the time, they were used to scare away evil spirits.

The first fireworks were very different than they are now. The firecrackers were bamboo, a type of grass. They would explode after sitting in the fire for a few minutes. Around 800 to 1,000 years later, Chinese scientists invented a powder that would explode when thrown into a fire. People began stuffing this powder inside of bamboo stems and then throwing them into a fire. The fireworks would not fly into the air, however. They also were not colorful.

Now they can fly high up in the sky, and they are very colorful! Do you like fireworks?

Making Rock Candy:

This easy rock candy recipe lets kids observe the crystallization process firsthand while making some pretty delicious treats. Sugar, water, and few more items found at home are all you need to turn your kitchen into a rock candy laboratory.

Step 1: How to Make Rock Candy
Gather your ingredients and tools. All you need is water, sugar, a clothespin, a pot for boiling, and a few wooden sticks to grow rock candy crystals in your kitchen! You might pick out a food color dye, too. We chose red. For the "sticks," we picked up a few bamboo skewers from the grocery store.

Step 2: Create your sugar solution
Bring two cups of water to a boil in a large pot on the stove. Next, stir in four cups of sugar. Boil and continue stirring until sugar appears dissolved. This creates a supersaturated sugar solution. This is also the time to add in any flavor enhancements, such as vanilla or peppermint and so on. Allow the solution to cool for 15-20 minutes.

Step 3: Prepare sticks for the candy
While waiting for the solution to cool, prepare your wooden sticks for growing the rock crystals. Wet the wooden sticks and roll them around in granulated sugar. Make sure you allow the sugared sticks to completely dry before continuing to Step 4. You'll need one stick per jar.

Step 4: Add in a food color of your choice
Once the sugar solution is cool, add in food coloring to create rock candy of your preferred color. Leave this step out for clear-colored crystals.

Step 5: Pour the cooled solution into a jar for the final candy-making process
Pour the cooled solution into a glass jar (or jars) and insert the sugar-covered wooden stick into the center of the glass. Make sure that the stick is not touching any part of the jar. If it does, the candy crystals could get stuck to the bottom or to the sides. You can divide the sugar solution across several smaller jars or use one large mason jar, depending on how many sticks of rock candy you'd like to make.

Once in place, secure the stick in place using a clothespin. Cover the top of the glass with a paper towel. You may have to poke a hole in the paper towel for the wooden stick to poke through.

Step 6: Let the candy crystals grow in a quiet, dark place

Place the glass in a cool and quiet place. Loud noises and a lot of movement can disturb the crystal making process. Every day, the candy crystals will grow larger. They will reach their maximum growth potential by two weeks. When you have a good amount of rock candy crystals, remove the stick and place it on a sheet of wax paper to dry...before eating!

Our rock candy took at least two weeks to grow, and fyi, it turned out more pink than red!

The Pepper and Soap Experiment

Read on to learn how to chase the "pepper" germs away!

You will need:

A shallow bowl or dish (a pie plate works well if you have one), water, ordinary black pepper, and some liquid dish soap.

Step 1

Cover the bottom of your shallow dish with water.

Step 2

Sprinkle black pepper across the surface of the water. Note how the surface tension of the water causes the pepper flakes float.

Step 3

Stick your finger in the center of the dish; did anything happen? Not much right? You probably just got some pepper flakes stuck to your finger. Now imagine that the pepper flakes are germs

Step 4

Now dip the tip of your finger into the liquid dish soap—you don’t need much.

Step 5

Now stick that finger into the center of the dish. What happens? Your soapy finger chased those pepper flakes to the edges of the plate! Dish soap is formulated to break the surface tension of water, which is why it is so effective on greasy, dirty dishes. And it wasn’t until you added soap to the bowl that those "germs" were chased away. This is the reason grown-ups are always nagging you to wash your hands with soap!

How to Make Invisible Ink

This low-tech invisible ink science experiment lets kids send secret messages to friends and family. All they'll need is a little lemon juice or milk. We decided to try both versions of this invisible ink experiment to see if the results were any different.

Commonly found household items make up the ingredient list, including juice, milk, honey, and vinegar. At room temperature, these compound liquids are colorless, making them perfect for invisible ink fun. Put them in contact with heat and the oxidization process turns them various shades of brown, aka, the ink appears! Read on for step-by-step instructions on how to make invisible ink with your kids.

We used milk and lemon juice to create our invisible ink.

Step 1

Gather your ingredients and tools. For this experiment, you need a piece of paper, a cotton swab, a heat source (a lamp or electric stove works), and milk or lemon.

Draw or write your secret message.

Step 2

If you are using lemon juice, squeeze your lemon into a glass. You can mix it with a little bit of water. Dip your cotton swab into the milk or lemon juice and start writing your message. Let your message dry completely.

Apply heat to get the secret message to appear.

Step 3

Once dry, an adult should hold the sheet of paper over a heat source. We used an electric stovetop. You can also use a lamplight or blow-dryer.

Your messages will appear like magic!

Step 4

As the milk or lemon “ink” heats up, it will oxidize and turn brown. You can try this experiment with other substances such as vinegar, honey, or orange juice.

Make a Walking Water Rainbow

Nothing brightens up a day like making your own rainbow! For this colorful science experiment, kids get to create their own mini rainbow while learning about capillary action.

You will need:

7 wide mouth jars or drinking glasses, food coloring (the 3 primary colors red, yellow, and blue), water, scissors, and paper towel (the thicker the better--we used thinner paper towels and the experiment took a lot longer). But don't worry: no matter how long it takes, the magic will happen!

Step 1: The Jars
Arrange the 7 jars in a line.

Step 2: The Water
Fill **every other** jar starting with the first about 3/4 of the way up with water. (We used less water and it took longer, so don't be shy with the water and the food coloring.)

Step 3: The Color
Add the food coloring. If you have the 7 jars arranged in a line, add a healthy squirt of red to the first **and** the last jar, yellow to the third jar, and blue to the fifth jar. Only the jars with water get the food coloring. So: red, skip a jar, yellow, skip a jar, blue, skip a jar, then red again.

Step 4: Fold The Paper Towels
Fold 6 paper towels in half and then in half again so you have long, thin paper towels. Really crease those folds! Next, fold one of the long paper towels in half length-wise so it's half the size. Depending on how tall your jars or glasses are, you'll want to cut a good inch or inch and a half off the end with scissors. You don't want the paper towels to stick up in the air too much. Repeat that step 5 more times with each of the remaining paper towels.

Step 5: Place Paper Towels in the Jars
Put one end of a folded paper towel in the first jar and the other end in the second jar. Take another and put one end in the second jar and the other end in the third jar. Repeat until you have a zigzag of paper towels going from the first jar to the last.

Step 6: Watch the Magic Happen!
The colored water is traveling up the narrow paper towel **against gravity**, using a process called capillary action. The water is pulled up through tiny gaps between the fibers in the paper towel, wicking each color up out of one jar and down into the next. The once empty jars are now filling up with the 2 colors from the jars on each side and mixing!

Make a Lava Lamp

A simple science experiment can be the best way to fill an afternoon at home. And as some of us may recall, a lava lamp can be a great way to fill an evening.

For this groovy experiment, kids get to recreate their parents' lava lamp while learning about liquid density.

Read on to learn how to prove that oil and water really don't mix!

You will need:

A wide bottle (or a fancy drinking glass or wide glass vase), food coloring, vegetable oil, water, and an Alka-seltzer tablet (make sure you have parent help as needed)

Step 1: The Oil

Fill the container about 3/4 with vegetable oil. You can choose the size of the container based on how much vegetable oil you have to spare.

Step 2: The Water

Fill the rest of the container with water, leaving 2-3 inches at the top. Watch the water fall through the vegetable oil and settle at the bottom. Can you believe that water is more dense than oil? Water molecules are "polar" and oil molecules are "non-polar", so they are not attracted to each other in the least.

Step 3: The Color

What color would you like the "lava" in your lava lamp to be? After the water has settled for a minute or so, add you food coloring. We added about 10 drops. Watch as each drop falls through the oil and sits on top of the water layer. Wait until all of the water droplets break through the oil/water line and burst into the water.

Step 4: The Bubbles

Drop your Alka-seltzer tablet in and let the games begin! The Alka-seltzer water reaction produces carbon dioxide gas bubbles which stick to the water droplets. The water/gas combo is less dense than the vegetable oil, so they rise to the top. The gas bubbles then break and are released into the air and the water sinks back down to the bottom to start over again!

Resources

Social Studies Home Learning Activities

Standard Benchmark	Economic Standard 3a: Students will identify human wants and the various resources and strategies which have been used to satisfy them over time.
Grade Band	K-3, For Grades 2 & 3
Vocabulary/Key Concepts	**Resources**: Things used to produce or make goods and services **Human Resources**: Quantity and quality of human effort directed to producing goods and services. Also known as labor. **Natural Resources**: Things that occur naturally in and on the earth that are used to produce goods and services. **Capital Resources**: Goods that are produced and used to produce or make other goods and services.

Read the vocabulary / Key Concepts and understand what all of the terms mean. **Idea!** → Put them on index cards and quiz yourself!

Activity 1:

Human resources are called labor. Human resources are needed to make or provide goods and services. Examples are teachers, carpenters, and police officers. Circle the pictures of human resources.



Capital resources are goods produced and used to produce or make other goods and services. Capital goods include tools, equipment and factories. Capital goods are used over and over. Circle the pictures of capital resources.



Activity 1 (continued)

Natural resources are things that occur naturally in and on the earth that are used to produce goods and services. Examples are water, lemons, and coal. Circle the pictures of natural resources.



Activity 2:

Look at the picture. Identify each type of resource in the picture.

The human resource is _____

_____

The natural resource is _____

_____

The capital resource is _____

_____

Activity 3:

Read the stories below. For each story underline an example of a natural resource. Circle an example of a capital resource. Put a box around an example of a human resource.

Story 1

Carlos mows lawns after school to earn money. He uses his father's lawn mower. He brings a banana to eat for a snack.

Story 2

Kristen takes care for her neighbor's dog. She uses a leash to walk the dog. She fills the dog's water bowl with fresh water.

Activity 4:

Ask a family member to describe his or her job. After he or she is finished describing the job, try to pick out the natural resource, the capital resource, and the human resource.

1. What is your family member's job? _____

2. What is the natural resource? _____

3. What is the capital resource? _____

4. What is the human resource? _____

Activity 5:

1. When you get older, how would you like to be the human resource?

_____

2. What capital resource will you use?

_____

3. What natural resource will you use?

_____