

Chapter
10

Identify and Describe Three-Dimensional Shapes

Colours About Math with
**Curious
George**

Many of the shapes in our environment
are three-dimensional shapes.

Name some of the shapes you
see in this picture.



Name _____

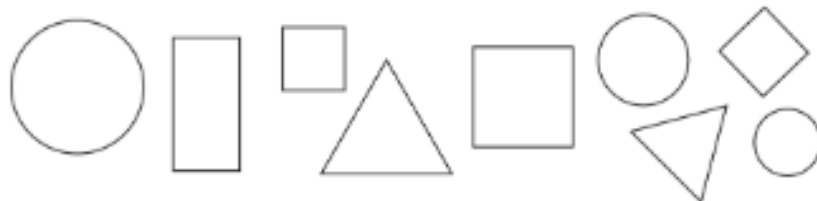
Show What You Know

Personal Math Trainer
Online Assessment
and Intervention



Identify Shapes

1



Describe Shapes

2



_____ sides

_____ vertices

3



_____ sides

_____ vertices



Sort Shapes



This page checks understanding of important skills needed for success in Chapter 10.



DIRECTIONS 1. Use red to color the squares. Use blue to color the triangles. 2–3. Look at the shape. Write how many sides. Write how many vertices. 4. Mark an X on the shapes with three sides.

Vocabulary Builder



DIRECTIONS Mark an X on the food shaped like a circle. Draw a line under the food shaped like a square. Circle the food shaped like a triangle.

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Follow the Shapes



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DIRECTIONS Choose a shape from START. Follow the path that has the same shapes. Draw a line to show the path to the END with the same shape.

Chapter 10 Vocabulary

above

arriba, encima

1

behind

detrás

5

below

debajo

6

beside

al lado

7

cone

cono

14

cube

cubo

15

curved surface

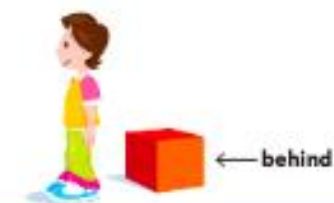







superficie curva

17

cylinder

cilindro

18

<p>© Houghton Mifflin Harcourt Publishing Company</p>  <p>← behind</p>	<p>© Houghton Mifflin Harcourt Publishing Company</p>  <p>← above</p>
<p>© Houghton Mifflin Harcourt Publishing Company</p>  <p>The flowers are beside the tree.</p>	<p>© Houghton Mifflin Harcourt Publishing Company</p>  <p>below →</p>
<p>© Houghton Mifflin Harcourt Publishing Company</p>  <p>cube</p>	<p>© Houghton Mifflin Harcourt Publishing Company</p>  <p>cone</p>
<p>© Houghton Mifflin Harcourt Publishing Company</p>  <p>cylinder</p>	<p>© Houghton Mifflin Harcourt Publishing Company</p>  <p>curved surface</p>

flat surface

superficie plana

27

in front of

delante de

35

next to

al lado de

44

roll

rodar

54

slide

deslizar

67

sphere

esfera

69

stack

apilar

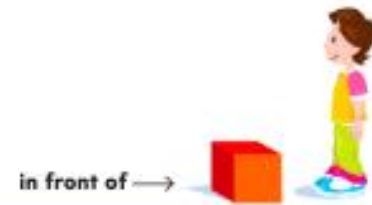
71

three-dimensional shapes

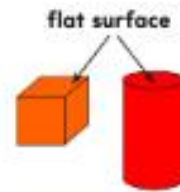
figuras tridimensionales

78

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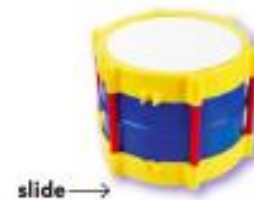
The flowers are **next to** the tree.

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sphere

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three-dimensional shapes

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The cubes **stack** on top of one another.

Picture It



Word Box

above
behind
below
beside
next to
in front of
cone
cube

Word Box

curved surface
cylinder
flat surface
roll
slide
sphere
stack
three-dimensional shape

Secret Words

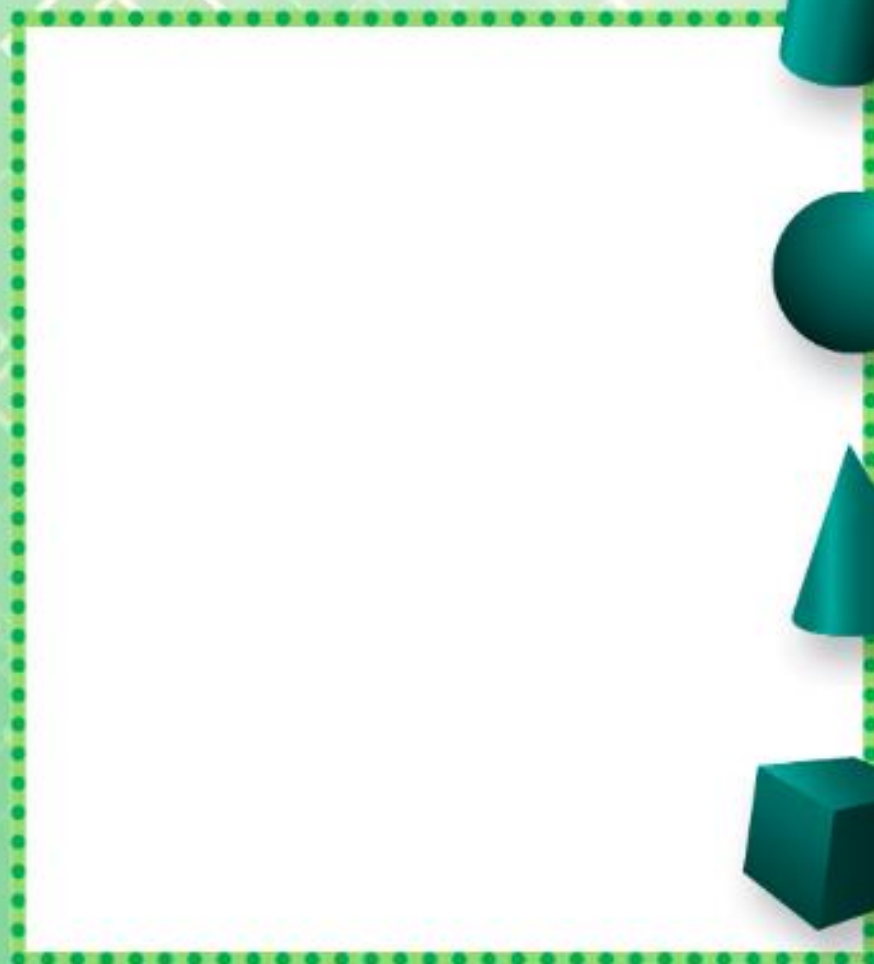
Player 1

Player 2

DIRECTIONS Players take turns. A player chooses a secret word from the Word Box and then sets the timer. The player draws pictures to give hints about the secret word. If the other player guesses the secret word before time runs out, he or she puts a counter in the chart. The first player who has counters in all his or her boxes is the winner.

MATERIALS timer, drawing paper, two-color counters for each player

The Write Way



DIRECTIONS Choose one idea. • Choose 2 three-dimensional shapes. Draw to show what you know about the shapes. • Draw to show *above*, *below*, and *next to*.
Reflect Be ready to tell about your drawing.

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Name _____

HANDS ON Lesson 10.1

Three-Dimensional Shapes

Essential Question How can you show which shapes stack, roll, or slide?



Geometry—K.G.B.4

MATHEMATICAL PRACTICES
MP5, MP6, MP7

Listen and Draw



does stack

does not stack

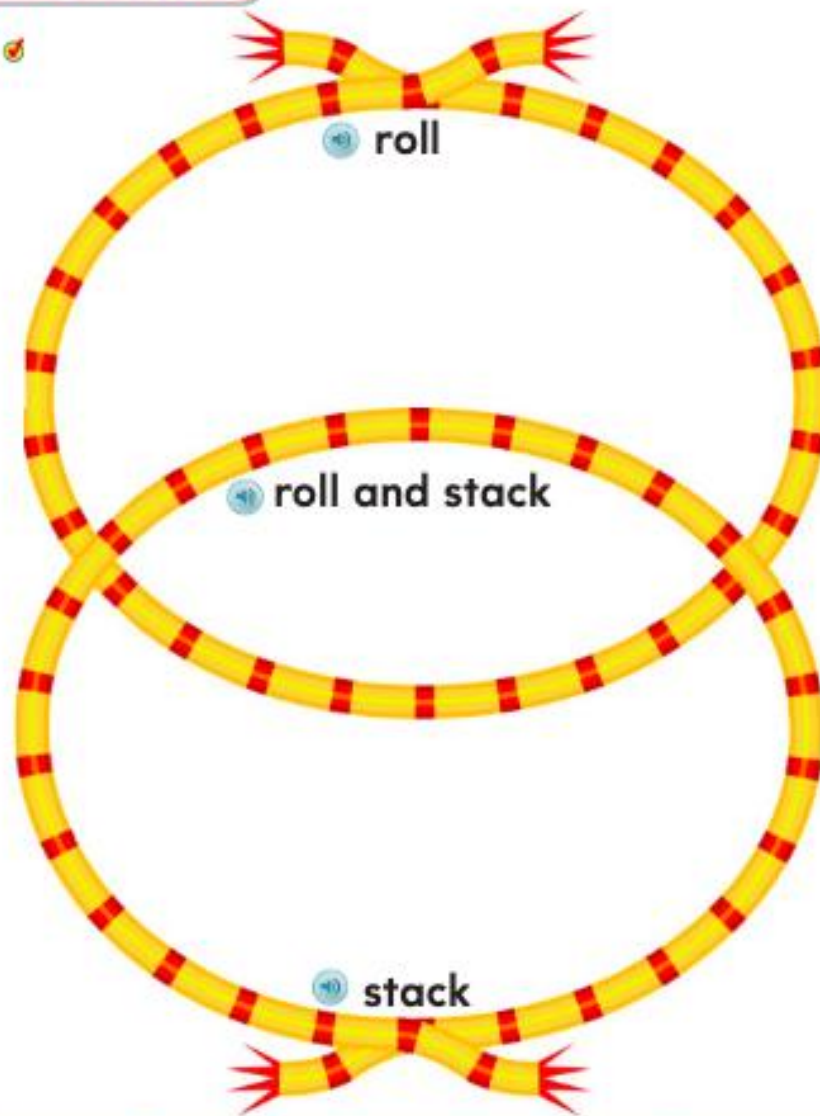
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DIRECTIONS Place three-dimensional shapes on the page. Sort the shapes by whether they stack or do not stack. Describe the shapes. Match a picture of each shape to the shapes on the sorting mat. Glue the shape pictures on the sorting mat.



Share and Show



roll



roll and stack



stack



DIRECTIONS 1. Place three-dimensional shapes on the page. Sort the shapes by whether they roll, roll and stack, or stack. Describe the shapes. Match a picture of each shape to the shapes. Glue the shape pictures on the page.



2



roll



3



stack



4



slide



5



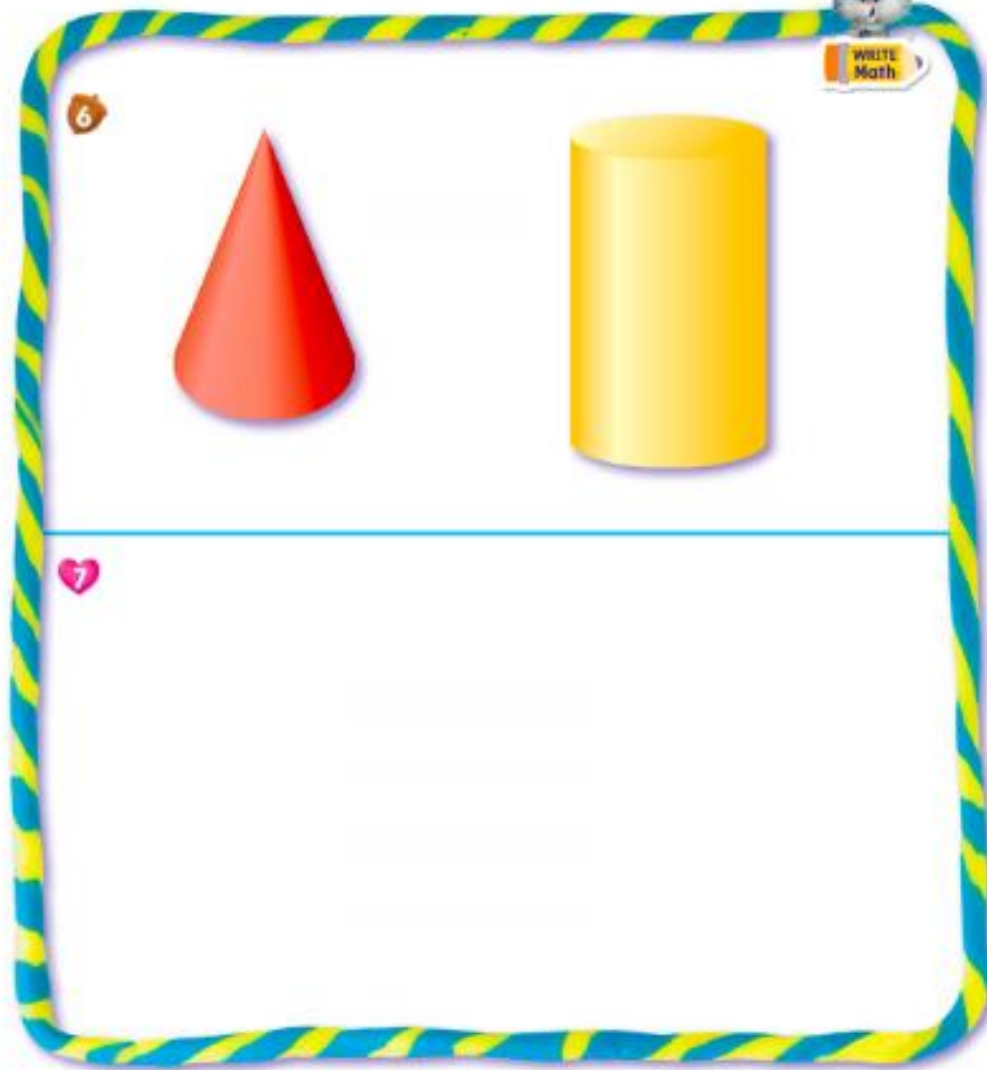
stack and slide



DIRECTIONS 2. Which shape does not roll? Mark an X on that shape. 3. Which shapes do not stack? Mark an X on those shapes. 4. Which shape does not slide? Mark an X on that shape. 5. Which shape does not stack and slide? Mark an X on that shape.



Problem Solving • Applications



DIRECTIONS 6. I roll and do not stack. Describe the shape. Mark an X on that shape.
7. Draw to show what you know about a real object that rolls and does not stack.



HOME ACTIVITY • Have your child identify and describe an object in the house that rolls and does not stack.

Three-Dimensional Shapes

COMMON CORE STANDARD—K.G.B.4
Analyze, compare, create, and compose shapes.

1



roll



2



stack



3



slide



4



stack and slide



DIRECTIONS 1. Which shape does not roll? Mark an X on that shape. 2. Which shapes do not stack? Mark an X on those shapes. 3. Which shape does not slide? Mark an X on that shape. 4. Which shape does not stack and slide? Mark an X on that shape.

**Lesson Check** (K.G.B.4)**Spiral Review** (K.CC.A.2, K.G.B.4)

DIRECTIONS 1. Which shape does not roll? Mark an X on the shape. 2. Count forward. Trace and write the numbers in order. 3. Which shape has a curve? Color the shape.

Name _____

Identify, Name, and Describe Spheres**Essential Question** How can you identify, name, and describe spheres?

Geometry—K.G.A.2

MATHEMATICAL PRACTICES
MP5, MP6, MP7**Listen and Draw**

sphere

not a sphere

DIRECTIONS Place three-dimensional shapes on the page. Identify and name the sphere. Sort the shapes on the sorting mat. Describe the sphere. Match a picture of each shape to the shapes on the sorting mat. Glue the shape pictures on the sorting mat.

1

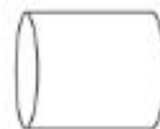
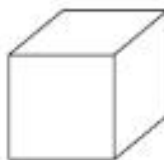
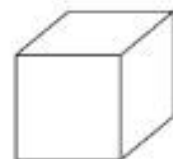
sphere



flat surface

curved surface

2



DIRECTIONS 1. Look at the sphere. Circle the words that describe a sphere. 2. Color the spheres.

Name _____

3



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DIRECTIONS 3. Identify the objects that are shaped like a sphere. Mark an X on those objects.



Problem Solving • Applications



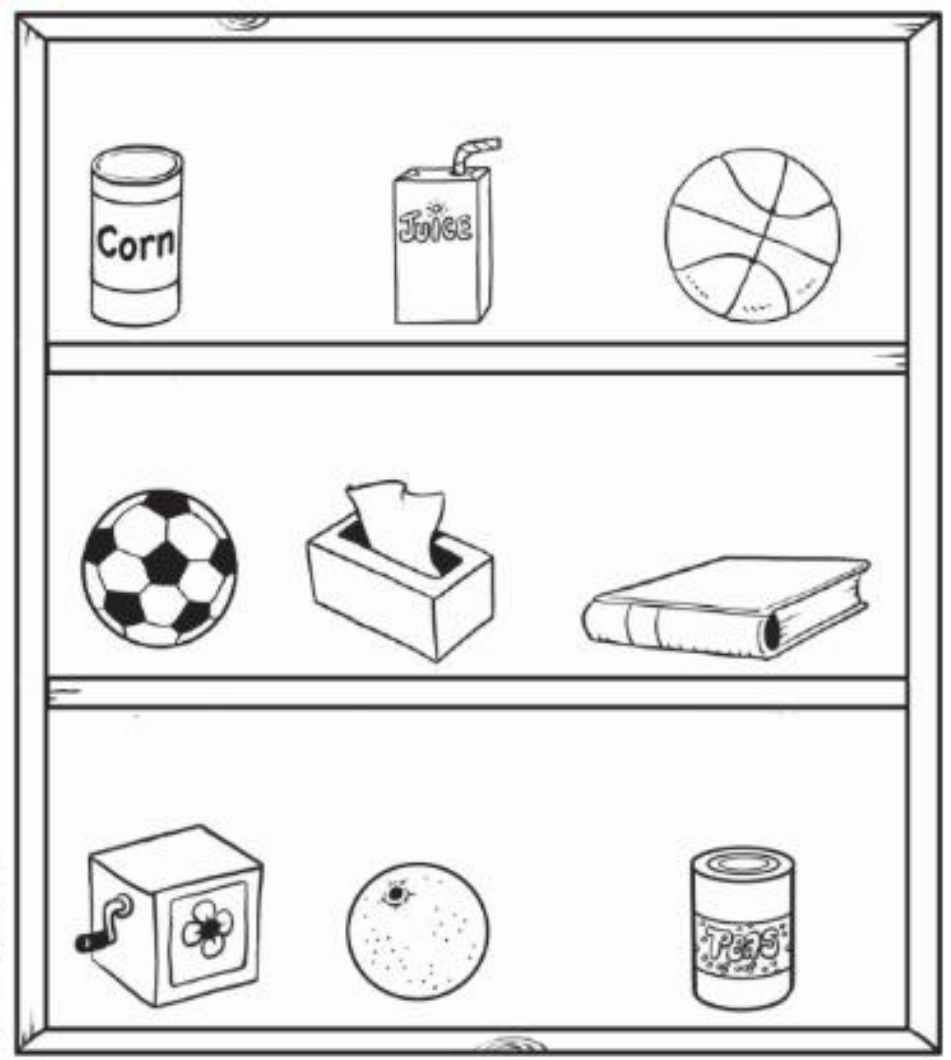
DIRECTIONS 4. I have a curved surface. Which shape am I? Mark an X on that shape. 5. Draw to show what you know about a real object that is shaped like a sphere.



HOME ACTIVITY • Have your child identify and describe an object in the house that is shaped like a sphere.

Identify, Name, and Describe Spheres

COMMON CORE STANDARD—K.G.A.2
Identify and describe shapes (squares, circles, triangles, rectangles, hexagons, cubes, cones, cylinders, and spheres).



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DIRECTIONS 1. Identify the objects that are shaped like a sphere. Mark an X on those objects.

Name _____

HANDS ON Lesson 10.3

Identify, Name, and Describe Cubes

Essential Question How can you identify, name, and describe cubes?



Geometry—K.G.A.2

MATHEMATICAL PRACTICES
MP2, MP5, MP6

Listen and Draw



cube

not a cube

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DIRECTIONS Place three-dimensional shapes on the page. Identify and name the cube. Sort the shapes on the sorting mat. Describe the cube. Match a picture of each shape to the shapes on the sorting mat. Glue the shape pictures on the sorting mat.

Share and Show



cube



flat surface

curved surface



flat surfaces

DIRECTIONS 1. Look at the cube. Circle the words that describe a cube. 2. Use a cube to count how many flat surfaces. Write the number.

Name _____

10 3



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DIRECTIONS 3. Identify the objects that are shaped like a cube. Mark an X on those objects.

Name _____

Practice and Homework
Lesson 10.3

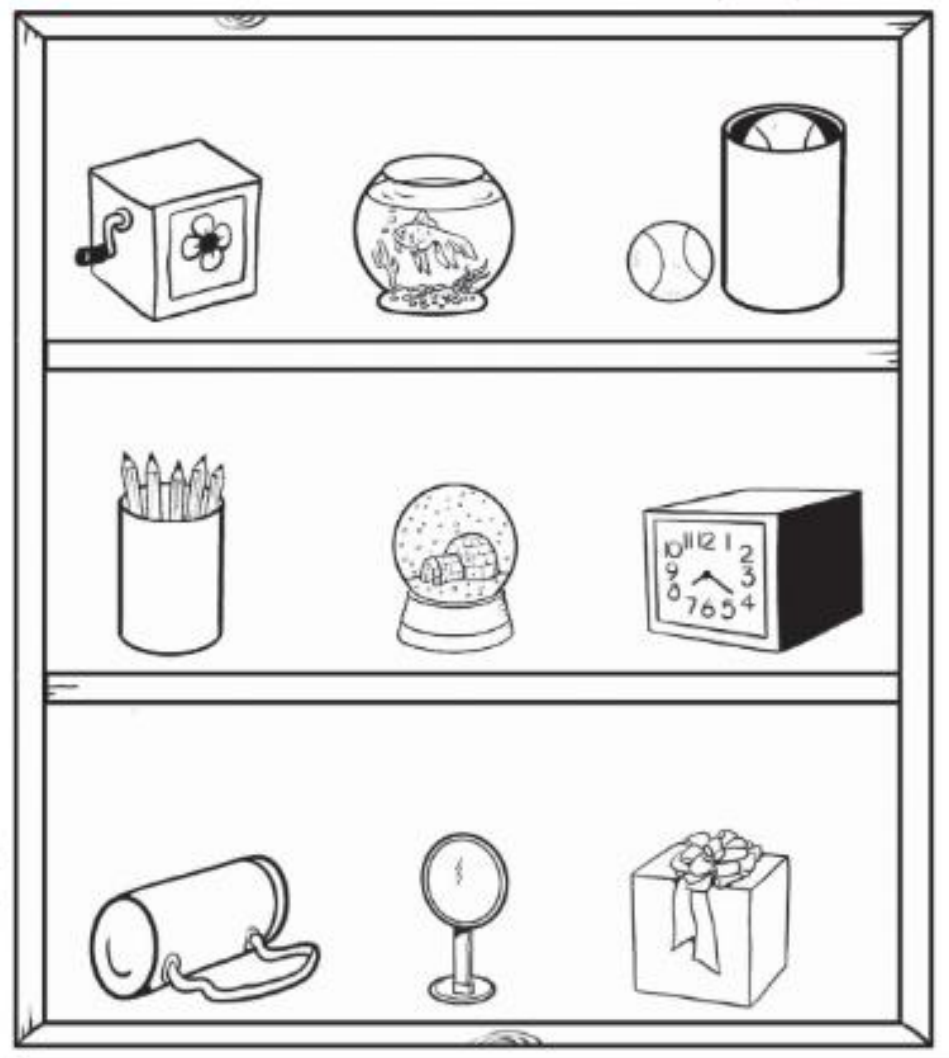
Identify, Name, and Describe
Cubes



1



COMMON CORE STANDARD—K.G.A.2
Identify and describe shapes (squares, circles, triangles, rectangles, hexagons, cubes, cones, cylinders, and spheres).



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DIRECTIONS 1. Identify the objects that are shaped like a cube. Mark an X on those objects.



Lesson Check (K.G.A.2)

1



Spiral Review (K.CCA.1, K.G.B.4)

2



_____ sides

3

71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100



DIRECTIONS 1. Which shape is a cube? Mark an X on the shape. 2. How many sides does the square have? Write the number. 3. Begin with 81 and count forward to 90. What is the next number? Draw a line under that number.



Name _____

HANDS ON
Lesson 10.4

Identify, Name, and Describe Cylinders

Essential Question How can you identify, name, and describe cylinders?



Geometry—K.G.A.2

MATHEMATICAL PRACTICES
MP2, MP5, MP6

Listen and Draw



cylinder

not a cylinder

DIRECTIONS Place three-dimensional shapes on the page. Identify and name the cylinder. Sort the shapes on the sorting mat. Describe the cylinder. Match a picture of each shape to the shapes on the sorting mat. Glue the shape pictures on the sorting mat.

Name _____

3



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DIRECTIONS 3. Identify the objects that are shaped like a cylinder. Mark an X on those objects.



Problem Solving • Applications

WRITE
Math

DIRECTIONS 4. I have 2 flat surfaces. Which shape am I? Mark an X on that shape. 5. Draw to show what you know about a real object that is shaped like a cylinder.



HOME ACTIVITY • Have your child identify and describe an object in the house that is shaped like a cylinder.



Lesson Check (K.G.A.2)



Spiral Review (K.OA.A.5, K.G.B.4)



_____ vertices



$$5 - \frac{\quad}{\quad} = 2$$



DIRECTIONS 1. Which shape is a cylinder? Mark an X on the shape. 2. How many vertices does the triangle have? Write the number. 3. Write the number to show how many are being taken from the set.



Name _____

Identify, Name, and Describe Cones

Essential Question How can you identify, name, and describe cones?



Geometry—K.G.A.2

MATHEMATICAL PRACTICES

MP2, MP5, MP6



Listen and Draw



cone	not a cone



DIRECTIONS Place three-dimensional shapes on the page. Identify and name the cone. Sort the shapes on the sorting mat. Describe the cone. Match a picture of each shape to the shapes on the sorting mat. Glue the shape pictures on the sorting mat.



cone



flat surface

curved surface



flat surface

DIRECTIONS 1. Look at the cone. Circle the words that describe a cone. 2. Use a cone to count how many flat surfaces. Write the number.

Name _____

3



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DIRECTIONS 3. Identify the objects that are shaped like a cone. Mark an X on those objects.

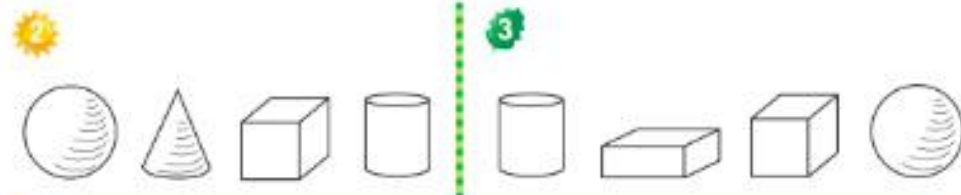


HOME ACTIVITY • Have your child identify and describe an object in the house that is shaped like a cone.

Mid-Chapter Checkpoint

Personal Math Trainer
Online Assessment
and Intervention

Concepts and Skills



4 THINK SMARTER

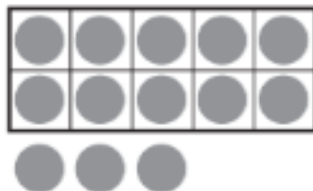
DIRECTIONS 1. Mark an X on the object that is shaped like a cylinder. (K.G.A.2)
2. Color the sphere. (K.G.A.2) 3. Color the cube. (K.G.A.2) 4. Draw lines to match the objects to their shapes. (K.G.A.2)



Lesson Check (K.G.A.2)



Spiral Review (K.NBT.A.1, K.G.A.2)





DIRECTIONS 1. Which shape is a cone? Mark an X on the shape. 2. Count and tell how many. Write the number. 3. Which shape is a circle? Color the circle.



Name _____



PROBLEM SOLVING Lesson 10.6



Problem Solving • Two- and Three-Dimensional Shapes

Essential Question How can you solve problems using the strategy *use logical reasoning*?



Geometry—K.G.A.3

MATHEMATICAL PRACTICES
MP4, MP5, MP7



Unlock the Problem



**two-dimensional
shapes**



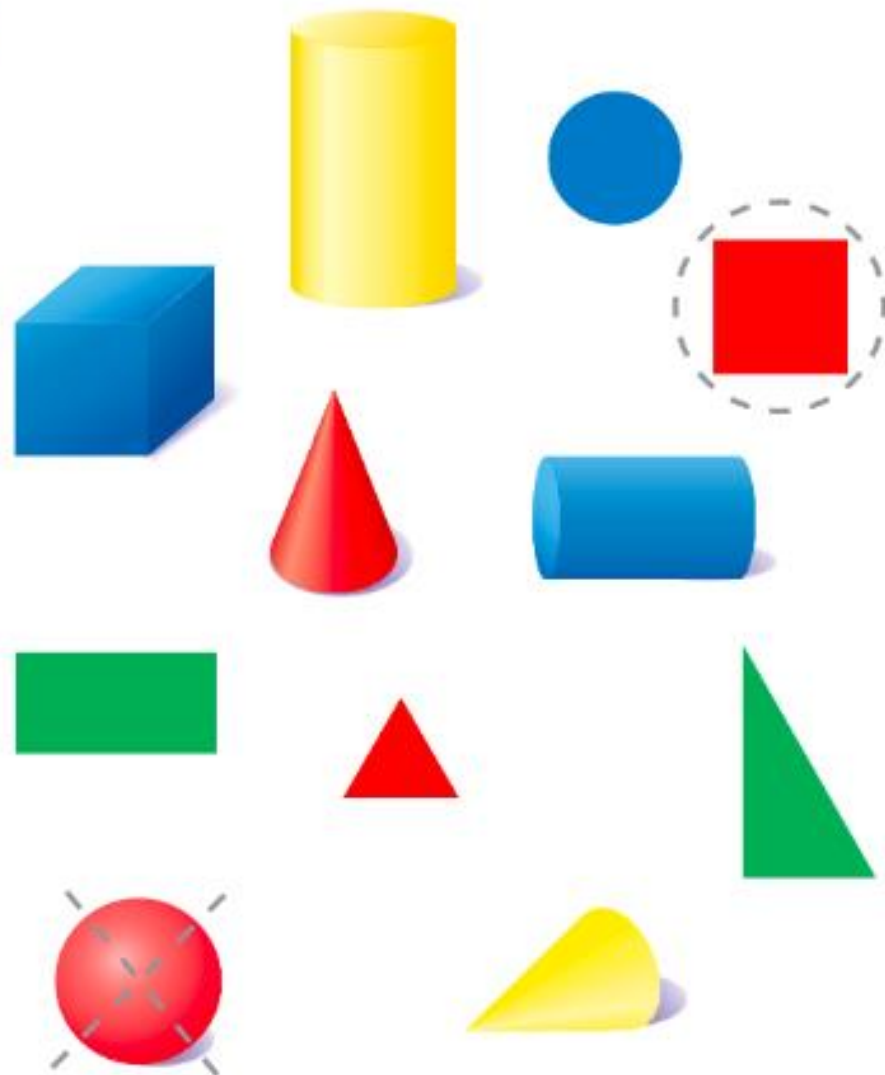
**three-dimensional
shapes**



DIRECTIONS Place shapes on the page. Sort the shapes on the sorting mat into sets of two-dimensional and three-dimensional shapes. Match a picture of each shape to a shape on the sorting mat. Glue the shape pictures on the sorting mat.



Try Another Problem

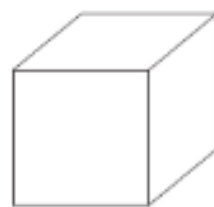


DIRECTIONS 1. Identify the two-dimensional or flat shapes. Trace the circle around the square. Circle the other flat shapes. Identify the three-dimensional or solid shapes. Trace the X on the sphere. Mark an X on the other solid shapes.

Name _____



Share and Show



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DIRECTIONS 2. Identify the two-dimensional or flat shapes. Use red to color the flat shapes. Identify the three-dimensional or solid shapes. Use blue to color the solid shapes.

On Your Own **Real World**



3

4

DIRECTIONS 3. Draw to show what you know about a flat shape. Name the shape. 4. Draw to show what you know about a real object that has a solid shape. Name the object and the shape.

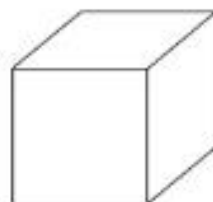


HOME ACTIVITY • Have your child identify a household object that is shaped like a three-dimensional shape. Have him or her name the three-dimensional shape.

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Problem Solving • Two- and Three-Dimensional Shapes**COMMON CORE STANDARD—K.G.A.3**

Identify and describe shapes (squares, circles, triangles, rectangles, hexagons, cubes, cones, cylinders, and spheres).



DIRECTIONS 1. Identify the two-dimensional or flat shapes. Use red to color the flat shapes. Identify the three-dimensional or solid shapes. Use blue to color the solid shapes.



Lesson Check (K.G.A.3)



Spiral Review (K.CC.A.1, K.G.B.6)



1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30



DIRECTIONS 1. Which is a three-dimensional or solid shape? Mark an X on the shape. 2. Join two triangles to make a shape. Draw and color the shape you created. 3. Begin with 1 and count forward to 19. What is the next number? Draw a line under that number.

Name _____

HANDS ON Lesson 10.7

Model Shapes

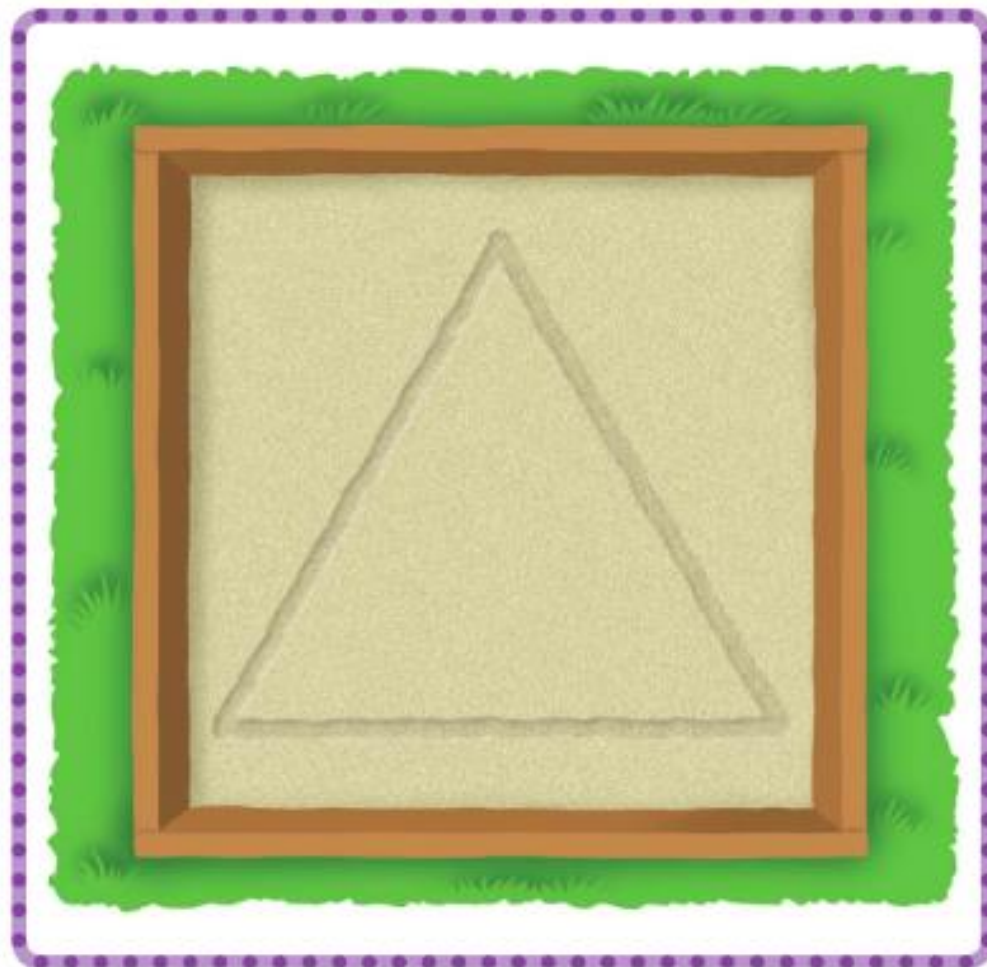
Essential Question How can you model shapes in the real world?



Geometry—K.G.B.5
Also K.G.A.2, K.G.A.3

MATHEMATICAL PRACTICES
MP3, MP8

Listen and Draw

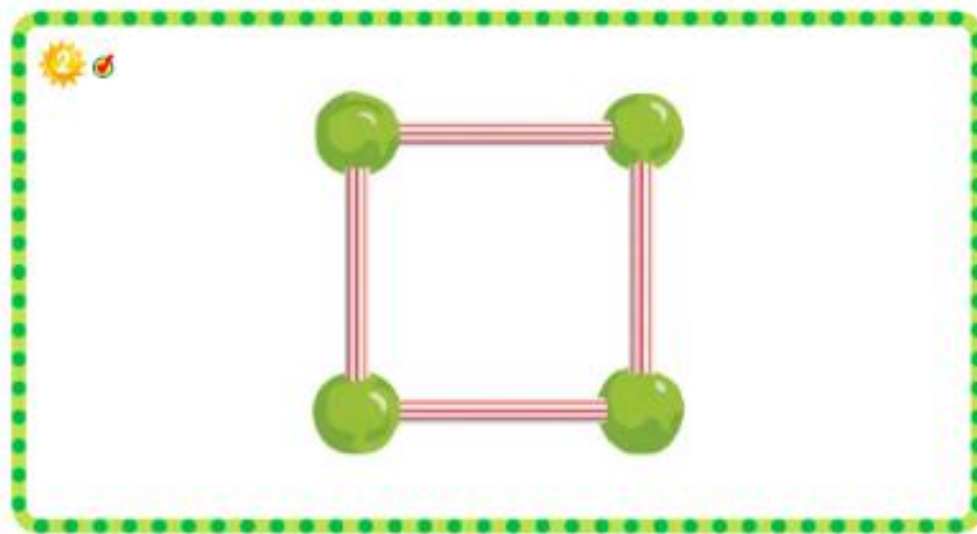
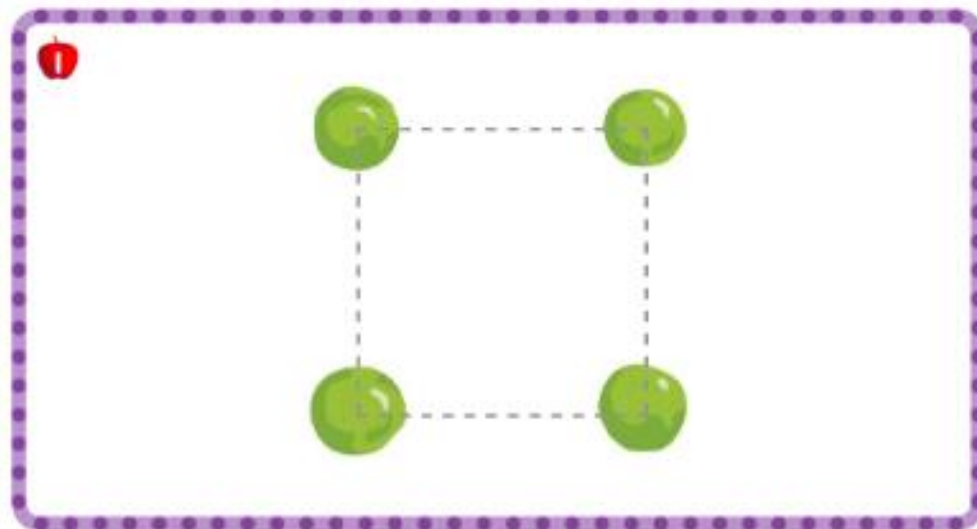


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DIRECTIONS Use your finger to trace around the shape. Name the shape. Tell a friend whether this shape is flat or solid. Talk about the number of sides and the number of vertices.

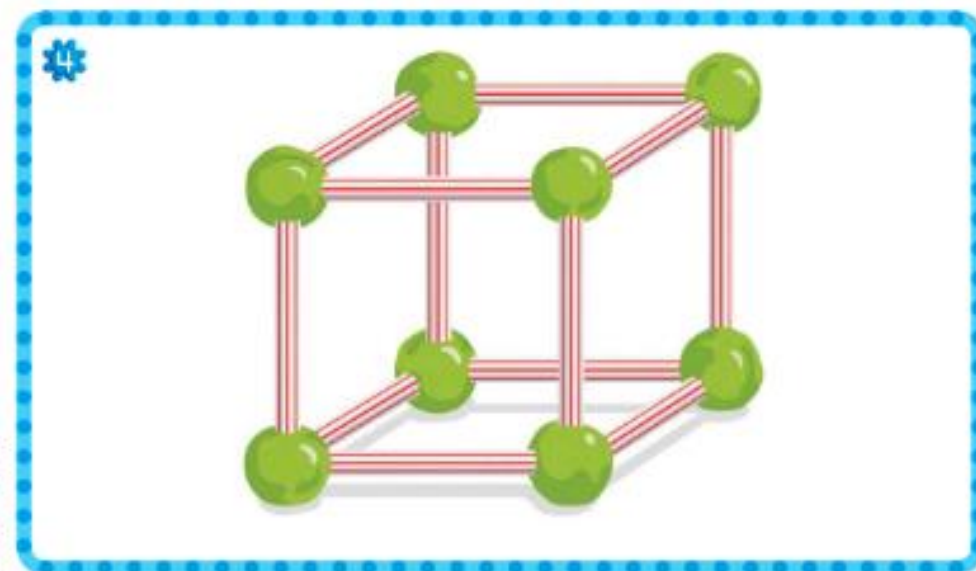
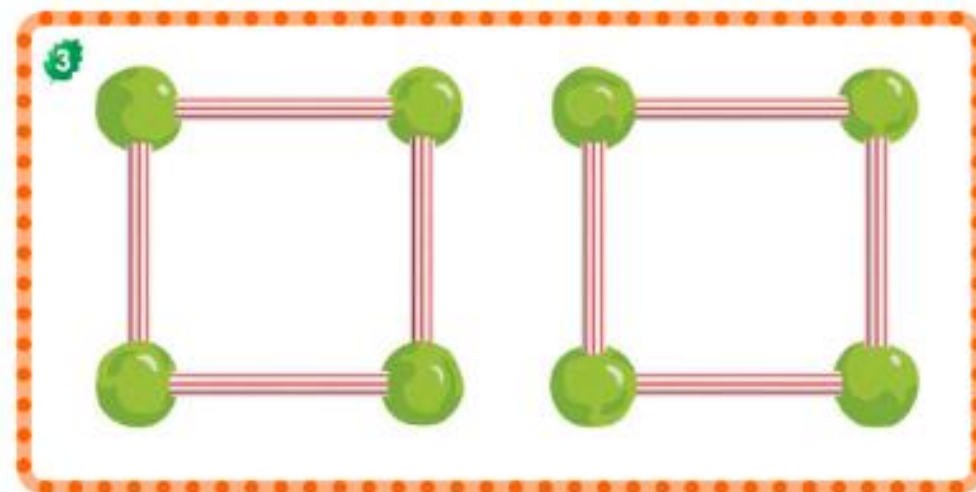


Share and Show



DIRECTIONS 1. Use clay to model 4 spheres as shown. Trace the square. The clay spheres will model the corners of the squares. 2. Place straws into the spheres as shown.

Name _____



4

DIRECTIONS 3. Use clay and straws to model another shape. Match the shape that you modeled in Exercise 2. 4. Stand a straw into each corner of one of the shapes. Carefully lift the other shape and place it onto the straws as shown. Name the solid shape you modeled.

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Problem Solving • Applications



5

6



DIRECTIONS 5. Maria's window has the shape of a square. Draw a picture of the shape. Tell a friend whether this shape is flat or solid. Talk about the number of sides and the number of vertices. 6. Use objects such as clay and straws to model a solid shape. Draw a picture of the solid shape. Tell a friend about the shape.



HOME ACTIVITY • Have your child identify a household object that has a flat shape. Have your child model the shape with a drawing. Repeat the activity with a solid object, and have your child model the shape with materials such as clay and toothpicks.

Name _____

Practice and Homework

Lesson 10.7

Model Shapes



COMMON CORE STANDARD—K.G.B.5

Model shapes in the world by building shapes from components (e.g., sticks and clay balls) and drawing shapes.

_____ sides

2

_____ flat surfaces



DIRECTIONS 1. Draw to show what you know about a square. Write how many sides. 2. Declan's can of corn has the shape of a cylinder. Use clay to model a cylinder. Draw the cylinder. How many flat surfaces are there? Write the number.



Lesson Check (K.G.B.5)

1



_____ flat surface



Spiral Review (K.G.A.2, K.O.A.A.2)

2



3



$$4 + \underline{\quad} = 5$$



DIRECTIONS 1. How many flat surfaces does this shape have? Write the number. 2. Which shape is flat? Color the flat shape. 3. Tell an addition word problem about the boats. Write the number to complete the addition sentence.

Name _____

Above and Below**Essential Question** How can you use the terms *above* and *below* to describe shapes in the environment?Common
Core

Geometry—K.G.A.1

MATHEMATICAL PRACTICES
MP4**Listen and Draw**

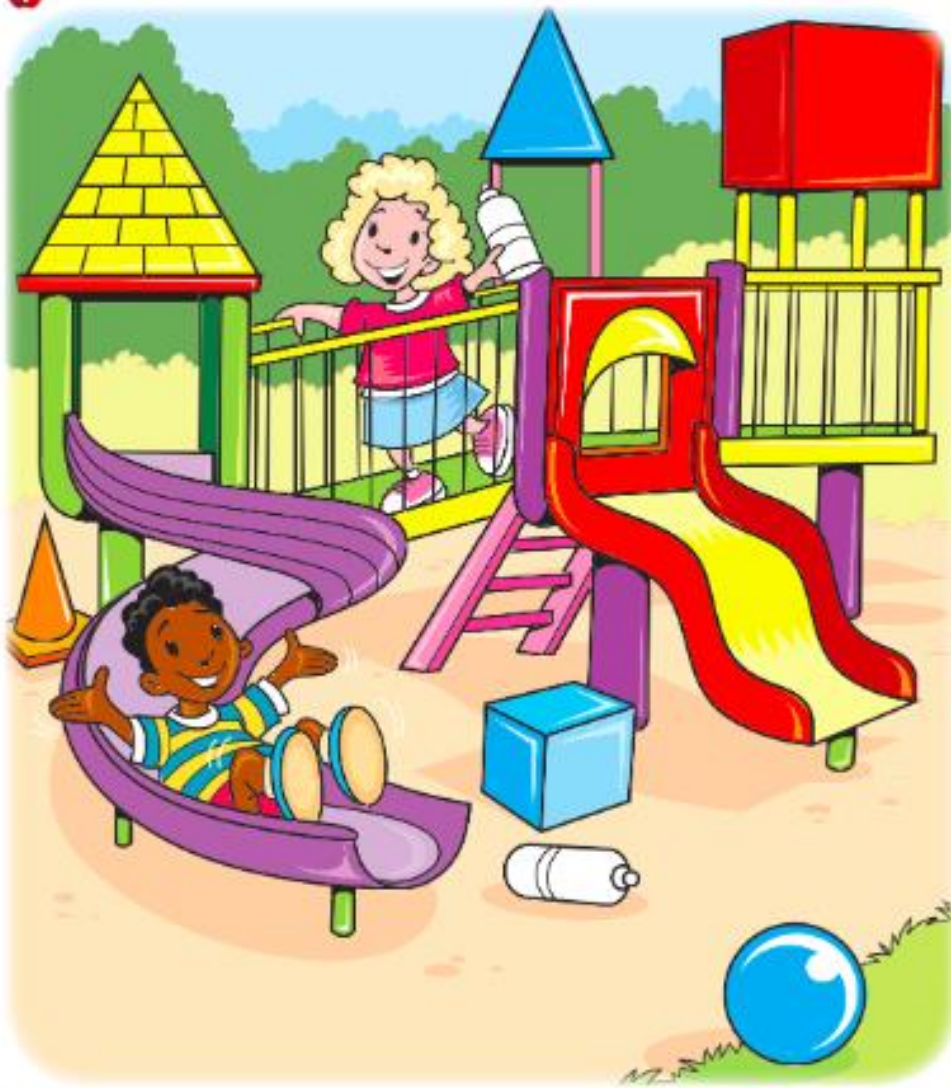
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DIRECTIONS Trace the circle around the object shaped like a cylinder that is below the shelf. Trace the X on the object shaped like a sphere that is above the cabinet.



Share and Show

1



- DIRECTIONS** 1. Circle the object that is shaped like a cone below the play set. Mark an X on the object that is shaped like a cube above the play set. Color the object that is shaped like a cylinder above the play set.

Name _____



DIRECTIONS 2. Circle the object shaped like a sphere above the net. Mark an X on the object shaped like a cube directly below the net.

Problem Solving • Applications **Real World**



3



DIRECTIONS 3. Draw to show what you know about real world three-dimensional objects that might be above or below the net. Tell a friend about your drawing as you name the shape of the objects.



HOME ACTIVITY • Tell your child you are thinking of something in the room that is above or below another object. Have your child tell you what the object might be.

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Above and Below



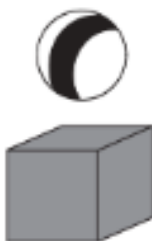
COMMON CORE STANDARD—K.G.A. 1

Identify and describe shapes (squares, circles, triangles, rectangles, hexagons, cubes, cones, cylinders, and spheres).



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DIRECTIONS 1. Mark an X on the object that is shaped like a sphere below the table. Circle the object that is shaped like a cube above the table.

**Lesson Check** (K.G.A.1)**1****Spiral Review** (K.CC.B.5, K.G.B.4)**2**

3

**vertices**

DIRECTIONS 1. Circle the set that shows an object shaped like a sphere above the object shaped like a cube. 2. Count and tell how many. Write the number. 3. How many vertices does the hexagon have? Write the number.

Name _____

Beside and Next To**Essential Question** How can you use the terms *beside* and *next to* to describe shapes in the environment?

Geometry—K.G.A.1

MATHEMATICAL PRACTICES
MP3, MP4, MP6**Listen and Draw****DIRECTIONS** Trace the X on the object shaped like a cone that is beside the object shaped like a sphere. Trace the circle around the object shaped like a sphere that is next to the object shaped like a cube.



Share and Show



- DIRECTIONS** 1. Mark an X on the bead shaped like a cube that is beside the bead shaped like a cone. Draw a circle around the bead shaped like a cone that is next to the bead shaped like a cylinder. Use the words *next to* and *beside* to name the position of other bead shapes.



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4

DIRECTIONS 2. Mark an X on the object shaped like a cylinder that is next to the object shaped like a sphere. Draw a circle around the object shaped like a cone that is beside the object shaped like a cube. Use the words *next to* and *beside* to describe the position of other package shapes.

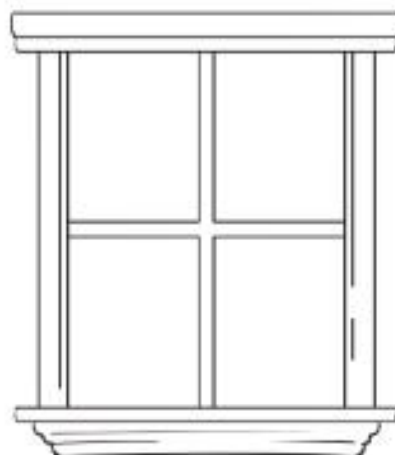


Beside and Next To

Common
Core

COMMON CORE STANDARD—K.G.A.1

Identify and describe shapes (squares, circles, triangles, rectangles, hexagons, cubes, cones, cylinders, and spheres).



DIRECTIONS 1. Mark an X on the object shaped like a cylinder that is next to the object shaped like a sphere. Circle the object shaped like a cone that is beside the object shaped like a cube. Use the words *next to* and *beside* to name the position of other shapes.



Lesson Check (K.G.A.1)



Spiral Review (K.CC.A.3, K.G.A.2)





DIRECTIONS 1. Circle the set that shows an object shaped like a cube beside the object shaped like a cone. 2. Which shape is a hexagon? Color the hexagon. 3. How many tiles are there? Write the number.

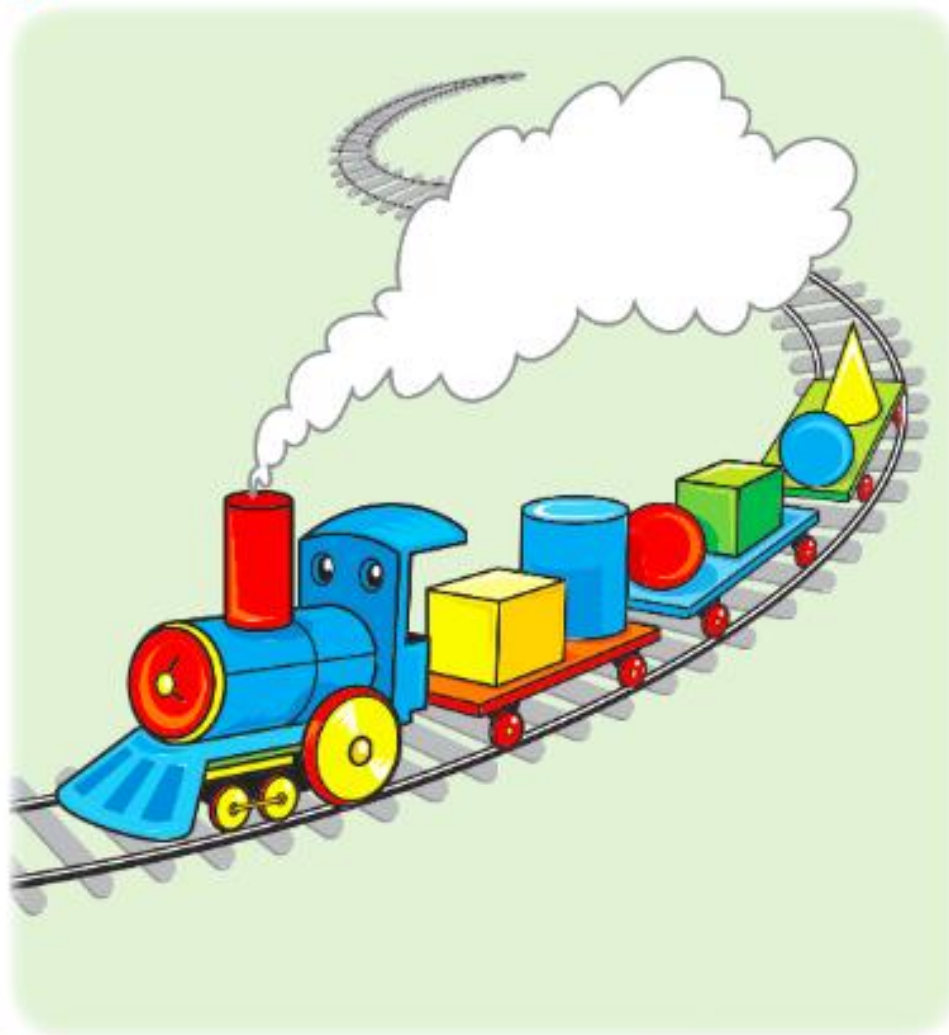




Share and Show

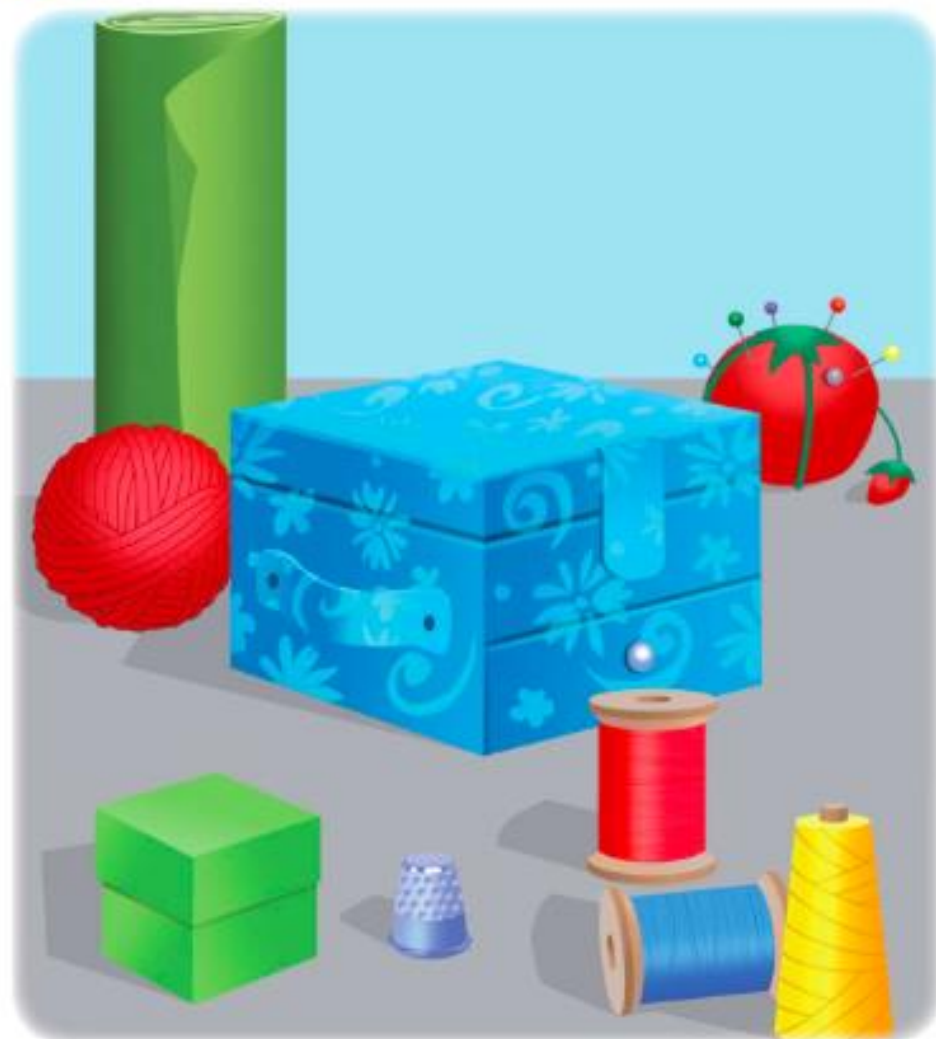


1



DIRECTIONS 1. Mark an X on the object shaped like a cylinder that is behind the object shaped like a cube. Draw a circle around the object shaped like a sphere that is directly in front of the object shaped like a cone. Use the words *in front of* and *behind* to name the position of other shapes.

Name _____



DIRECTIONS 2. Mark an X on the object shaped like a cube that is in front of the object shaped like a cylinder. Draw a circle around the object shaped like a cylinder that is behind the object shaped like a sphere. Use the words *in front of* and *behind* to name the position of other shaped objects.

In Front Of and Behind



COMMON CORE STANDARD—K.G.A.1
Identify and describe shapes (squares, circles, triangles, rectangles, hexagons, cubes, cones, cylinders, and spheres).



DIRECTIONS 1. Mark an X on the object shaped like a cylinder that is behind the object shaped like a cone. Draw a circle around the object shaped like a cylinder that is in front of the object shaped like a cube. Use the words *in front of* and *behind* to name the position of other shapes.

**Lesson Check** (K.G.A.1)**Spiral Review** (K.OA.A.1, K.G.A.2)

_____ and _____



DIRECTIONS 1. Circle the set that shows an object shaped like a cone in front of the object shaped like a cube. 2. Which shape is a triangle? Color the triangle. 3. How many of each color counter? Write the numbers.



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