Review & Enrichment

Math/Sci Week of May 18 & 25

3rd Grade

Student Name _____

Teacher Name _____

If possible, please return paper copies to drop boxes at food distribution sites or if using online access email teacher upon completion.

McKeesport Area School District

Flexible Instruction Days – Elementary Lesson Plan

GRADE / SUBJECT: 3/ Math			LESSON TITLE: Calculating and Determining Area	
☐LESSON 1:	☐ LESSON 2:	☒ LESSON 3:	☐ LESSON 4:	☐ LESSON 5:

STANDARDS AND SEQUENCE:

CCSS.MATH.CONTENT: CC.2.4.3.A.5; 3.MD.C.6 ; 3.MD.C.7.B M03.D-M.3.1.1.2

CC.2.4.3.A.5 Determine the area of a rectangle and apply the concept to multiplication and to addition.

3.MD.C.6 Measure area by counting unit squares, (square cm, square m, square in., square ft., and improvised units).

3MD.C.7a Multiply side lengths to find areas of rectangles with whole-number side lengths in the context of solving real world and mathematical problems, and represent whole-number products as rectangular areas in mathematical reasoning.

INSTRUCTIONAL OUTCOMES:

Students will:

be able to calculate area of squares and rectangles.

be able to design a space using area models on one inch and centimeter graph paper.

STUDENT PARTICIPATION:

Students will: use the area formula to find the area of given shapes and objects.

They will design their own area models on centimeter and one inch graph paper.

ACCOMMODATIONS:

For struggling learners:

The students will use the textbook pages and a multiplication chart attached to help in calculating area. They can use graph paper to create area grid models. They can count the square units to find the area of the shape.

For advanced learners: They can use centimeter grid paper to draw area models and write the number sentences for each area model.

They will engage in measuring specified areas using the Complete the Calculating the Area worksheet and an eighth paper ruler.

Common Core Standards Practice Sheets CC 55, CC 56, CC 57, CC 58

RESOURCES:

Reteaching textbook pages 364-367, Common Core Standards Practice Sheets CC 47,48, CC 49, CC 50, CC 53, CC 54

Performance task assignment page 360, various worksheets pertaining to area calculations, one inch and centimeter grid paper and a paper eighth inch ruler

EVIDENCE OF LEARNING

Students will demonstrate: strategies for understanding the meaning of calculating area by drawing and labeling area models on grid paper.

They will design an area model of a garden. They will calculate the area of given rectangles.

Math Directions Page
Week of May 18-22, 2020

Calculating and Determining Area

Essential Questions:

- **What does area mean?**
- **What are different ways to find the area of a shape?**

Brainstorm:

What do you already know about finding the area of a shape?

Assignments:

Monday: **Lesson 14-2 on Pages 346, 347, Common Core Standards Practice sheets CC 47, CC 48**

Tuesday: **Lesson14-3 Pages 348, 349, Common Core Standards Practice sheets CC 49, CC 50**

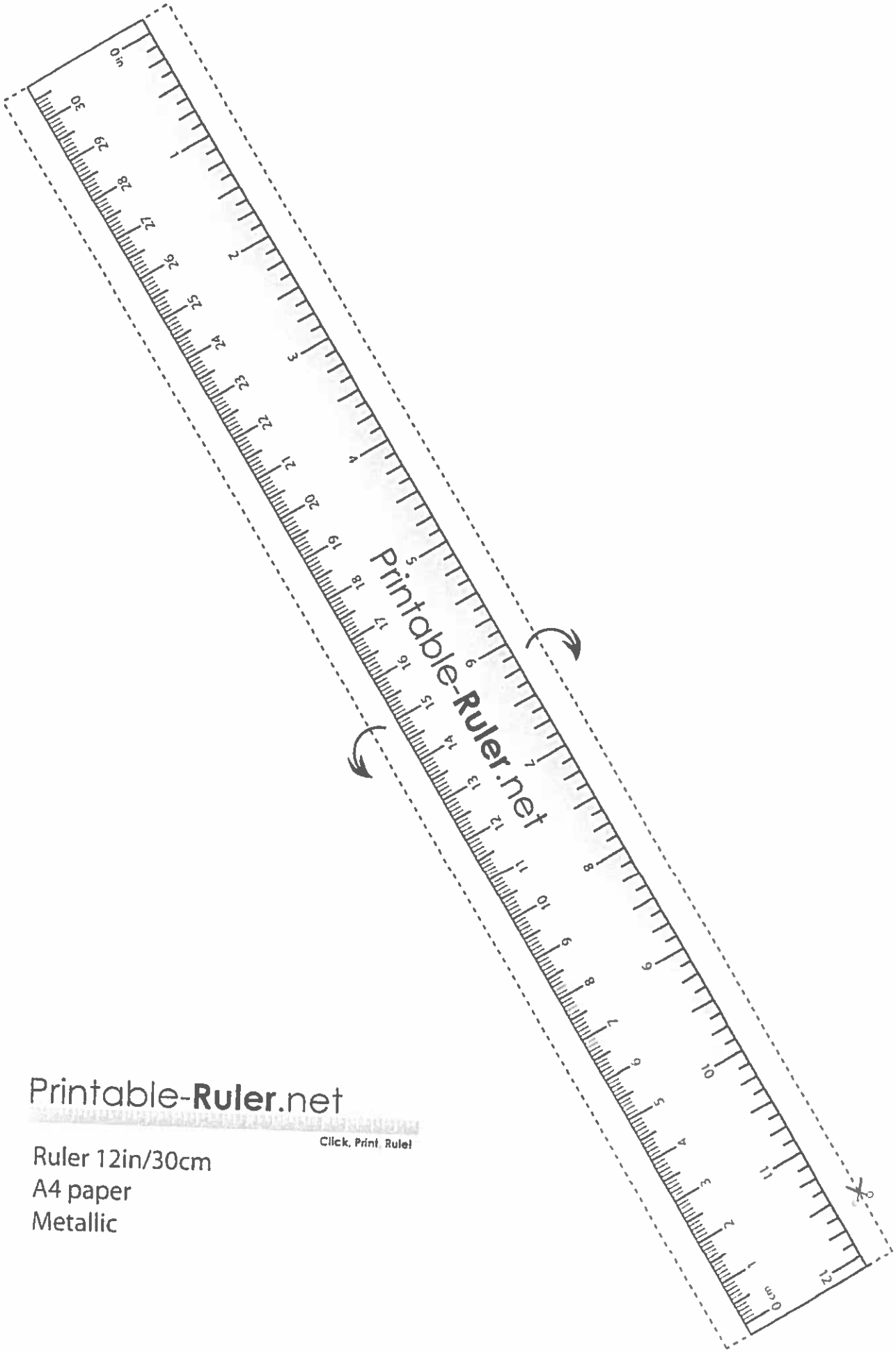
Wednesday: **Lesson 14-4 Pages 352, 353, Common Core Standards Practice sheets CC 53, CC 54**

Thursday: **Calculate the area of the community garden. Complete worksheets Geometry in the Garden and Design Your Own Community Garden.**

Friday: **Lesson 14-9 Equal Areas and Fractions pages 360,361**
Independence Practice: Use centimeter grid paper to draw the area models for numbers 6 and 7.

Extension Activity: **Performance Task Topic 14 Page 370**
Follow the directions to chart the calculated areas of each design. Record your answers in the worksheet chart labeled Performance Task Topic 14 Table. Complete only numbers 1-3.
Optional: Draw and complete numbers 4 and 5 on one inch grid paper.

Math Tools



Printable-**Ruler**.net

Click, Print, Rule!

Ruler 12in/30cm
A4 paper
Metallic

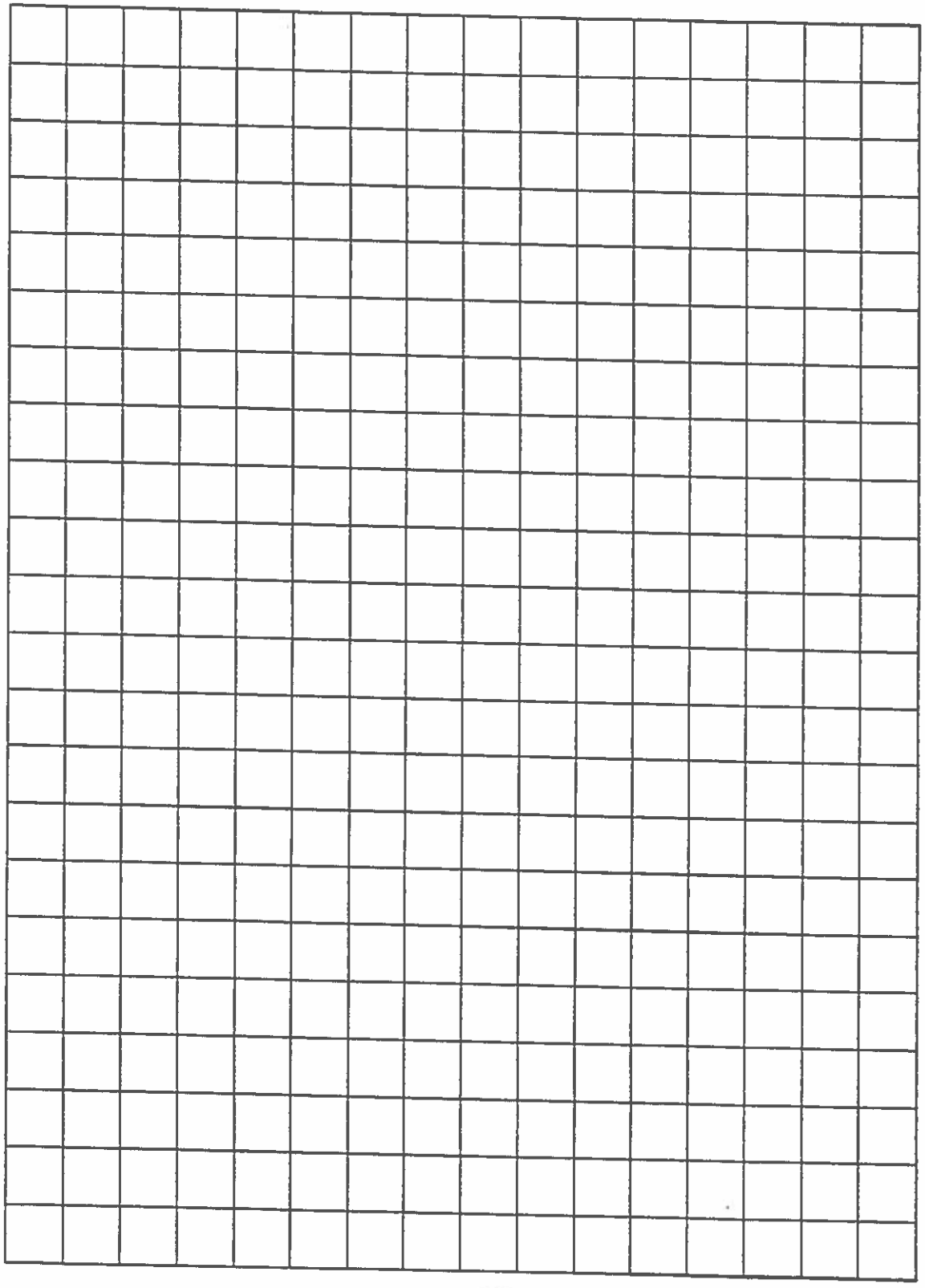
Name: _____

Multiplication Table

	0	1	2	3	4	5	6	7	8	9	10	11	12
0	0	0	0	0	0	0	0	0	0	0	0	0	0
1	0	1	2	3	4	5	6	7	8	9	10	11	12
2	0	2	4	6	8	10	12	14	16	18	20	22	24
3	0	3	6	9	12	15	18	21	24	27	30	33	36
4	0	4	8	12	16	20	24	28	32	36	40	44	48
5	0	5	10	15	20	25	30	35	40	45	50	55	60
6	0	6	12	18	24	30	36	42	48	54	60	66	72
7	0	7	14	21	28	35	42	49	56	63	70	77	84
8	0	8	16	24	32	40	48	56	64	72	80	88	96
9	0	9	18	27	36	45	54	63	72	81	90	99	108
10	0	10	20	30	40	50	60	70	80	90	100	110	120
11	0	11	22	33	44	55	66	77	88	99	110	121	132
12	0	12	24	36	48	60	72	84	96	108	120	132	144

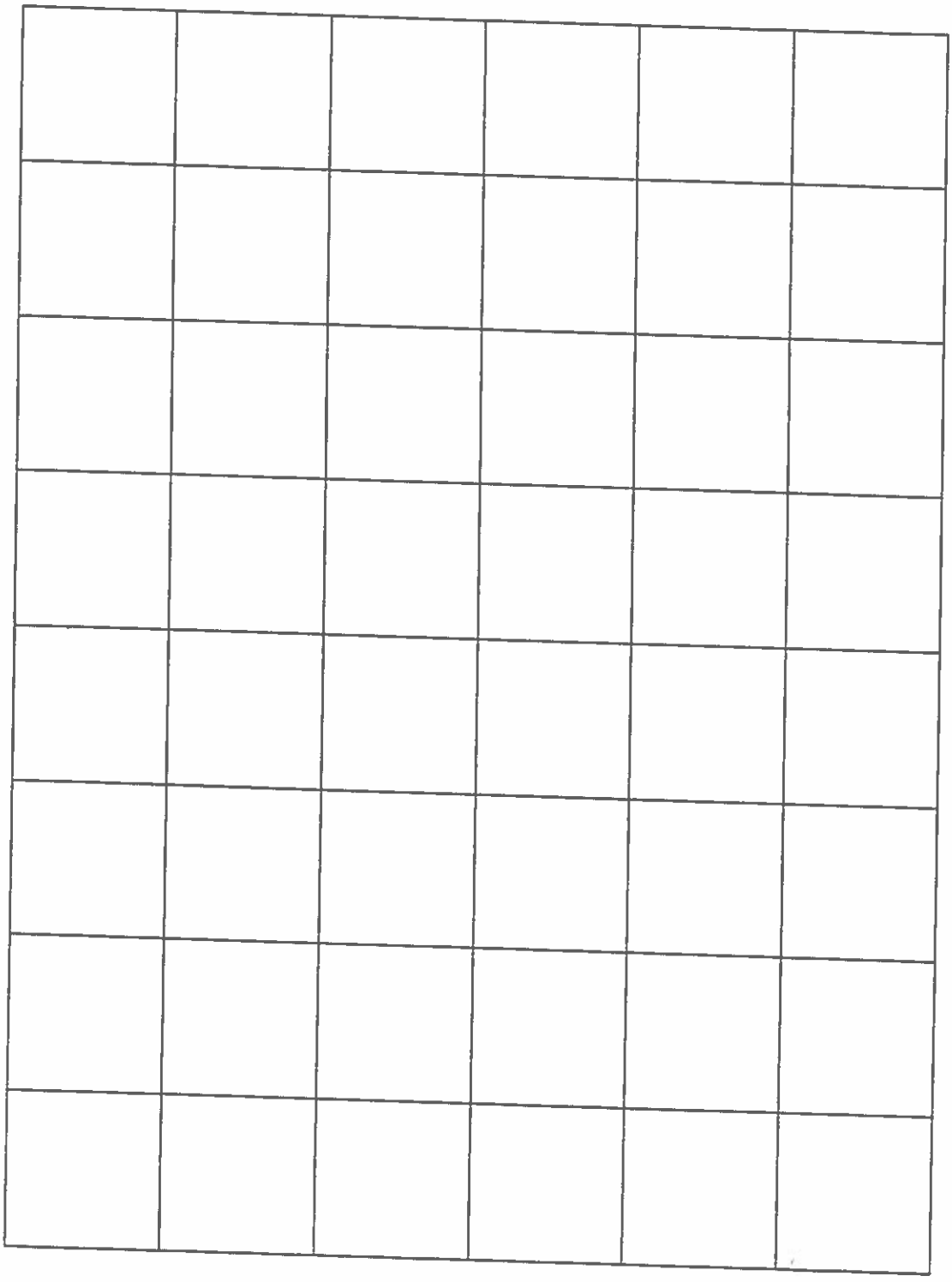
Name _____

Teaching Tool
11



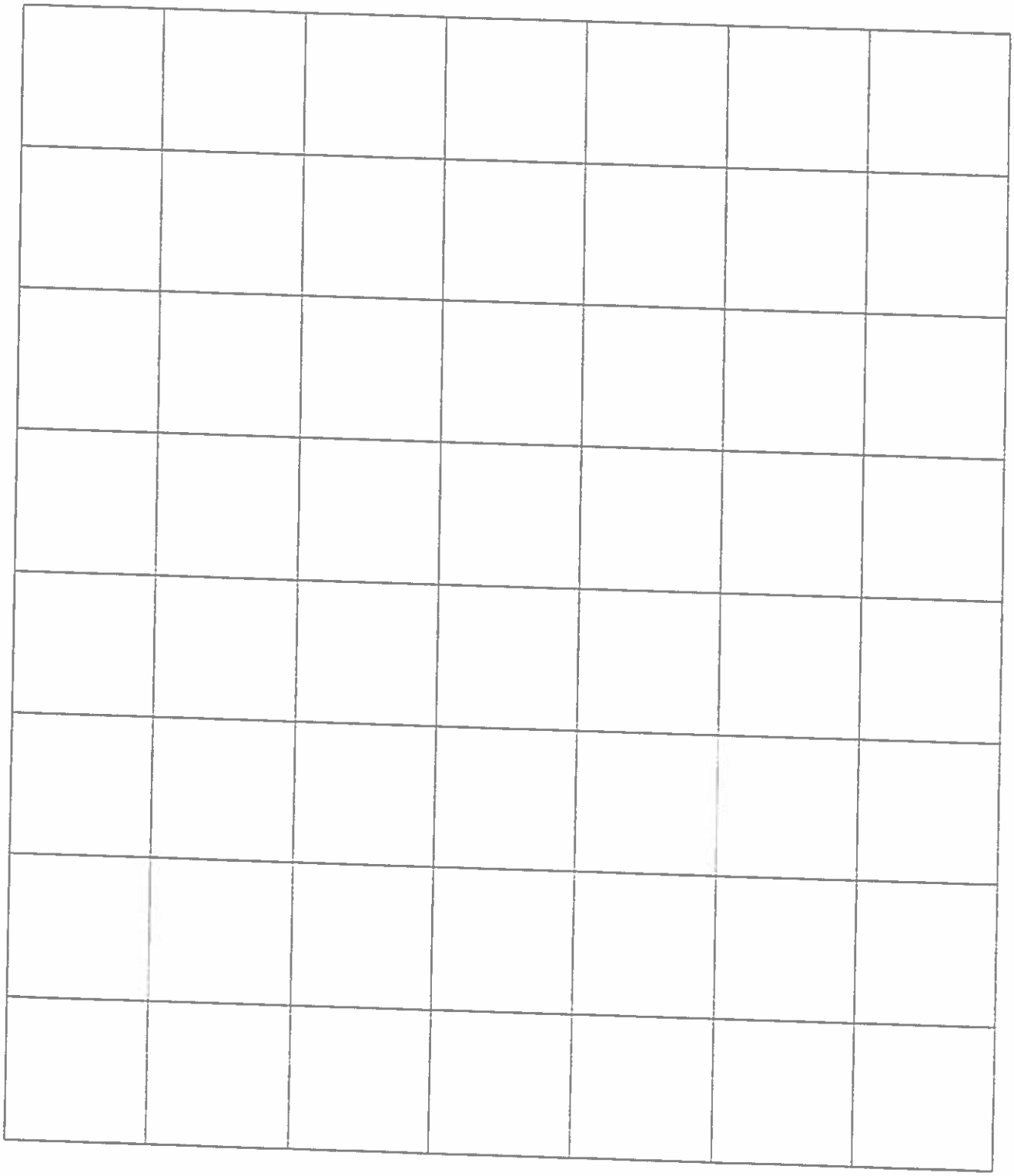
Name _____

Teaching Tool
12



1 Inch Graph Paper

One line per inch. Black lines.



Lessons

Lesson 14-2

Common Core

3.MD.5.a A square with side length 1 unit, called "a unit square," is said to have "one square unit" of area, and can be used to measure area.
Also 3.MD.5.b

Area and Units

Hands-On metric ruler

What types of units describe area?

Tran wants to make a bookmark for a paperback book. He wants his bookmark to have an area of 20 square units. A square unit is a square with sides that are each 1 unit long.

Should he use square centimeters or square inches as a unit?

☐ = 1 square unit

Guided Practice*

MATHEMATICAL PRACTICE

Do you know HOW?

Use Tools In **1–3**, use a ruler to draw.

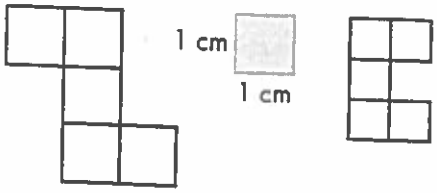
1. Draw 1 square centimeter.

2. Draw 1 square inch.

3. Draw a square with sides that are each 2 centimeters long. What is the area of the figure?

Do you UNDERSTAND?

4. Which of these shapes has an area of 5 square centimeters? How do you know?



5. Beth made bookmarks for friends. Alma's has an area of 8 square inches. Tevan's has an area of 8 square centimeters. Whose bookmark has a larger area? Explain how you decided.

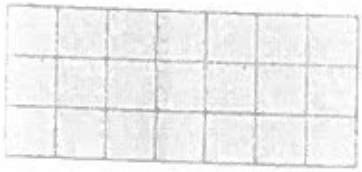
Independent Practice

In **6–7**, use a ruler to make each drawing.

6. A figure with an area of 6 square centimeters.

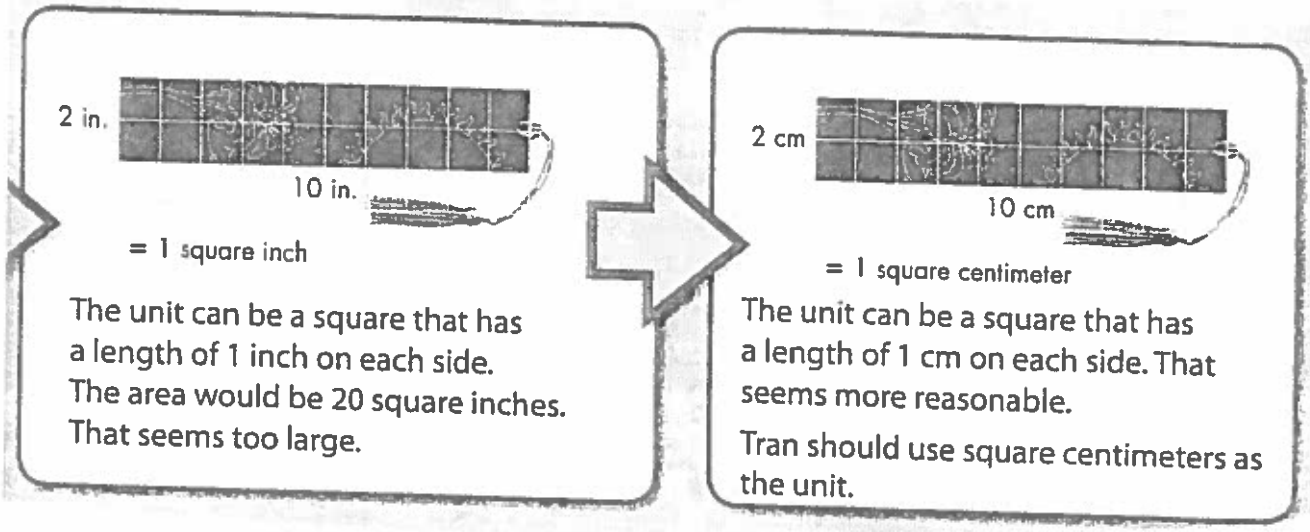
7. A figure with an area of 6 square inches.

8. Mitch drew a pattern on the piece of paper shown below. What is the area of his drawing in square units?



DIGITAL Animated Glossary, eTools www.pearsonsuccessnet.com

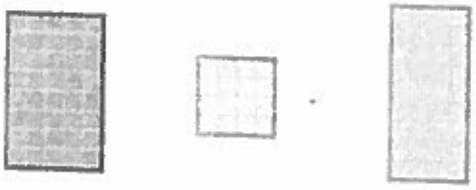
*For another example, see Set B on page 364.



Problem Solving

MATHEMATICAL PRACTICES

For **9** and **10**, use the picture at the right.



9. Suppose each square in the picture represents one square centimeter. What is the area of the blue shape?

10. Critique Reasoning Maggie thinks that the area of two of the orange shapes is equal to the area of one of the green shapes. Do you agree? Explain.

11. Yasmeen is buying letter beads to make a bracelet that spells her name. The beads cost 8¢ each. How much money does Yasmeen need to buy the beads?

12. Persevere There were 24 grapes in a dish. Luke ate 6 grapes. Juan ate half of the grapes that were left. Then Luke ate all but two of the remaining grapes. Who ate the most grapes?

13. Use Tools On grid paper, make a shape with an area of 18 square centimeters.

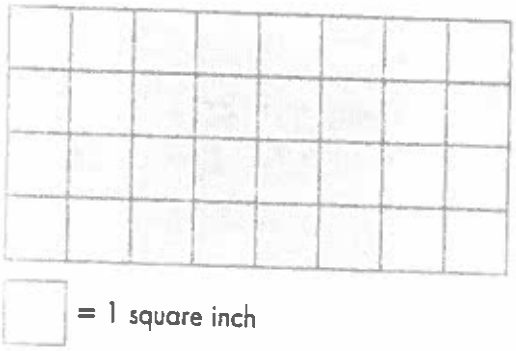
14. What is the area of the shape Ben made with tile squares? Use the figure at the right.

A 30 square inches

B 32 square inches

C 36 square inches

D 40 square inches

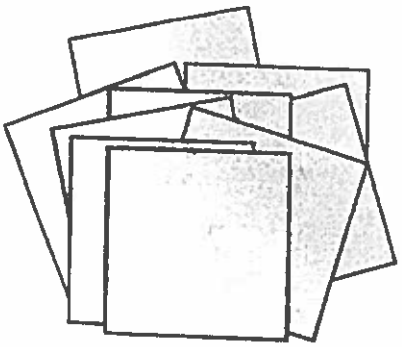


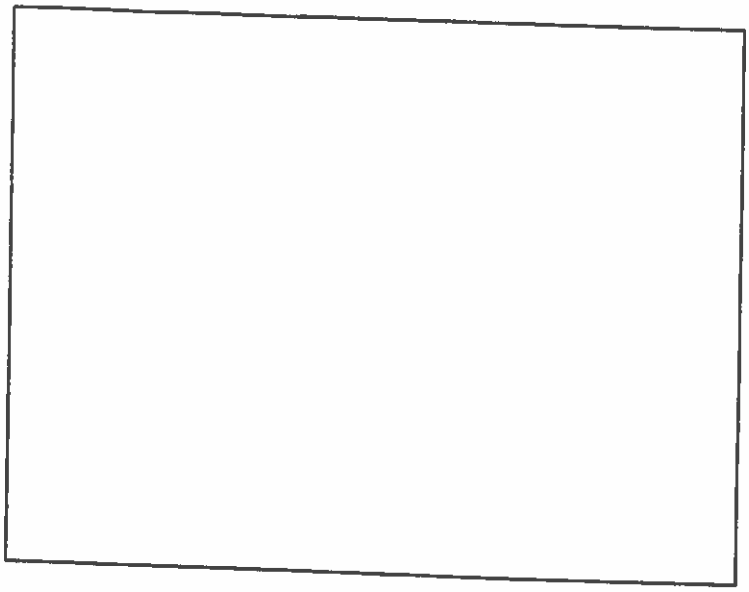
Name _____

Common Core Standards Practice

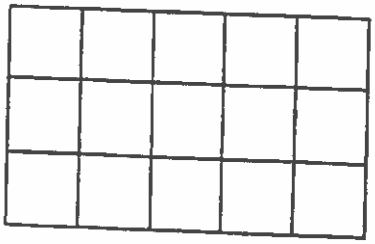
3.MD.C.5a Recognize area as an attribute of plane figures and understand concepts of area measurement. A square with side length 1 unit, called "a unit square," is said to have "one square unit" of area, and can be used to measure area.
3.MD.C.5b Recognize area as an attribute of plane figures and understand concepts of area measurement. A plane figure which can be covered without gaps or overlaps by *n* unit squares is said to have an area of *n* square units.

1. Alicia is to find the area of this rectangle. She has some inch squares. Tell her what to do to find the area.

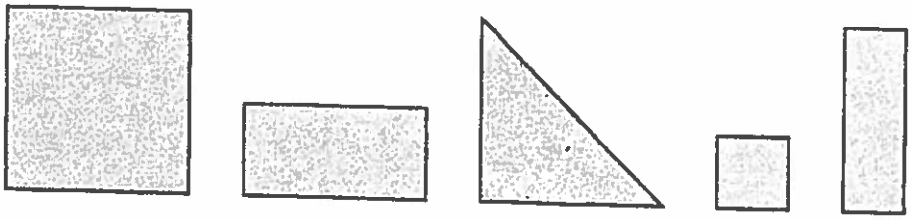




2. Hudson completely covers a rectangle with unit squares as shown below. What is the area of the rectangle? How do you know?



3. Which of these objects can Milly use to find the area of a square? Explain your answer.



4. Cassie has a new rug in her bedroom. The rug is 9 square feet. Draw a model of Cassie's new rug. Show that it is 9 square feet.

5. Circle the units used to measure area.

feet	square inches	centimeters
square meters	square feet	meters

Lesson
14-3

Common Core

3.MD.6 Measure areas by counting unit squares (square cm, square m, square in, square ft, and improvised units).

Standard Units

How can you measure area using standard units of length?

Meg bought a poster to hang in her bedroom. What is the area of the poster?

Hands-On
grid paper

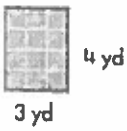
Guided Practice*

MATHEMATICAL PRACTICES

Do you know HOW?

For **1** and **2**, count the square units. Then write the area.

1.



2.

Do you UNDERSTAND?

3. Reason If the poster above measured 2 yards by 3 yards, what would its area be?

4. Use Tools Zoey has a picture on her wall that measures 8 inches by 10 inches. Use grid paper to find the area of the picture.

Independent Practice

Be Precise For **5** through **10**, count the square units. Then write the area.

5.

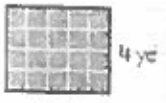
6.

7.

8.

9.

10.



DIGITAL eTools
www.pearsonsuccessnet.com

*For another example, see Set A on page 364.

Count the square units.

1 square unit = 1 square foot

The poster covers 6 of the square units.
The poster is measured in feet.

So, the area of the poster is 6 square feet.

Standard Units of Length and Area

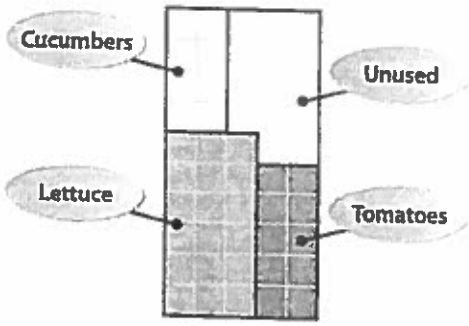
Unit	Square Unit
inch (in.)	square inch
foot (ft)	square foot
yard (yd)	square yard
mile (mi)	square mile
centimeter (cm)	square centimeter
meter (m)	square meter
kilometer (km)	square kilometer

Problem Solving

MATHEMATICAL PRACTICES

Use Tools For **11** through **13**, use the picture at the right.

Mr. Sanchez's Garden



11. Mr. Sanchez grows three types of vegetables in his garden. What is the area of the section he uses to grow cucumbers?

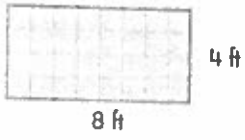
12. Mr. Sanchez leaves one section unused each growing season. What is the area of the garden that is being left unused this season?

13. What is the area in square feet of the garden that is being used to grow crops?

14. Critique Reasoning Brad says a square that has a length of 9 feet will have an area of 18 square feet. Why is Brad incorrect?

15. Amy bought $\frac{6}{8}$ pound of green grapes and $\frac{4}{8}$ pound of red grapes. Did she buy more green grapes or red grapes? Explain.

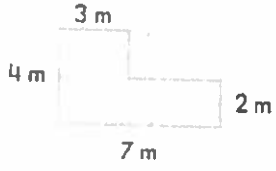
16. What is the area of the rectangle at the right?



A 12 feet **C** 12 square feet

B 32 feet **D** 32 square feet

17. Erica drew the shape shown at the right. What is the area of the shape?

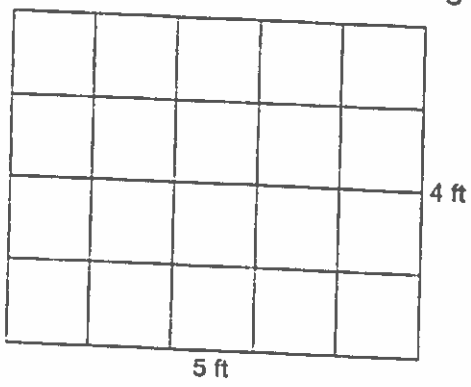


Name _____

Common Core Standards Practice

3.MD.C.6 Measure areas by counting unit squares (square cm, square m, square in, square ft, and improvised units).

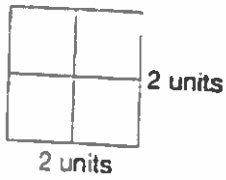
1. What is the area of the rectangle below?



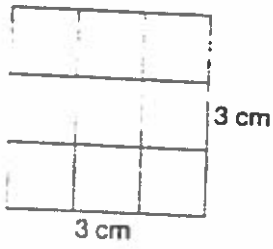
2. Explain how you found the area of the rectangle.

Find the area of each figure. Be sure to use the correct units.

3.

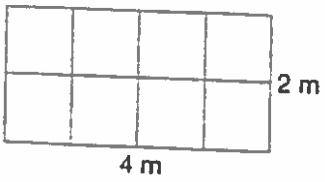


4.

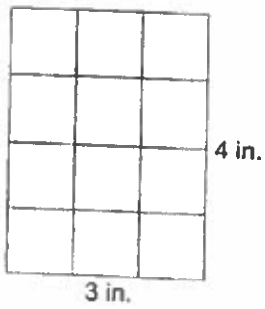


Find the area of each figure. Be sure to use the correct units.

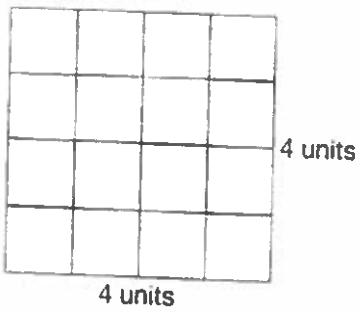
5.



6.

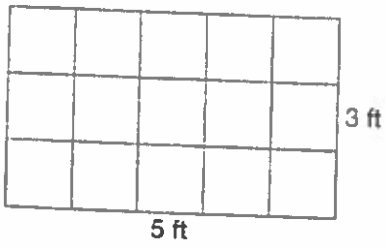


7. What is the area of the square shown below?



A 4 square units
B 8 square units
C 12 square units
D 16 square units

8. What is the area of the rectangle shown below?



A 8 square feet
B 12 square feet
C 15 square feet
D 18 square feet

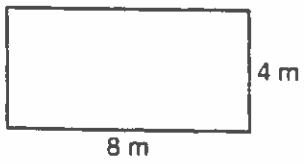
Name _____

Common Core Standards Practice

3.MD.C.7b Relate area to the operations of multiplication and addition. **b.** Multiply side lengths to find areas of rectangles with whole-number side lengths in the context of solving real world and mathematical problems, and represent whole-number products as rectangular areas in mathematical reasoning.

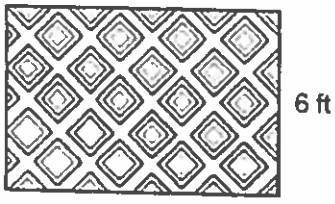
Find the area of each square or rectangle.

1.



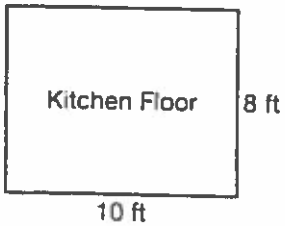
2.

3. A rug is shaped like a rectangle. The length of the rug is 9 feet, and the width is 6 feet. What is the area of the rug?



A 30 square ft
B 15 square ft
C 54 square ft
D 63 square ft

4. Ms. Leonard plans to put square tiles on her kitchen floor. Each tile covers 1 square foot and costs $1. How much will the tiles for the floor cost?



5. Troy wants to make a pen for his rabbits. The pen will be a rectangle with an area of 24 square meters. Answer Yes or No if the length and width could be the dimensions of Troy's rabbit pen.

A	length: 2 m, width: 6 m	YES	NO
B	length: 3 m, width: 8 m	YES	NO
C	length: 5 m, width: 5 m	YES	NO
D	length: 4 m, width: 6 m	YES	NO

6. Izzie is planting a garden. Her garden is shaped like a rectangle. The length is 7 feet, and the width is 3 feet.

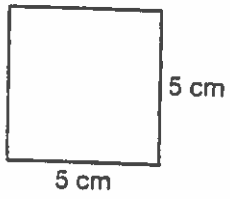
   a. Draw a picture of Izzie's garden. Label the length and width.

   b. What is the area of Izzie's garden?

   Area =

7. The drawing shows the lid of a box. Lorrie is gluing square tiles to the lid. Each tile has an area of 1 square centimeter.

   a. How many tiles will Lorrie need to completely cover the lid?

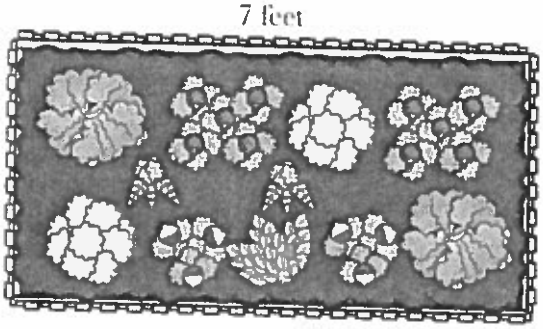
   b. Explain how you found your answer.

Geometry in the Garden

Paloma and her neighbors are planting fruits and vegetables in their community garden. Help Paloma find the area of each garden bed. **Remember: Area=Length x Width**

7 feet

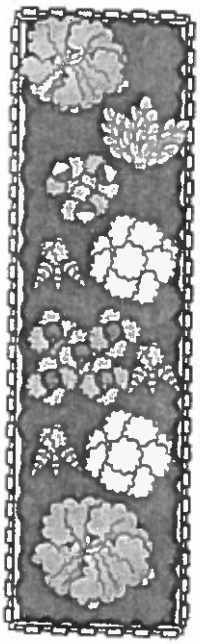
3 feet



Area = _____

2 feet

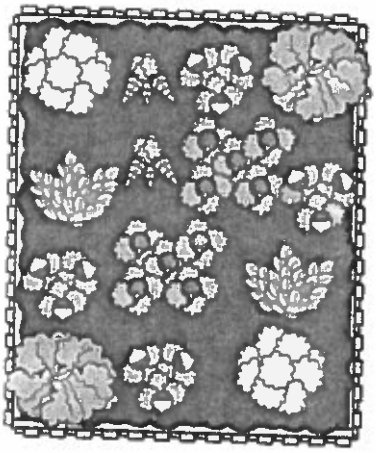
9 feet



Area = _____

5 feet

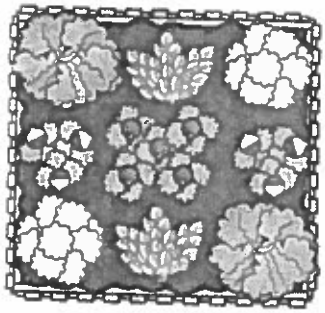
6 feet



Area = _____

4 feet

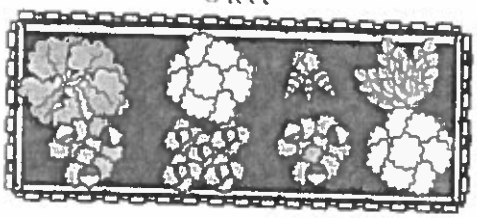
4 feet



Area = _____

8 feet

4 feet



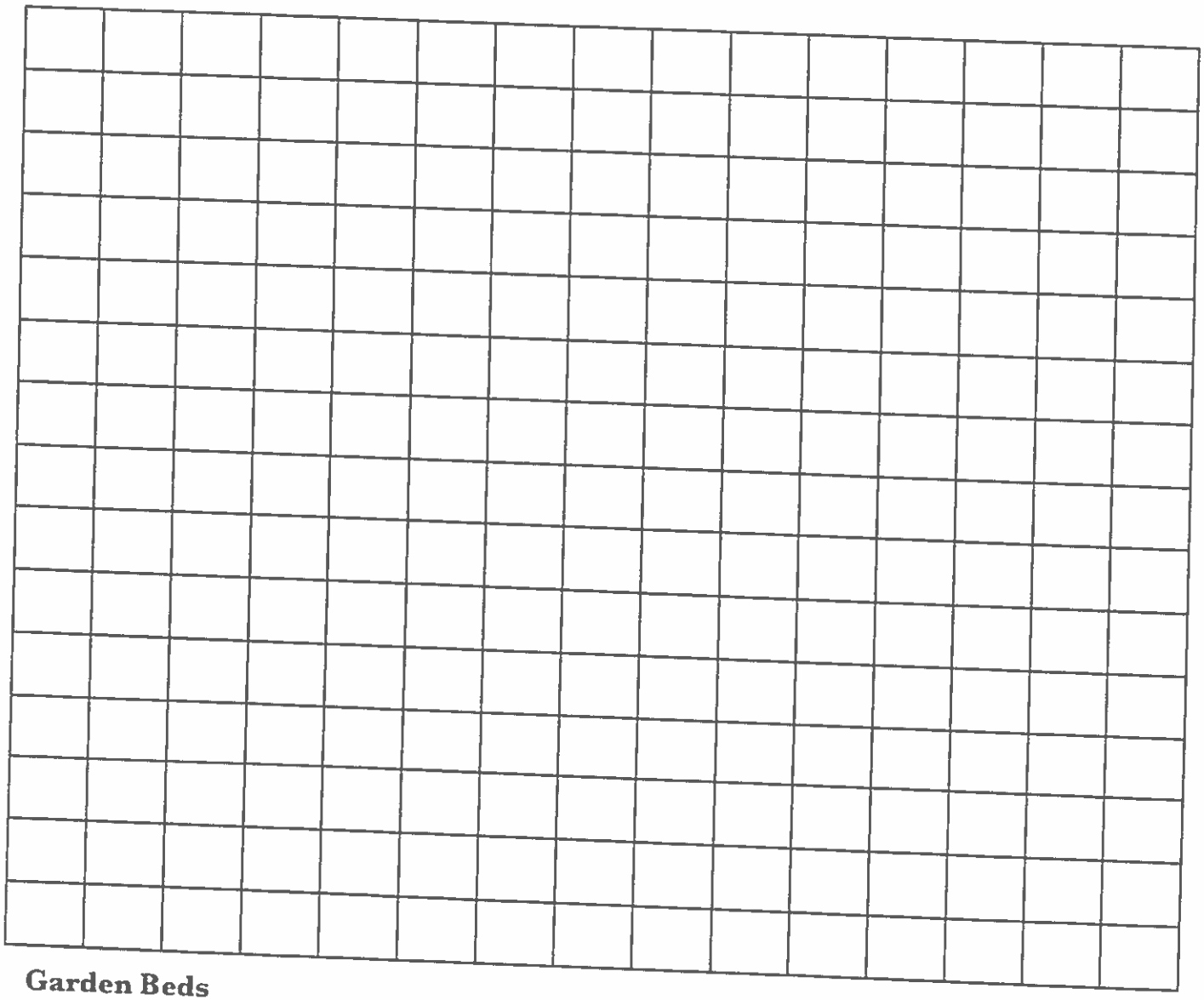
Area = _____

Bonus: What is the total area that can be planted in Paloma's community garden?

Area = _____

Design Your Own Community Garden

Your neighbors need help growing fruits and vegetables! Using the grid below, design your own community garden. Include three or more rectangular garden beds. Then, find the area of each garden bed.
Remember: Area=Length x Width



Garden Beds

1. Area = _____

2. Area = _____

3. Area = _____

4. Area = _____

5. Area = _____

BONUS: What is the total area of all the garden beds?

Area = _____

Lesson 14-9

Common Core

3.G.2 Partition shapes into parts with equal areas. Express the area of each part as a unit fraction of the whole. ... Also 3.MD.5

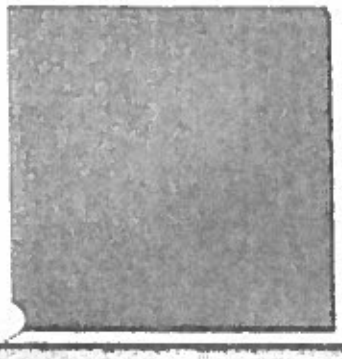
Equal Areas and Fractions

Hands-On

grid paper

How can you use equal areas to model unit fractions?

Ben folds a square sheet of paper into four parts. All four parts have the same area. How can he label each part?



Guided Practice*

MATHEMATICAL PRACTICES

Do you know HOW?

Use Tools For **1–3**, use centimeter grid paper.

1. Draw a 6 × 3 rectangle. Then draw lines to separate the rectangle into 3 equal parts.

2. Draw another 6 × 3 rectangle. Draw lines to separate it into 3 equal parts another way.

3. In each rectangle, what fraction shows the area of one of the parts?

Do you UNDERSTAND?

4. Draw a third way Ben could fold the paper in the example above into 4 equal parts.

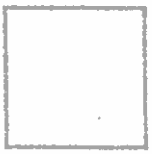
5. Look at the rectangle you drew for Exercise 1. What is its area? What is the area of each part?

Independent Practice

For **6** and **7**, copy each drawing on centimeter grid paper.

6. Show two ways to separate the rectangle into 2 equal parts. What fraction shows the area of one of the parts?

7. Show two ways to separate the rectangle into 6 equal parts. What fraction shows the area of one of the parts?



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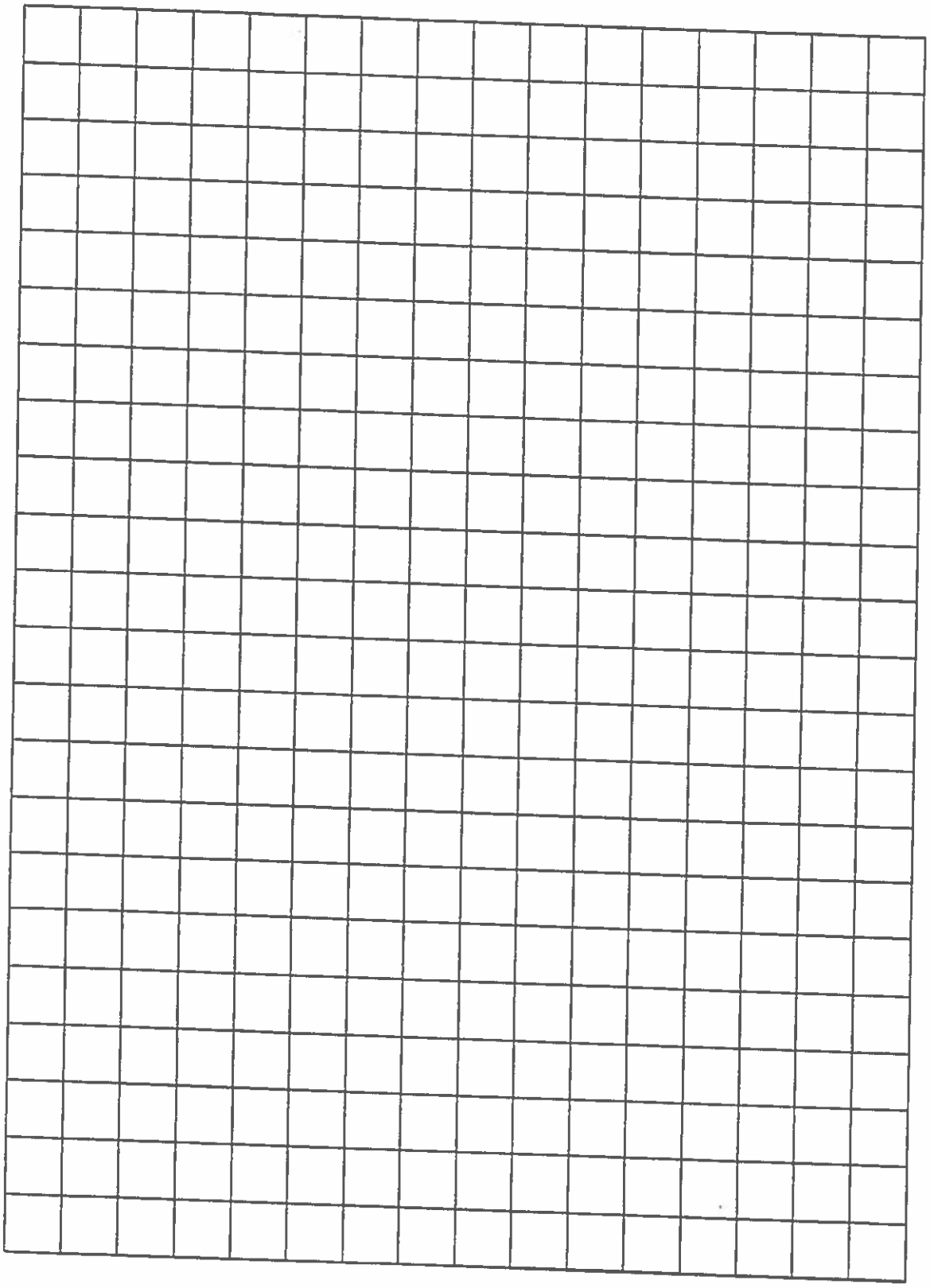
*For another example, see Set H on page 367.

Name _____

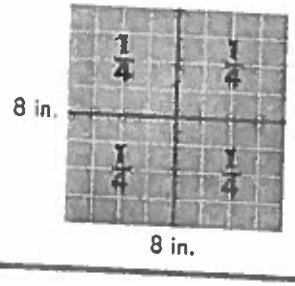
Teaching Tool
11



One Way

Ben could fold the paper this way into four equal parts.

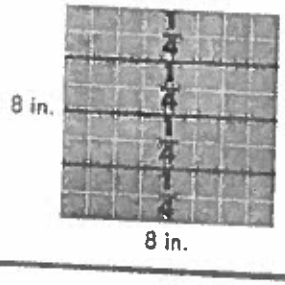
Since each part has the same area, it is $\frac{1}{4}$ of the whole.



Another Way

Ben could also fold the paper this way into four equal parts.

Since each part has the same area, it is $\frac{1}{4}$ of the whole.



Problem Solving

MATHEMATICAL PRACTICES

8. Model Mary made a cake to share equally among 8 people. Copy the picture below. Show how to divide the cake into 8 equal pieces. Label each piece using a unit fraction.

9. Reason Use the table below. Which animal can run 2 times as fast as the mule deer?

Animal Sprint Speeds

Animal	Speed (mi per hr)
Cheetah	70
Lion	50
Gray fox	42
Mule deer	35

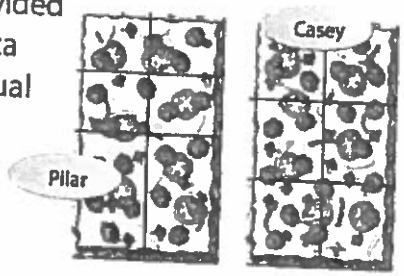
10. Noah's grandmother made a quilt for his bed. The quilt is made of 8 equal squares. What fraction of the quilt is one square?

A $\frac{1}{3}$ B $\frac{1}{4}$ C $\frac{1}{6}$ D $\frac{1}{8}$

11. Persevere Angie's teacher bought a crate of 48 apples at the market. She used 12 apples to make applesauce. Then she gave 25 apples to the students in her class. How many apples does she have left?

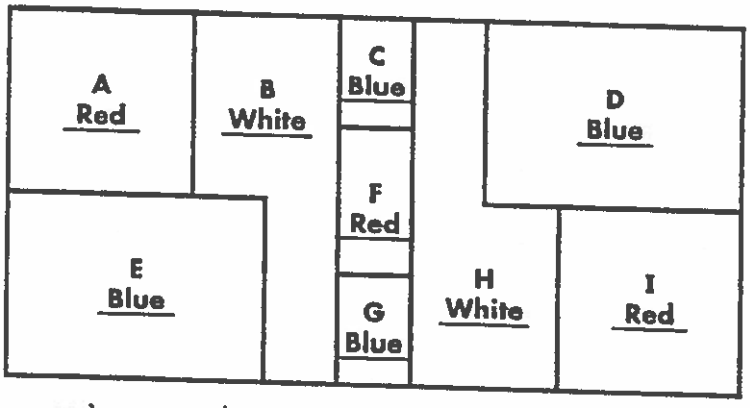
12. Kwan wants to plant half of his garden with flowers and half with vegetables. Copy the drawing on grid paper to show two ways he could do this.

13. Writing to Explain Look at how Casey and Pilar divided their pizzas. Who divided the pizza into equal parts? Explain.



Topic 14
Area
Performance
Task

For **1** through **3**, use the banner below.



= 1 square inch

1. Make a table like the one shown below. Complete the information for each section. The first part of the table has been started for you.

Section	Color	Shape	Describe How to Find the Area	Area
A	Red	Square		

2. What is the total area covered by each color?

3. What is the total area of the banner? What is its total perimeter?

4. Copy rectangle F on 1-inch grid paper and separate it into 4 equal parts. What fraction shows the area of one of the parts?

5. Copy rectangle D on 1-inch grid paper. Separate the 7-inch side in order to make a 5×4 rectangle and a 5×3 rectangle. Is the area of rectangle D equal to the sum of the areas of the two small rectangles? Write an equation to show how you know.

Topic 14 Area
Performance Task Table
Use with Textbook Page 370

Section	Color	Shape	Describe how to find the area Number sentence	Area L x W
A	Red	Square	Multiply the Length x Width 5sq. in. x 5 sq. in. =25 sq. in.	25 sq. in.
B	White	Rectangles	Divide the shape into two rectangles. __sq. in. x __ sq. in. =__sq. in. __sq. in. x __ sq. in. =__sq. in. _____sq. in.+_____ sq. in.	
C	Blue	Rectangle	Multiply the Length x Width _____ X _____ = _____	
D	Blue	Rectangle	Multiply the Length x Width _____ X _____ = _____	
E	Blue	Rectangle	Multiply the Length x Width _____ X _____ = _____	
F	Red	Rectangle	Multiply the Length x Width _____ X _____ = _____	
G	Blue	Rectangle	Multiply the Length x Width _____ X _____ = _____	
H	White	Rectangles	Divide the shape into two rectangles. __sq. in. x __ sq. in. =__sq. in. __sq. in. x __ sq. in. =__sq. in. ___sq. in.+___ sq. in. = ___ sq. in.	
I	Red	Square	Multiply the Length x Width _____ X _____ = _____	

Lesson 14-4

Common Core

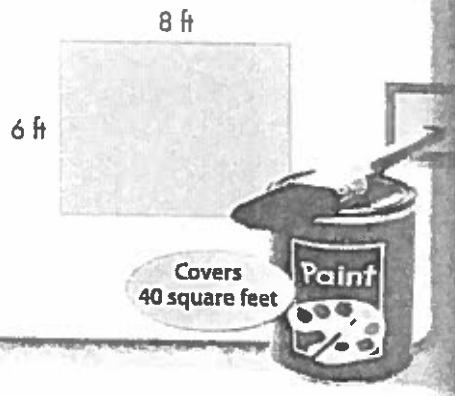
3.MD.7.a Find the area of a rectangle with whole-number side lengths by tiling it, and show that the area is the same as would be found by multiplying the side lengths. Also 3.MD.7.b

Area of Squares and Rectangles

Hands-On metric ruler

How can you find the area of a figure?

A small can of chalkboard paint covers 40 square feet. Does Mike need more than one small can to paint one wall of his room?



Guided Practice*

MATHEMATICAL PRACTICES

Do you know HOW?

For **1** through **4**, find the area of each figure.

1. 7 in, 3 in

2. 5 m, 4 m

3. 9 ft, 6 ft

4. 9 cm

Do you UNDERSTAND?

5. Communicate What is the formula for the area of a square? Explain how you know.

6. Mike plans to paint another wall in his room blue. That wall measures 10 feet by 8 feet. How much area does Mike need to paint?

Independent Practice

Leveled Practice In **7** and **8**, measure the sides, and find the area of each figure.

7. cm, cm

8. cm, cm

In **9** through **12**, find the area of each figure.

9. 4 ft, 9 ft

10. 10 mm, 6 mm

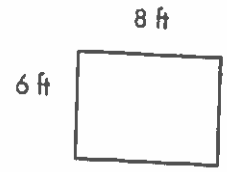
11. 5 in., 7 in.

12. 4 yd

*For another example, see Set C on page 365.

One Way

You can count the square units to find area.



There are 48 square units.

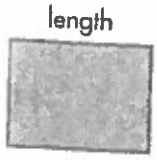
The area of Mike's wall is 48 square feet.

Another Way

You can measure to find the length of each side and use a formula to find area.

Area = length × width

$A = \ell \times w$
$A = 8 \times 6$
$A = 48$



The area of Mike's wall is 48 square feet. He will need more than one small can of paint.

Problem Solving

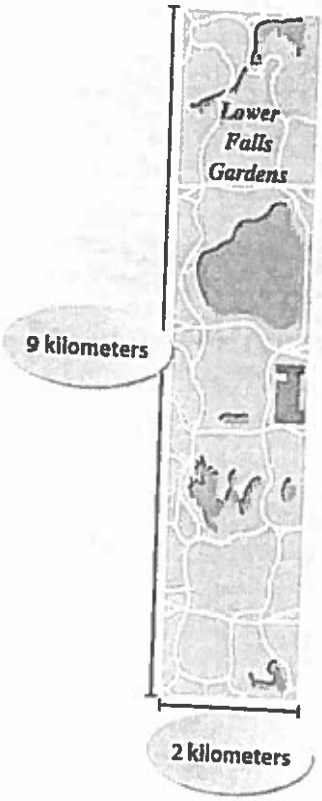
MATHEMATICAL PRACTICES

13. Reason Jen's garden is 4 feet wide and has an area of 28 square feet. What is the length of the garden?

14. Diane drew a polygon with 4 sides and 1 set of parallel sides. What type of polygon did Diane draw?

15. Mr. Andre is putting tile down in his bathroom. The bathroom is 10 feet long and 5 feet wide. The tile costs $8 per square foot. How much will it cost Mr. Andre to tile his bathroom?

Use Tools For **16** and **17**, use the map at the right.



16. What is the area of Lower Falls Gardens?

A 11 square kilometers

B 18 square kilometers

C 20 square kilometers

D 22 square kilometers

17. Which polygon best describes the shape of Lower Falls Gardens?

A Triangle **C** Quadrilateral

B Pentagon **D** Hexagon

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Reteaching (Review)

Set A, pages 342–343, 346–347

Count to find the area.

The shape fully covers 9 squares and partially covers 7 squares. Each partial cover is about one half of a square.

So, the shape has an area of about 13 square units.

You can use standard units of length to measure area.

If each unit in the grid above equals 1 square inch, then the shape has an area of about 13 square inches.

Remember you can count partial squares to estimate an area.

Count to find the area. Tell if the area is exact or an estimate.

1. 

2.

Count the square units. Then write the area.

3. 

4.

Set B, pages 344–345

The number of square units needed to cover the region inside a figure is its area.

Erica wants to make a wall poster that has an area of 30 square units. Should she use square inches or square centimeters as a unit?

A square centimeter is a square that has a length of 1 cm on each side.

An area of 30 square centimeters seems too small for a wall poster.

A square inch is a square with 1-inch sides.

An area of 30 square inches seems more reasonable.

So, square inches is the better unit to use.

Remember you can find the area of a figure by counting the number of square units in the figure.

1. Keisha made a painting with an area of 16 square inches. Anne's painting has an area of 16 square centimeters. Whose painting has a larger area?

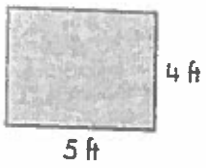
2. Hasan wants to make an art design with an area of 50 square centimeters. If he makes his design on centimeter grid paper, how many squares would the design cover? Tell how you know.

Set C, pages 348–349

Use a formula to find the area of the rectangle.

Area = length × width

$A = \ell \times w$
$A = 5 \times 4$
$A = 20$ square feet



The area of the rectangle is 20 square feet.

Remember the terms *base* and *height* can be used for *length* and *width*.

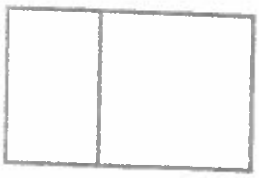
Find the area of each shape.

1.

2.

Set D, pages 350–351

A large rectangle is separated into two rectangles. Compare the area of the large rectangle to the combined areas of the small rectangles.



$5 \times 8 = 40$
The area of the large rectangle is 40 square units.

Use the Distributive Property to break apart facts.

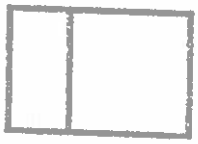
$5 \times 8 = 5 \times (5 + 3) = (5 \times 5) + (5 \times 3)$

The area of the large rectangle is equal to the area of the two small rectangles.

Remember to break apart facts to find the product.

Write an equation for each model.

1.



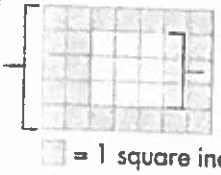
2.

Set E, pages 352–353

Use simpler problems to find the area of the shaded part of the rectangle.

Find the area of the whole rectangle.
$5 \times 7 = 35$

Find the area of the square.
$3 \times 3 = 9$



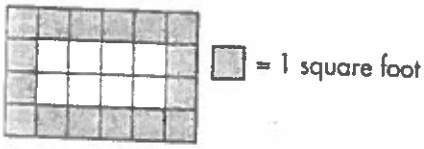
Subtract: $35 - 9 = 26$

The area of the shaded part of the rectangle is 26 square inches.

Remember to use the answers to the simpler problems.

Solve. Use simpler problems.

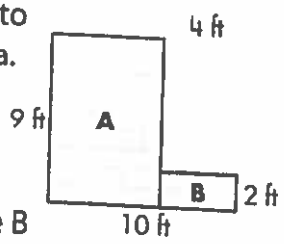
1. Walt wants to paint the shaded part of a wall. What is the area of the shaded part?



Set F, pages 354–356

You can divide a figure into rectangles to find the area.

Find the area of each rectangle.



Rectangle A
$A = 9 \times 6$
$= 54$

Rectangle B
$A = 2 \times 4$
$= 8$

Add the partial areas:
$54 + 8 = 62$ square feet

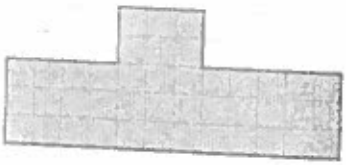
Remember you can count the units to find the area.

Find the area of each figure.

1.

2.

3.



Set G, pages 358–359

Draw a different rectangle with the same perimeter as the one shown, and find its area.

8 ft

3 ft 

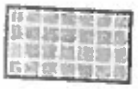
$P = (2 \times \ell) + (2 \times w)$
$= (2 \times 8) + (2 \times 3)$
$= 16 + 6$
$= 22$ ft

$A = \ell \times w$
$= 8 \times 3$
$= 24$ square feet

A 4 ft by 7 ft rectangle has the same perimeter.

$P = (2 \times 7) + (2 \times 4) = 22$ ft
$A = 7 \times 4$
$A = 28$ square feet

7 ft

4 ft 

Remember that two rectangles can have the same area but different perimeters.

Draw two different rectangles with the perimeter listed. Find the area of each rectangle.

1. $P = 24$ feet
2. $P = 40$ centimeters

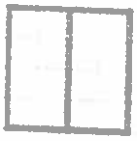
Draw two different rectangles with the area listed. Find the perimeter of each rectangle.

3. $A = 64$ square feet
4. $A = 80$ square yards

Set H, pages 360–361

You can use equal areas to model unit fractions.

You can separate the square into 2 equal parts this way.



You can also separate the square into 2 equal parts this way.

Since each part has the same area it is $\frac{1}{2}$ of the whole.

Remember that equal parts have the same area.

Copy each figure on centimeter grid paper. Show two ways to separate the figure into equal parts. What fraction shows one of the parts?

1. 4 equal parts

2. 3 equal parts

3. 6 equal parts

Set I, pages 362–363

Choose an appropriate measurement unit and tool to measure the area of a napkin.

- Square feet or square meters are too large compared to the size of a napkin.
- Square inches or square centimeters are smaller and easier to use.

The best tool would be an inch ruler or a centimeter ruler.

Remember a good measurement unit is smaller than the amount to be measured but large enough to make it easy to measure.

Name the measurement unit and tool you would use to measure the area of each item.

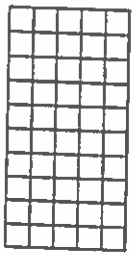
1. door

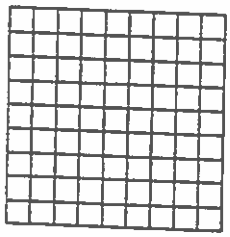
2. index card

Determining Area with Square Units

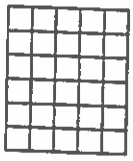
Name:

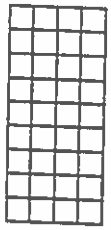
Determine the area. Each □ = 1 square unit (u^2).

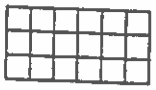
1) 

2) 

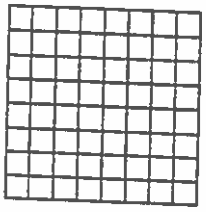
3) 

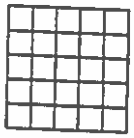
4) 

5) 

6) 

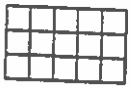
7) 

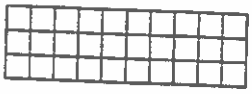
8) 

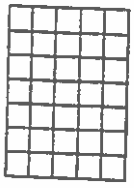
9) 

10) 

11) 

12) 

13) 

14) 

15) 

Answers

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____
9. _____
10. _____
11. _____
12. _____
13. _____
14. _____
15. _____

1-10	93	87	80	73	67	60	53	47	40	33
11-15	27	20	13	7	0					

Enrichment (Challenge)

A Areas Around a Room

Name_____ Date_____

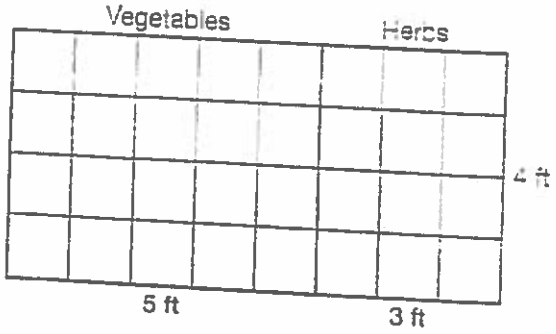
Use the formula: Area = length (x) width **(A = l x w)** to find approximate areas for items in your environment, to the nearest inch or centimeter. Circle the unit of measurement used.

1. A table top **Length:** ____ cm/in (x) **Width:** ____ cm/in = Area of ____cm^2/in^2	2. A container top **Length:** ____ cm/in (x) **Width:** ____ cm/in = Area of ____cm2/in2
3. A rug **Length:** ____ cm/in (x) **Width:** ____ cm/in = Area of ____ cm^2/in^2	4. A floor **Length:** ____ cm/in (x) **Width:** ____ cm/in = Area of ____cm^2/in^2
5. A wall **Length:** ____ cm/in (x) **Width:** ____ cm/in = Area of ____ cm^2/in^2	6. A ceiling **Length:** ____ cm/in (x) **Width:** ____ cm/in = Area of ____ cm^2/in^2
7. A chair seat **Length:** ____ cm/in (x) **Width:** ____ cm/in = Area of ____ cm^2/in^2	8. Your choice! **Length:** ____ cm/in (x) **Width:** ____ cm/in = Area of _____ cm^2/in^2

Common Core Standards Practice

3.MD.C.7c Relate area to the operations of multiplication and addition. Use tiling to show in a concrete case that the area of a rectangle with whole-number side lengths a and b + c is the sum of a × b and a × c. Use area models to represent the distributive property in mathematical reasoning.

1. Max drew a model of his garden. He has one part for vegetables and one part for herbs.

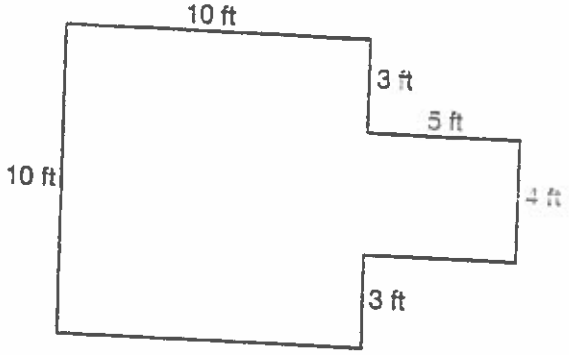


a. What is the area of the part of the garden for vegetables?

b. What is the area of the part of the garden for herbs?

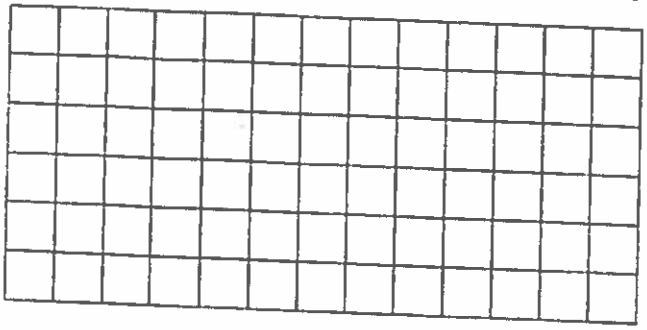
c. What is the area of the garden?

2. Ralph's father will put new tiles on the kitchen floor. Ralph draws a model of the kitchen floor. What is the area of the kitchen floor?



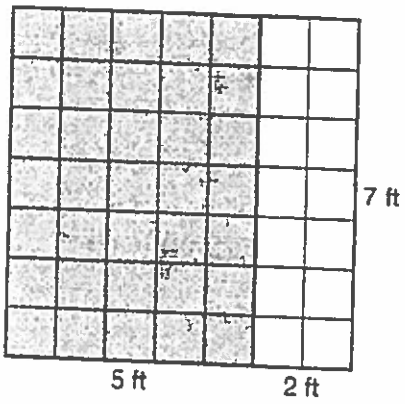
3. Holly says that 3×9 is the same as the sum of 3×5 and 3×4.

   a. On the grid below, draw a model to show that Holly is correct.



   b. Explain how your model shows that Holly is correct.

4. How does the model below show that 7×7 is the same as $(7 \times 5) + (7 \times 2)$?

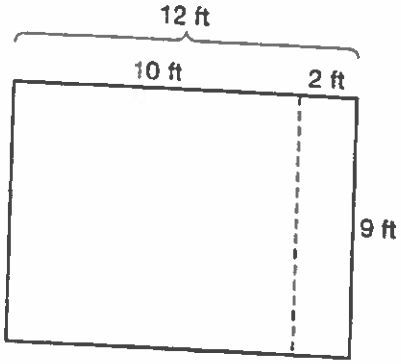


Name _____

Common Core Standards Practice

3.MD.C.7d Relate area to the operations of multiplication and addition. Recognize area as additive. Find areas of rectilinear figures by decomposing them into non-overlapping rectangles and adding the areas of the non-overlapping parts, applying this technique to solve real world problems.

1. Linda's bedroom floor has side lengths of 12 feet and 9 feet. She drew a picture of the floor, and then broke it apart into two smaller rectangles.

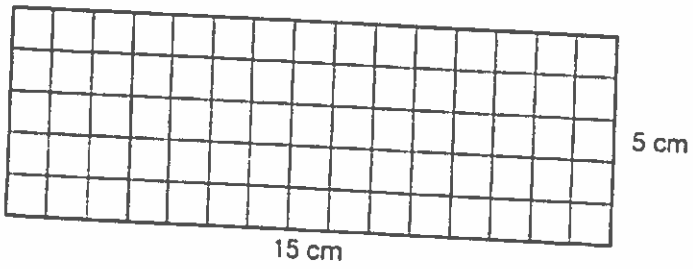


   a. What is the area of each smaller rectangle?

   b. What is the total area of the floor? How do you know?

2. Curt made a bookmark in the shape of a rectangle. The bookmark has a length of 15 centimeters and a width of 5 centimeters.

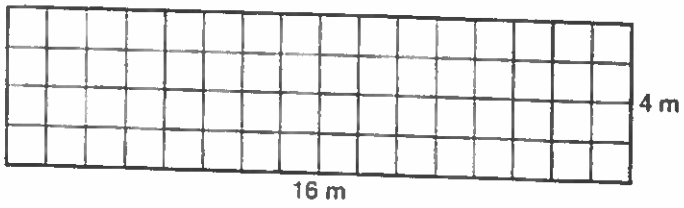
   a. Break apart the bookmark into two smaller rectangles to make it easier to find the area.



   b. What is the area of the bookmark? Show your work.

3. A driveway has the shape of a rectangle. It is 16 meters long and 4 meters wide.

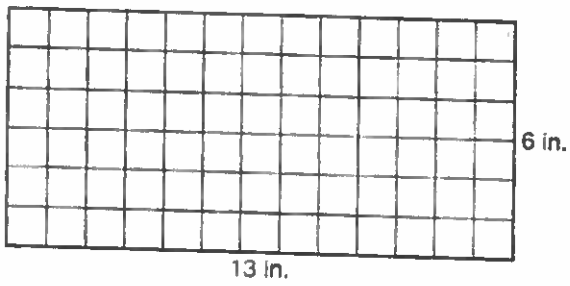
   a. Break apart the driveway into two smaller rectangles to make it easier to find the area.



   b. What is the area of the driveway? Show your work.

   c. Explain how breaking apart the driveway made it easier to find the area.

4. A mirror has the shape of a rectangle. It is 13 inches long and 6 inches wide. What is the area of the mirror? Show your work.



McKeesport Area School District

Flexible Instruction Days – Elementary Lesson Plan

GRADE / SUBJECT: 3/ Math			LESSON TITLE: Calculating and Finding Perimeter	
☐ LESSON 1:	☐ LESSON 2:	☐ LESSON 3:	☒ LESSON 4:	☐ LESSON 5:

STANDARDS AND SEQUENCE:

CCSS.MATH.CONTENT: Standard - CC.2.4.3.A.6 ; 3MD.D.8

Anchor Descriptor: MO3.D-M.4.1Find and use the perimeters of plane figures.

Solve problems involving perimeters of polygons and distinguish between linear and area measures.

Eligible Content - M03.D-M.4.1.1 Solve real-world and mathematical problems involving perimeters of polygons, including finding the perimeter given the side lengths, finding an unknown side length, exhibiting rectangles with the same perimeter and different areas, and exhibiting rectangles with the same area and different perimeters. Use the same units throughout the problem.

INSTRUCTIONAL OUTCOMES:

Students will:

be able to find the perimeter of shapes by adding all of the sides to find the total.

be able to draw shapes with same and different perimeters using one inch and centimeter grid paper and a paper eighth inch and cm ruler.

be able to select the appropriate tool and unit measurement to measure the perimeter of a figure.

STUDENT PARTICIPATION:

Students will add the measurements of all sides of given figures to find their perimeters.

Students will draw shapes/figures on centimeter and one inch grid paper and then add all of the sides to find the total perimeter.

Students will draw different shapes on grid paper that have the same perimeter.

Students will identify the correct tool and measurement unit used to find perimeter of a figure.

Students will review finding perimeter and the area of a given rectangle figures with premeasured sides on a worksheet s entitled: Perimeter Sheet 1 and Perimeter Sheet 2 found in the Reteaching section.

ACCOMMODATIONS:

For struggling learners:

The students will use textbook pages, hundreds chart, and centimeter and one inch grid paper to help in adding the sides of a shape to find the total perimeter. They can use graph paper to draw their shapes. They can count the lines around the shape to find the total perimeter.

For advanced learners: They can use centimeter grid paper and a paper centimeter/inch ruler, to draw shapes with the same perimeter but different measurements and write the number sentences for each shape created. They will engage in drawing, designs, and engage in a rectangular robot activity. They will then add the sides to find the total perimeter. Two challenge problems relating to perimeter and area can be completed for additional practice.

RESOURCES:

Reteaching textbook pages 334-335, Common Core Standards Practice Sheets CC 59,CC 60, Performance task assignment page 338, various worksheets pertaining to calculating perimeter, one inch and centimeter grid paper

EVIDENCE OF LEARNING

Students will demonstrate: strategies for understanding the meaning of finding perimeter by drawing and labeling shapes on grid paper.

Students will identify the correct tool and unit of measurement used to calculate the perimeter of a given design.

Math Directions Page
Week of May 25-29, 2020

Calculating and Determining Perimeter

Essential Questions:

- What does perimeter mean?
- What are different ways to find the perimeter of a shape?

Brainstorm:

What do you already know about finding perimeter of a shape?

What tools and units are used to measure the perimeter of different objects?

Assignments:

Monday: Lesson 13-1 Understanding Perimeter Pages 324-325, Teaching Tool 11, worksheet Trapezoid Perimeter

Tuesday: Lesson13-2 Tools and Units for Perimeter Pages 326,327, Measurement Problems worksheet Common Core Sheet

Wednesday: Lesson 13-3 Perimeter of Common Shapes Pages 328,329 Common Core Standards Practice sheet CC 59, CC 60

Thursday: Lesson 13-4 Different Shapes with the Same Perimeter
Pages 330-331 Use graph paper to draw the shapes. Extension: Optional Practice: Area and Perimeter Challenge 3 worksheet

Friday: Polygon Perimeter Word Problems worksheet Use graph paper to draw the shape models. Add the sides to find the total perimeters.

Extension Activity: Performance Task Topic 13 Page 338
Follow the directions to calculate the perimeter of each design. Use the provided grid paper for problems 2 and 3.

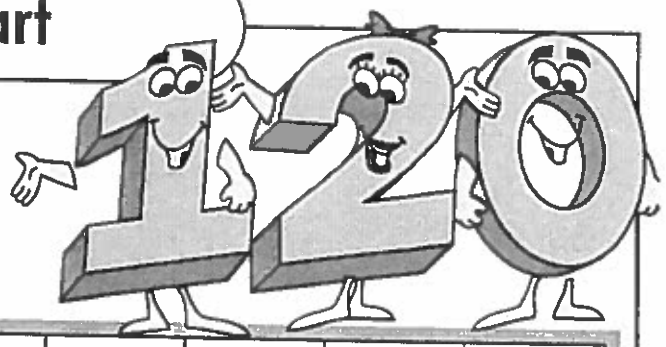
Reteaching: Review textbook pages 334,335, worksheets Perimeter Sheet 1 and Perimeter Sheet 2

Enrichment: Rectangular Robot activity, Area and Perimeter Challenge 1, and Area and Perimeter Challenge 2

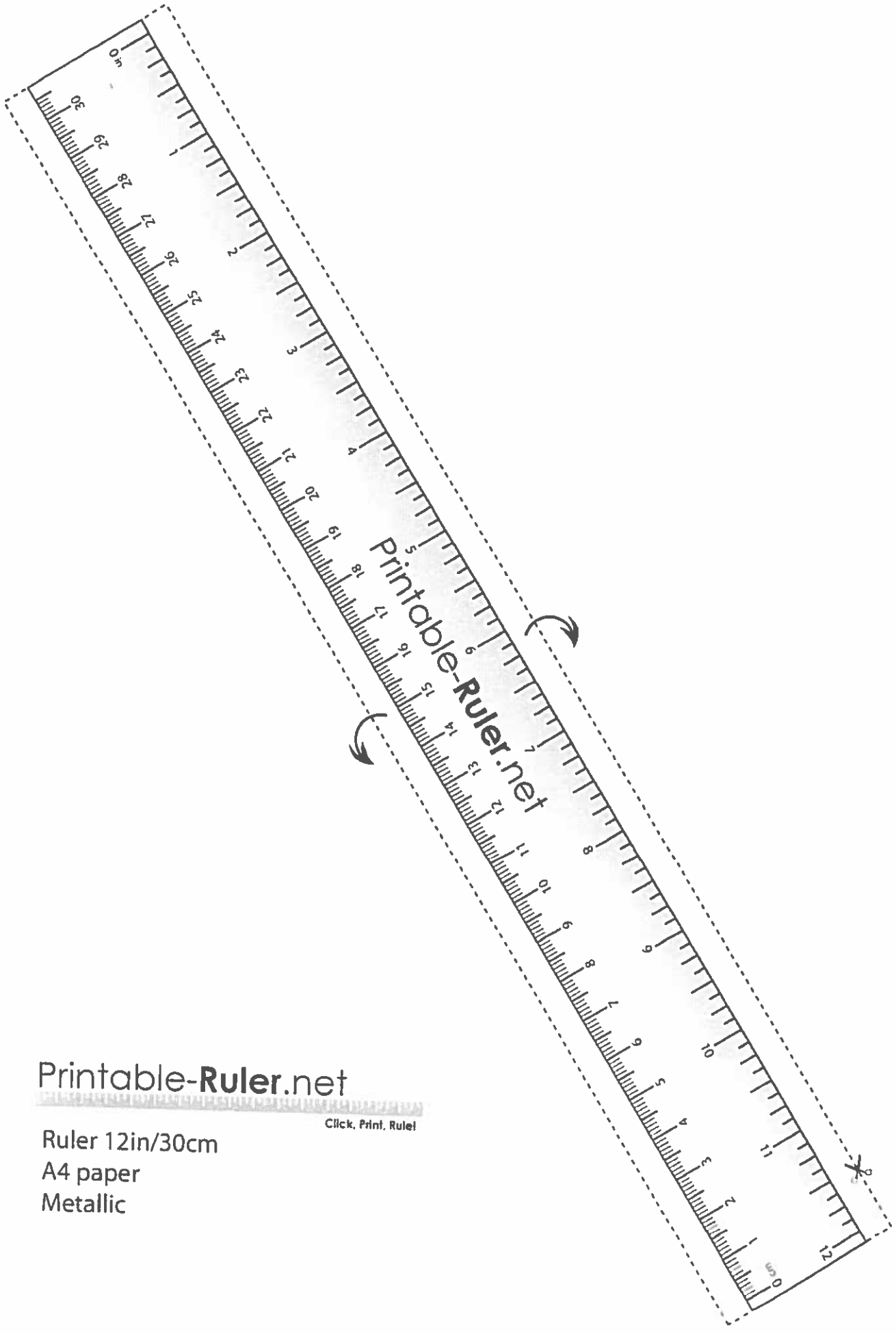
Math Tools

Name: _____

120 Chart



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
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
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
101	102	103	104	105	106	107	108	109	110
111	112	113	114	115	116	117	118	119	120



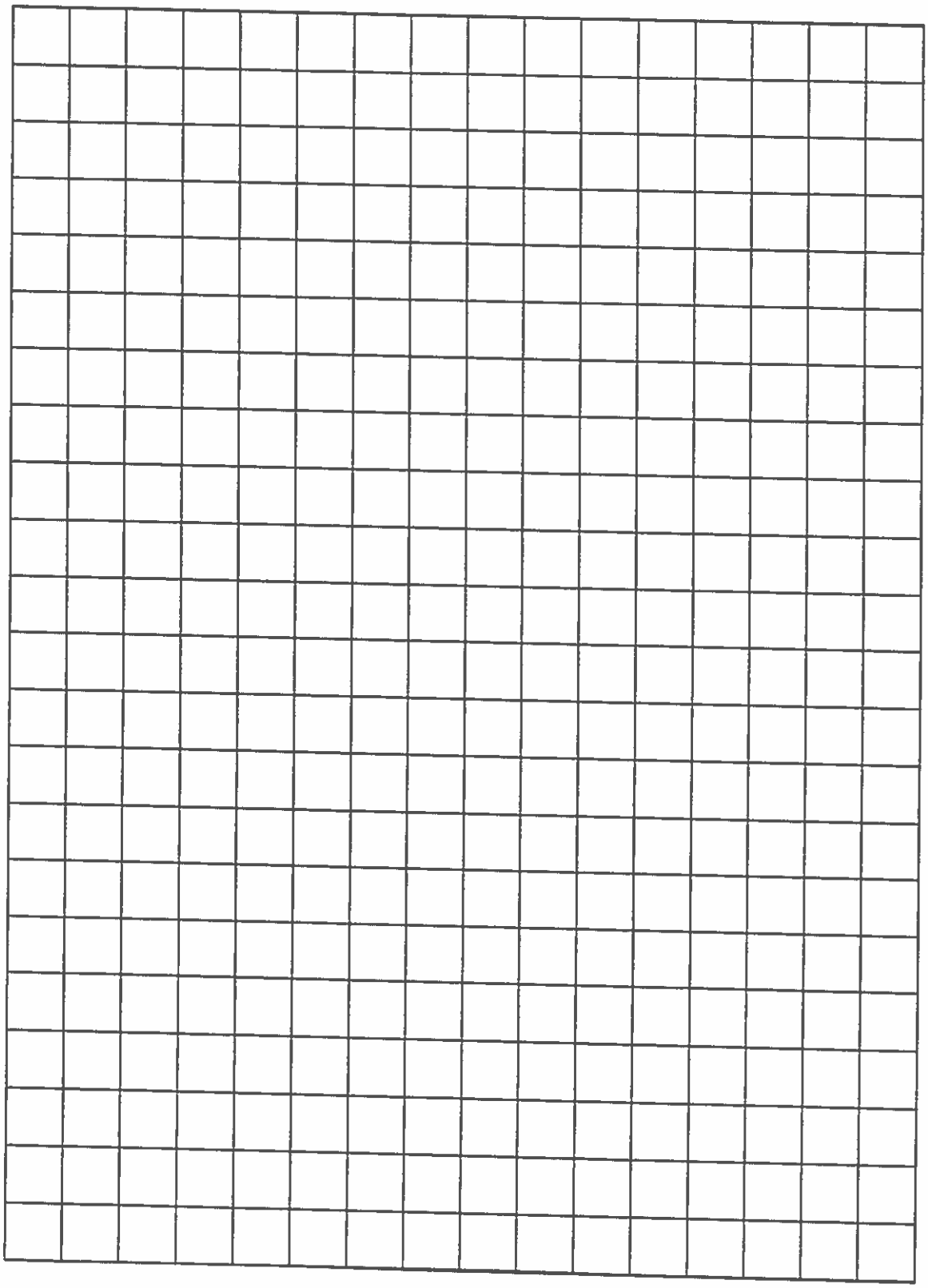
Printable-**Ruler**.net

Click, Print, Rule!

Ruler 12in/30cm
A4 paper
Metallic

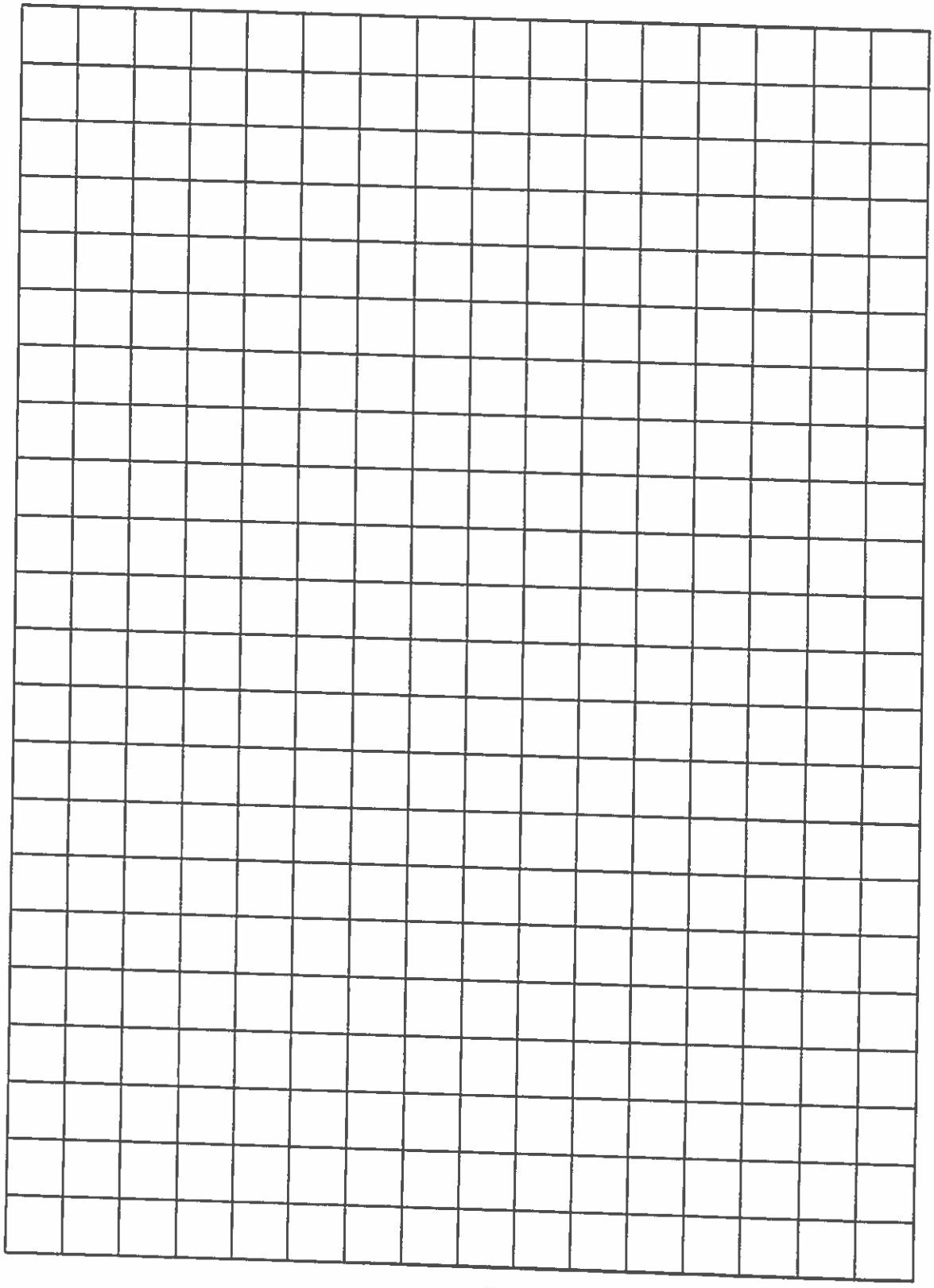
Name _____

Teaching Tool
11



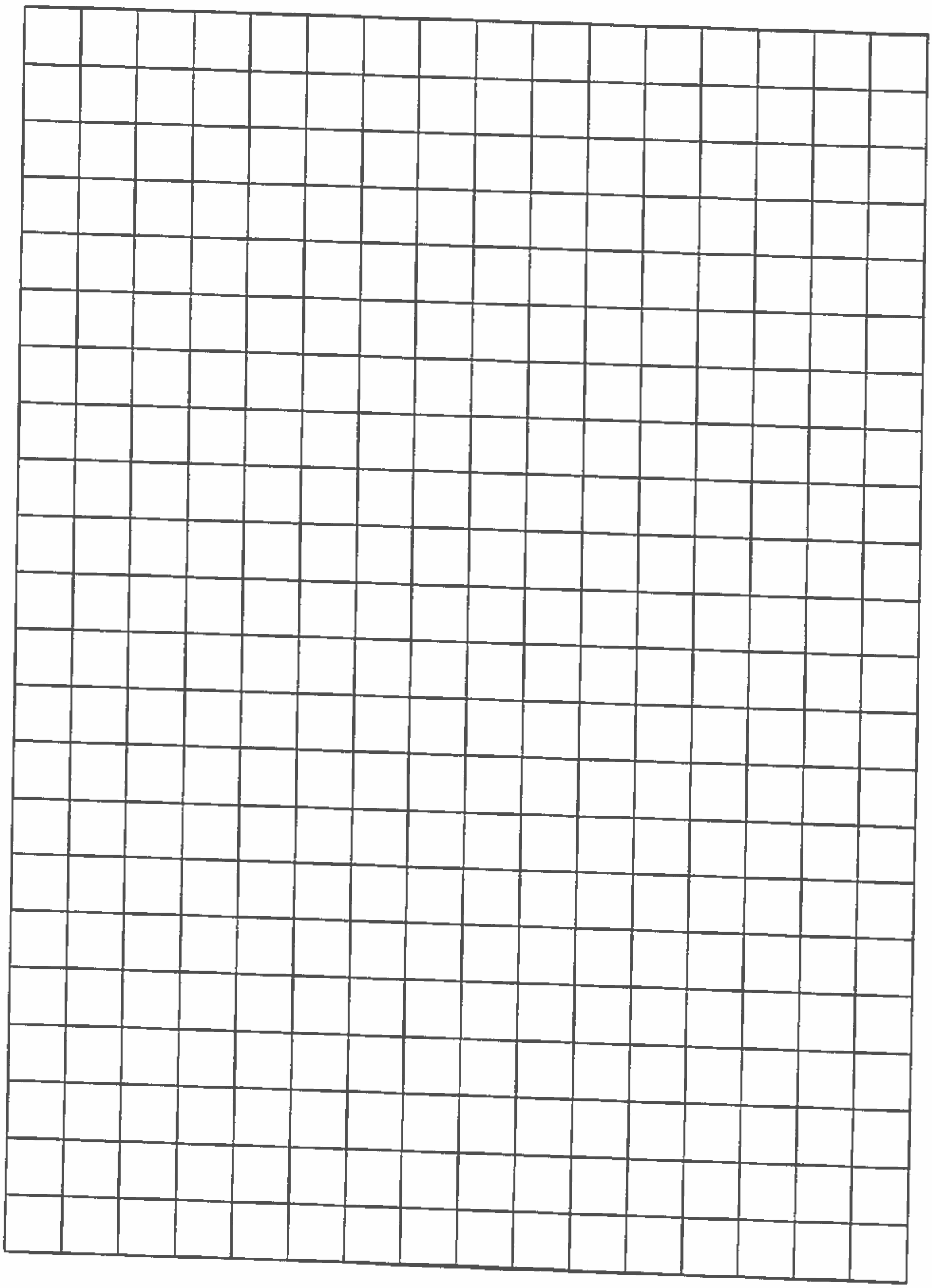
Name _____

Teaching Tool
11



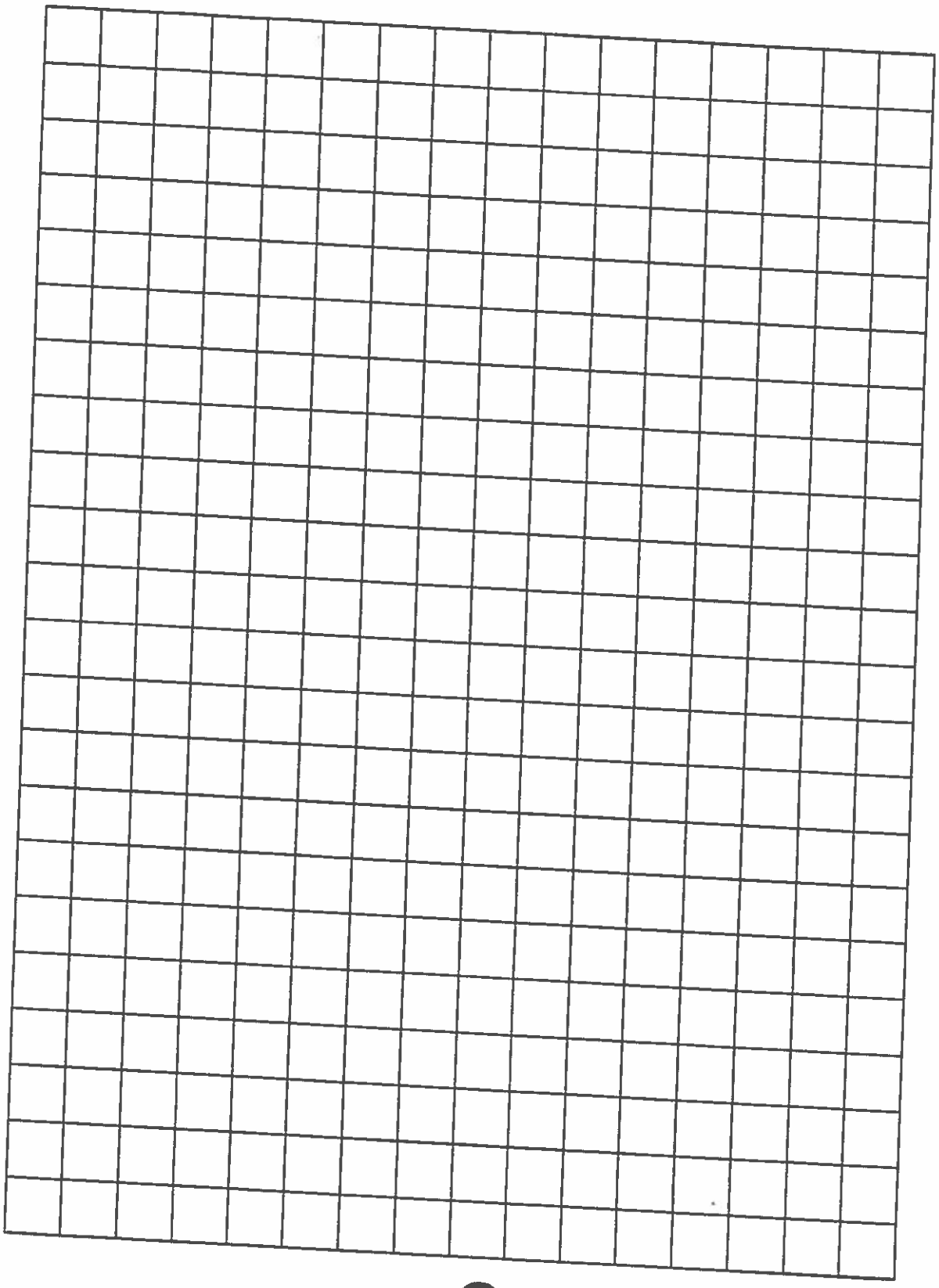
Name _____

Teaching Tool
11



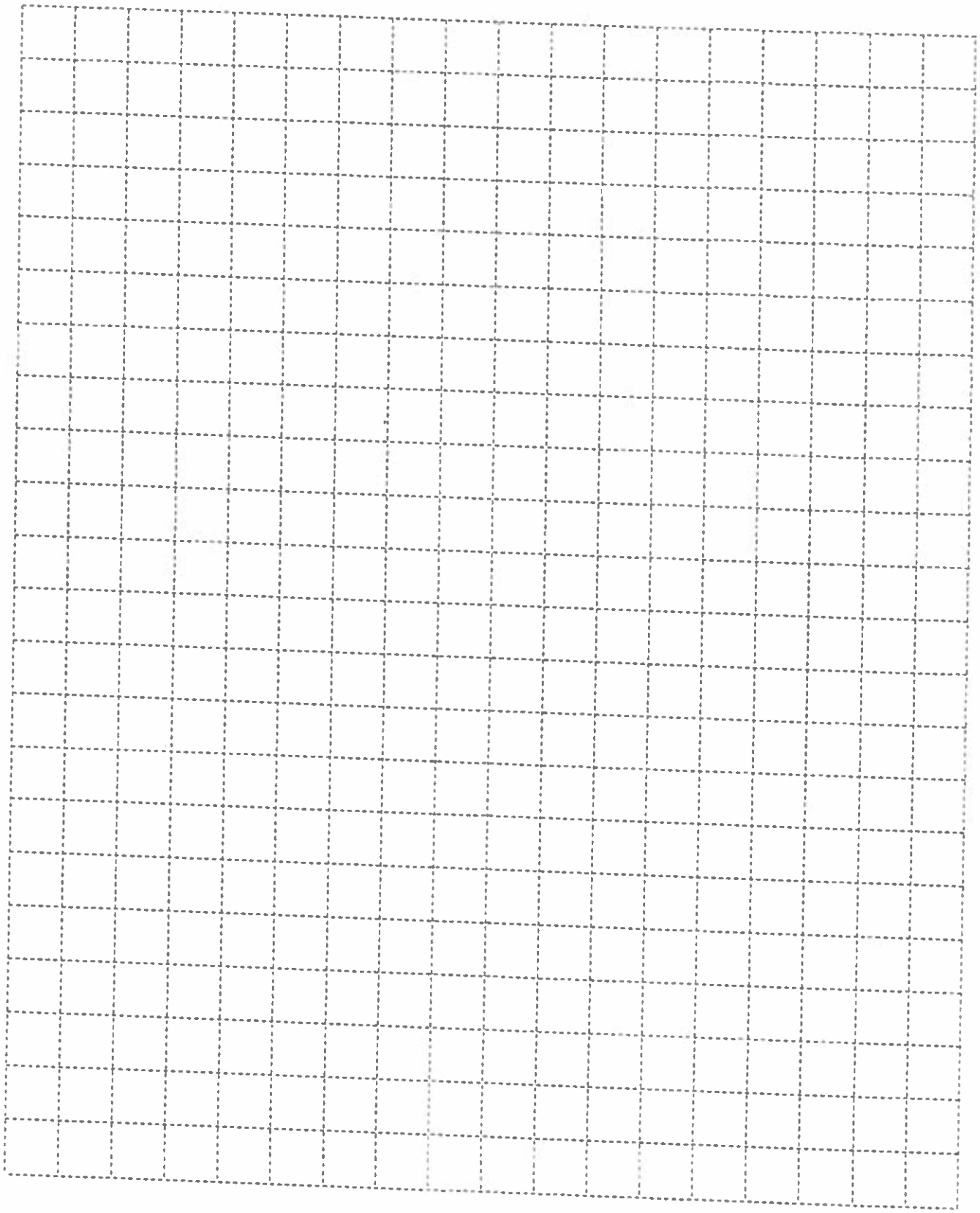
Name _____

Teaching Tool
11



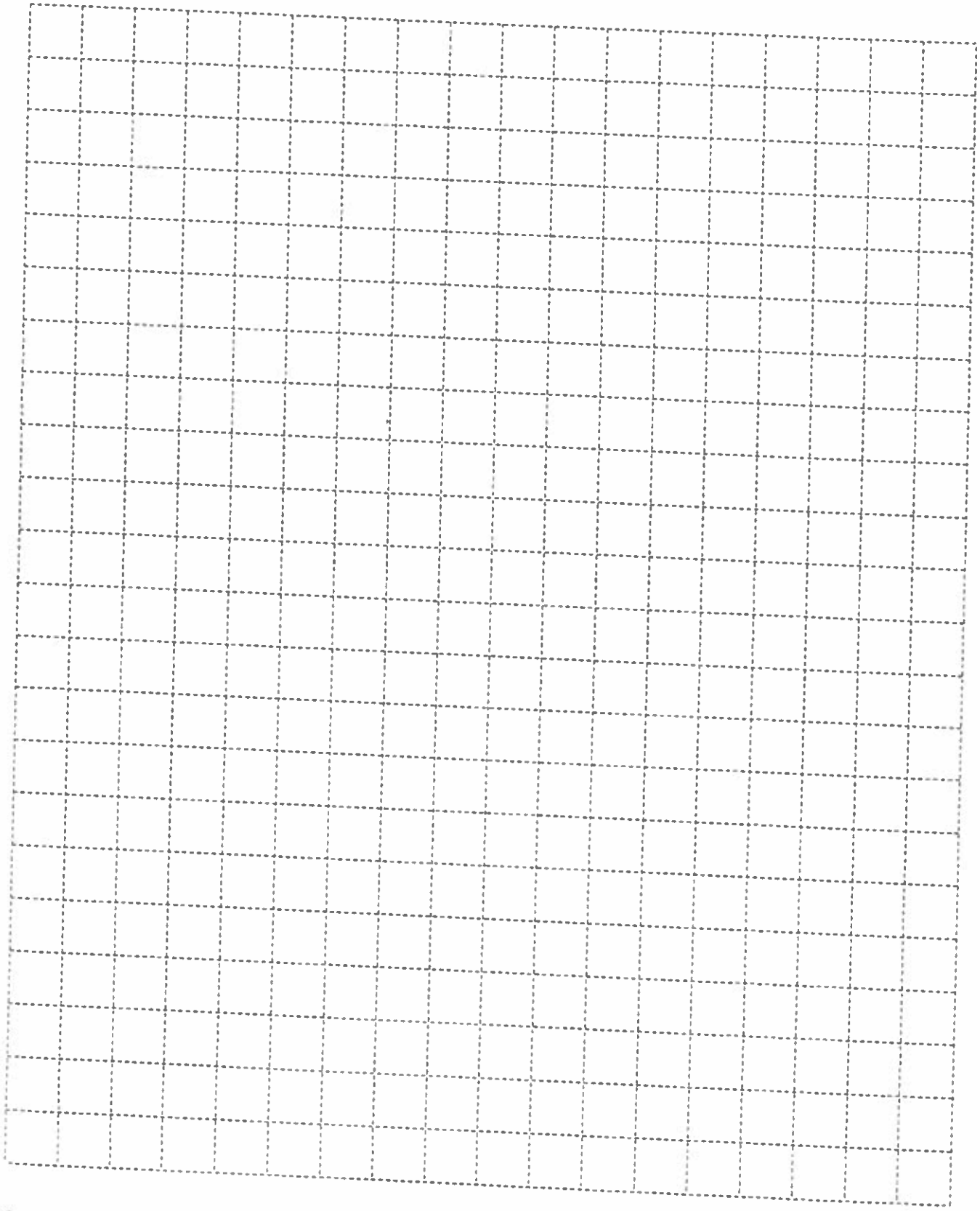
NAME _____ DATE _____

Centimeter Grid Paper



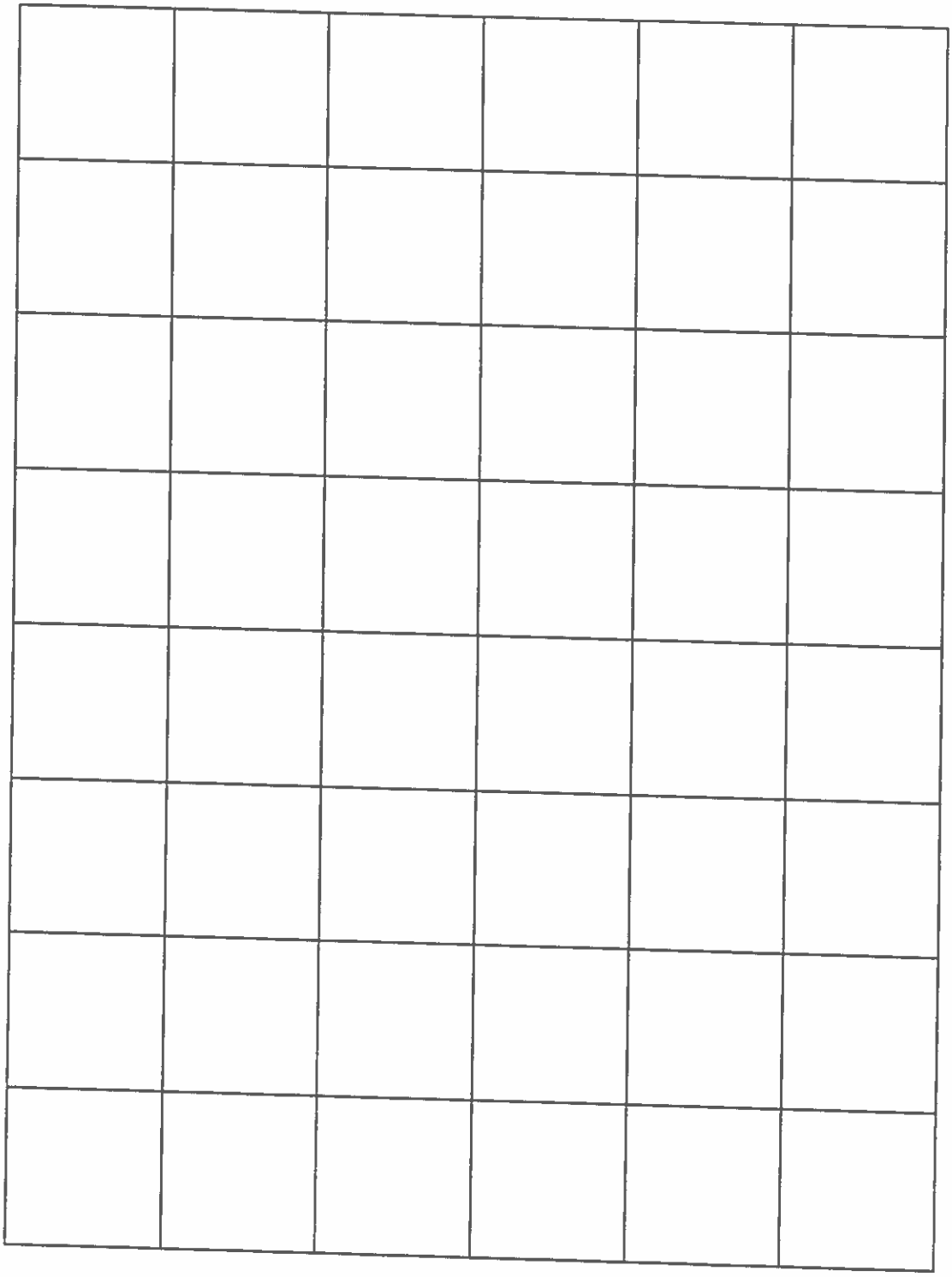
NAME _____ DATE _____

Centimeter Grid Paper



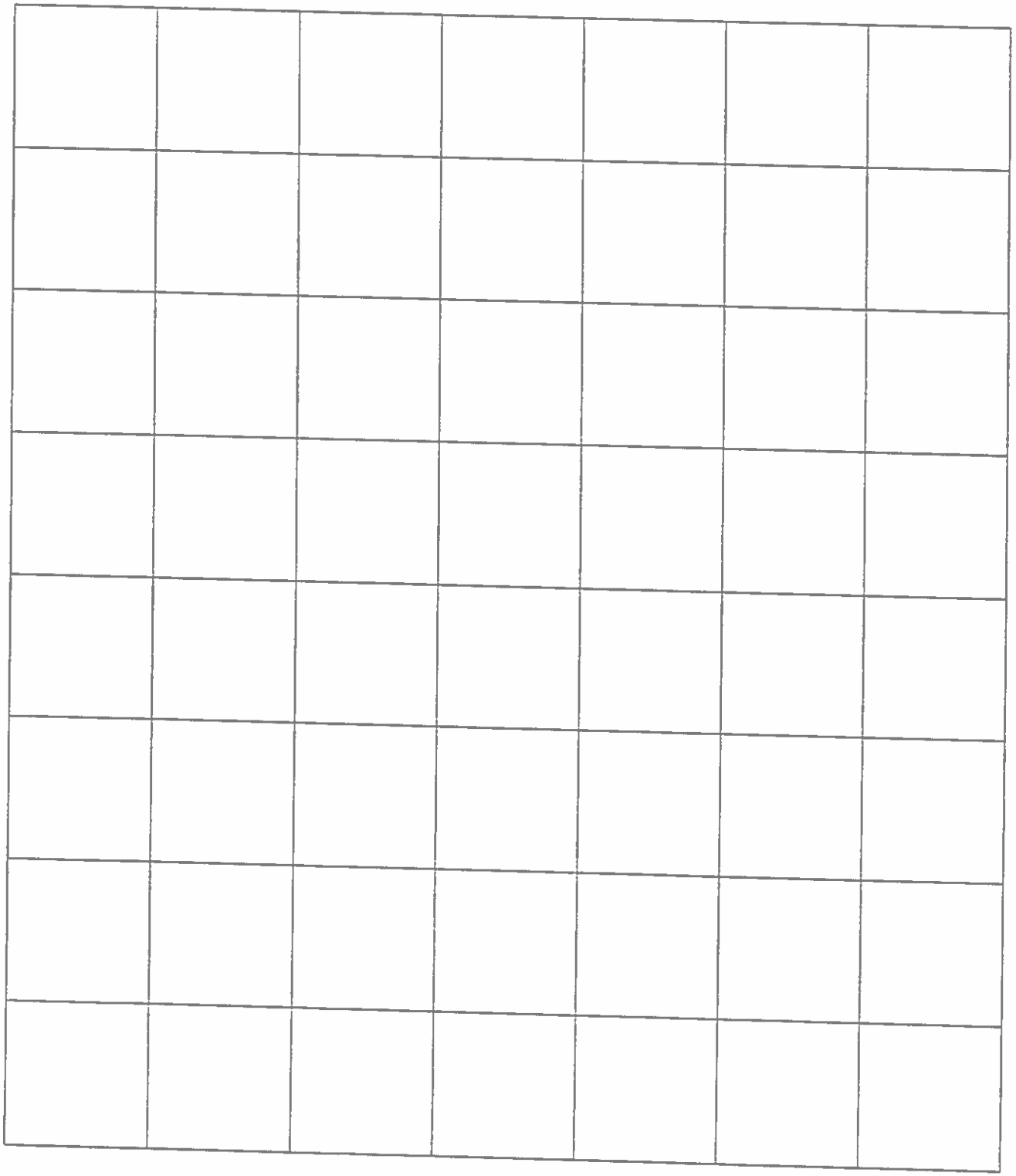
Name _____

Teaching Tool
12



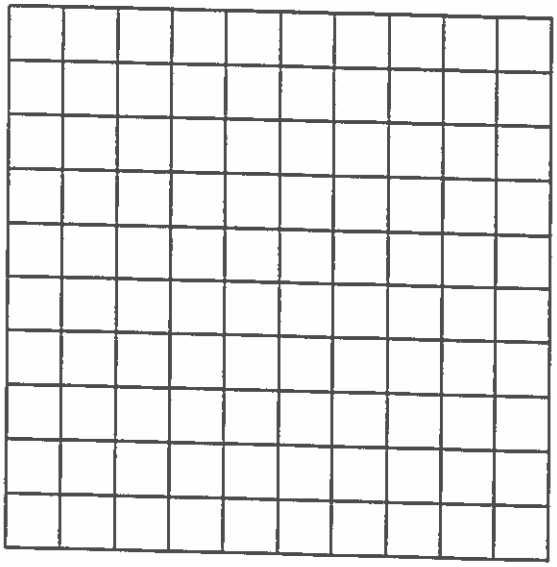
1 Inch Graph Paper

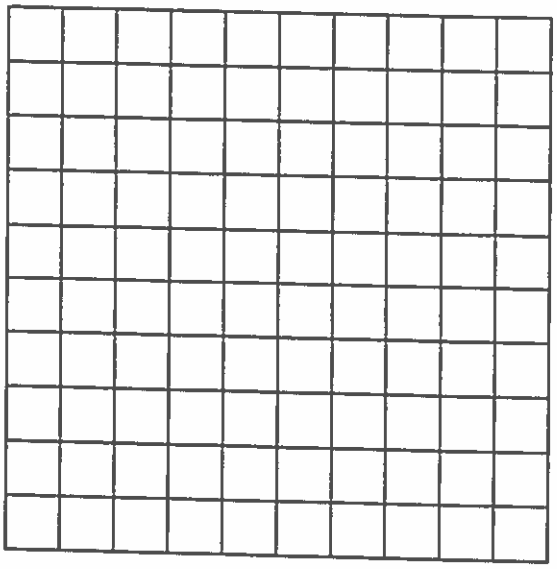
One line per inch. Black lines.

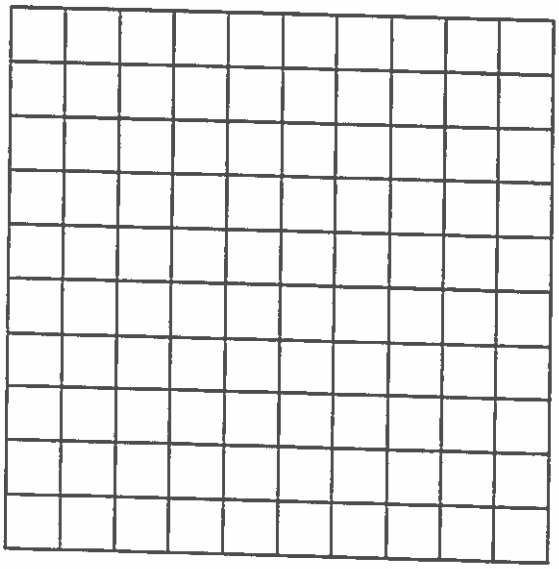


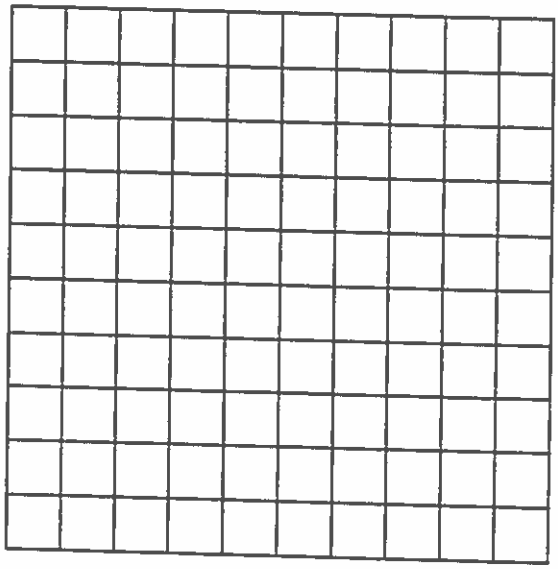
Name _____

Teaching Tool
13









Lessons

Lesson 13-1

Common Core

3.MD.8 Solve real world and mathematical problems involving perimeters of polygons, including finding the perimeter given the side lengths, finding an unknown side length, and exhibiting rectangles with the same perimeter and different areas or with the same area and different perimeters.

Understanding Perimeter

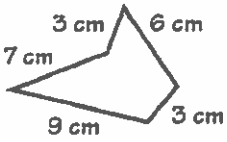
Hands-On

grid paper

scale: ⊢ = 1 foot

How do you find perimeter?

Gus wants to make a playpen for his dog and put a fence around it. He made drawings of two different playpens. What is the perimeter of the playpen in each drawing?



1 cm represents 1 m

The distance around a figure is its perimeter.

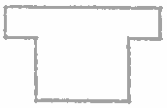
Guided Practice*

MATHEMATICAL PRACTICES

Do you know HOW?

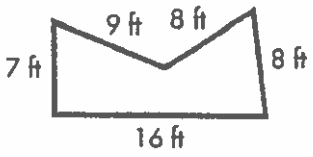
In **1** and **2**, find the perimeter.

1.



scale: ⊢ = 1 inch

2.



Do you UNDERSTAND?

3. Reason In the example above, how do you know what unit Gus used for the first playpen?

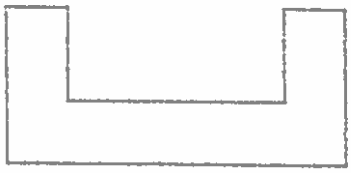
4. Be Precise What is the perimeter of the garden shown in the diagram below?

scale: ⊢ = 1 foot

Independent Practice

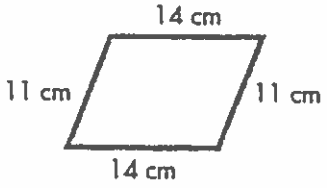
In **5–7**, find the perimeter of each polygon.

5.

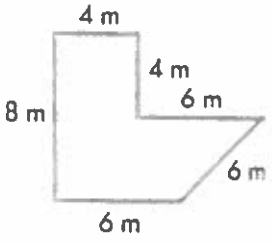


scale: ⊢ = 1 m

6.



7.



In **8–10**, draw a figure with the given perimeter. Use grid paper.

8. 14 units **9.** 8 units **10.** 20 units

DIGITAL Animated Glossary, eTools www.pearsonsuccessnet.com

*For another example, see Set A on page 334.

One Way

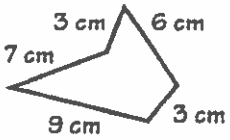
You can find the perimeter by counting unit segments.

scale: H = 1 foot

The perimeter of this playpen is 34 feet.

Another Way

Add the lengths of the sides to find the perimeter.



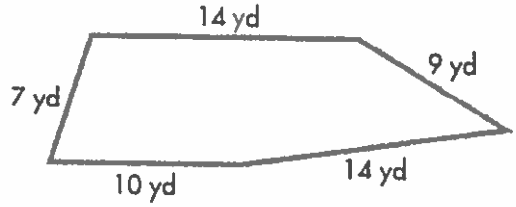
$3 + 9 + 7 + 3 + 6 = 28$

The perimeter of the drawing is 28 cm.
The perimeter of this playpen is 28 meters.

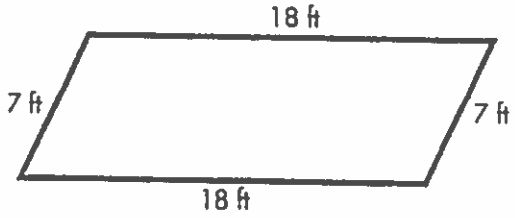
Problem Solving

MATHEMATICAL PRACTICES

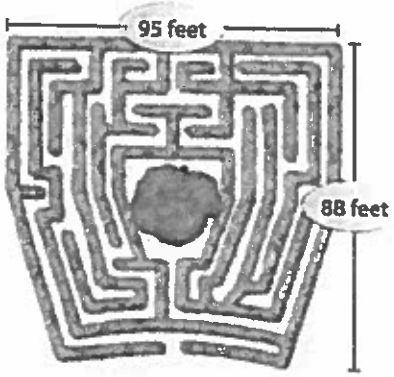
11. Mr. Karas needs to find the perimeter of the playground to build a fence around it. What is the perimeter of the playground?



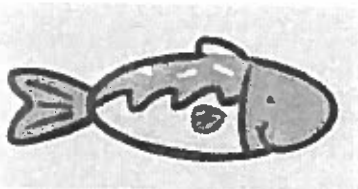
12. Mike needs to find the perimeter of the pool so he knows how many tiles to put around the edge. What is the perimeter of the pool?



13. Persevere The distance around the outside of this maze is the same as the perimeter of a rectangle. The picture shows the lengths of the sides of the rectangle. What is the perimeter of the maze?



14. Jani has the magnet shown below.



What is the perimeter of Jani's magnet to the nearest inch? Use a ruler to measure.

A 2 in. **B** 4 in. **C** 5 in. **D** 6 in.

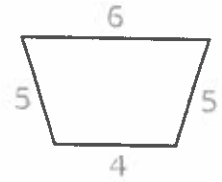
15. Communicate Roberto has a magnet that is twice as long and twice as wide as Jani's magnet in Problem 14. Find the perimeter of Roberto's magnet. Explain your work.

Name: _____ Date: _____

Trapezoid Perimeters

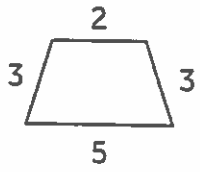
A **trapezoid** is a quadrilateral that has one set of **parallel lines**, **four** sides, and **four** angles.

To find the **perimeter** of a trapezoid, add up the lengths of each side.

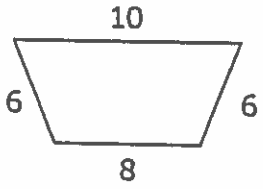


6 + 5 + 5 + 4 = **20 units**

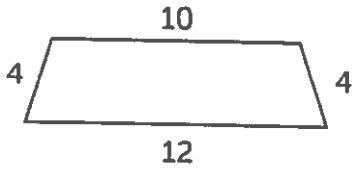
Directions: *Find the perimeter of the trapezoids.*

1. 

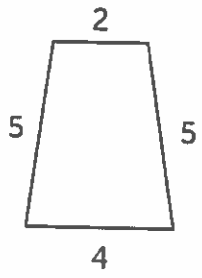
Perimeter: _____ units

2. 

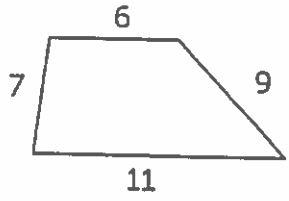
Perimeter: _____ units

3. 

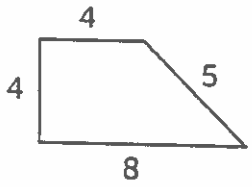
Perimeter: _____ units

4. 

Perimeter: _____ units

5. 

Perimeter: _____ units

6. 

Perimeter: _____ units

Challenge: *Draw a trapezoid in the space below. Label the lengths of the sides and find the perimeter.*

Lesson 13-2

Common Core

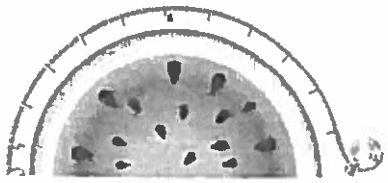
3.MD.8 Solve real world and mathematical problems involving perimeters of polygons, including finding the perimeter given the side lengths, finding an unknown side length, and exhibiting rectangles with the same perimeter and different areas or with the same area and different perimeters.

Tools and Units for Perimeter

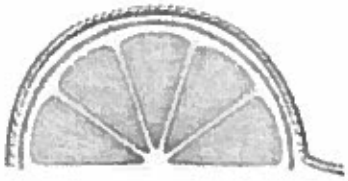
How can you use tools to find perimeter?

Maria wants to put ribbon around a poster. She wants to find out how much ribbon she will need. What unit could Maria use? What tool could she use?

Other Examples



A measuring tape can be used to measure a curve. A measuring tape measures in inches or feet.



If you do not have a measuring tape, you can wrap a string around the curve. Then mark the string and measure it with a yardstick or ruler.

Guided Practice*

MATHEMATICAL PRACTICES

Do you know HOW?

In 1 and 2, choose a tool and unit.
Tools: ruler, yardstick, measuring tape
Units: feet, inches, yards, miles

1. Which tool and unit should be used to find the perimeter of a square swimming pool?

2. Which tool and unit should be used to find the perimeter of a sandbox with one curved side?

Do you UNDERSTAND?

3. In the example above, what unit should Maria use if she were making a long banner instead of a poster?

4. **Construct Arguments** Why wouldn't you use a ruler or a yardstick to measure a mile?

5. Maria also wants to put ribbon around a small, round mirror. She doesn't have a tape measure. How could she find the distance around the mirror?

DIGITAL Animated Glossary www.pearsonsuccessnet.com

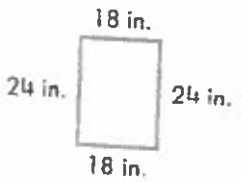
*For another example, see Set B on page 334.

A ruler is used to measure short distances, such as the length of a desk. A ruler measures in inches or feet.

A yardstick is used to measure medium distances, such as the length of a football field. A yardstick measures in inches, feet, or yards.

A mile is a measure of longer distances. It is too long to use a ruler or a yardstick. Most people can walk a mile in about 15 minutes.

Maria is measuring a short distance. She could use a ruler and measure in inches.



$24 + 18 + 24 + 18 = 84$

Maria needs 84 inches of ribbon.

Independent Practice

In **6–8,** choose the best unit and tool for measuring the perimeter of each.

6. a square window

7. a round rug

8. a patio shaped like a rectangle

Problem Solving

MATHEMATICAL PRACTICES

In **9** and **10,** choose the best measuring tool and unit from the lists at the right.

9. Mr. Paz wants to put a railing around a deck that is shaped like a hexagon. Which tool and unit should he use to measure the perimeter of the deck?

10. Kelly wants to put ribbon around the edge of a round tablecloth. Which tool and unit should she use to measure the tablecloth?

Tools	Units
Ruler	Inches
Yardstick	Feet
Measuring Tape	Yards
	Miles

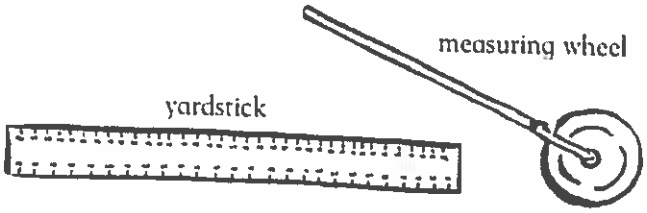
11. Reason If you had only a 12-inch ruler, would you be able to measure the perimeter of a gymnasium? Explain.

12. Use Tools Max wants to measure the perimeter of his shoe. What different tools and units could he use?

13. Which unit should be used to find the perimeter of a city?

A inches **B** feet **C** yards **D** miles

Measurement problems

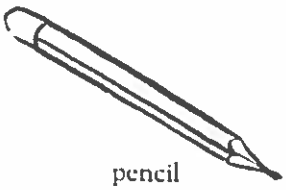


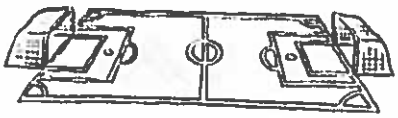

tape measure


ruler

Which measuring tool would be best to measure a garden? *measuring wheel*

Write which measuring tool would be best for measuring each item.


pencil


the side of a soccer field


trash can lid

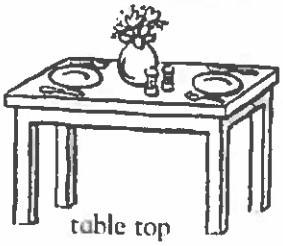
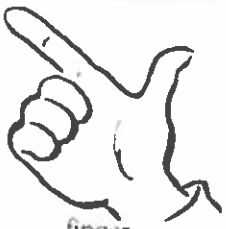
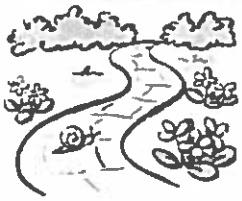


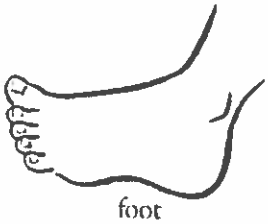
table top


finger


round pond


soccer ball


curvy garden path

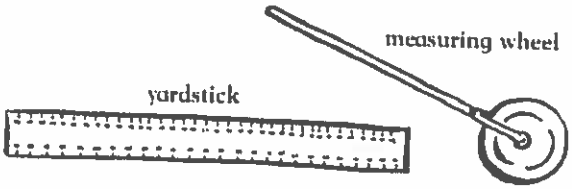

foot


swimming pool


front door


toy snake

Measurement problems

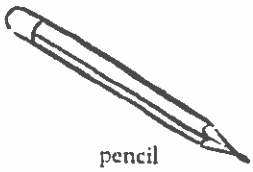



tape measure

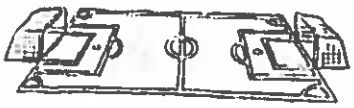

ruler

Which measuring tool would be best to measure a garden? measuring wheel

Write which measuring tool would be best for measuring each item.


pencil

ruler


the side of a soccer field

measuring wheel


trash can lid

tape measure

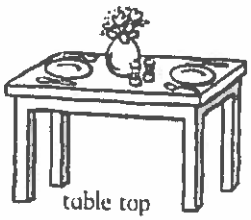


table top

yardstick


finger

ruler


round pond

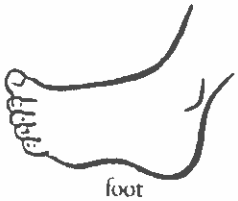
measuring wheel


soccer ball

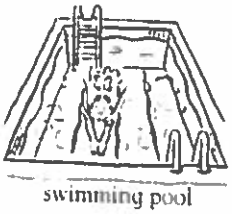
tape measure


curvy garden path

measuring wheel


foot

tape measure


swimming pool

measuring wheel


front door

yardstick


toy snake

tape measure

Although it is possible to measure most of these items with any of the instruments the question is "which is best?". Help children understand why a tape measure is more useful than a ruler for measuring curved lengths.

Lesson 13-3

Common Core

3.MD.8 Solve real world and mathematical problems involving perimeters of polygons, including finding the perimeter given the side lengths, finding an unknown side length, and exhibiting rectangles with the same perimeter and different areas or with the same area and different perimeters.

Perimeter of Common Shapes

How can you find the perimeter of common shapes?

Mr. Coe needs to find the perimeter of two swimming pool designs. One pool shape is a rectangle. The other pool shape is a square. What is the perimeter of each pool?

Guided Practice*

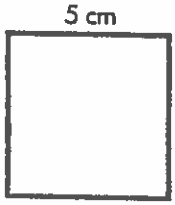
MATHEMATICAL PRACTICES

Do you know HOW?

For **1** and **2**, find the perimeter.

1. Rectangle

2. Square



Do you UNDERSTAND?

3. Generalize How can you use multiplication and addition to find the perimeter of the rectangle above?

4. In Exercises **1** and **2**, explain how to find the missing lengths.

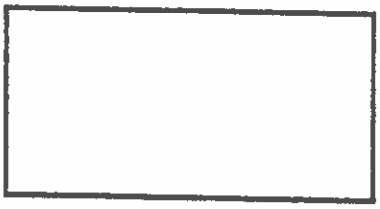
5. Darla drew an equilateral triangle. Each side was 9 inches long. What was the perimeter of the triangle?

Independent Practice

In **6** and **7**, use an inch ruler to measure the lengths of the sides of the polygon. Find the perimeter.

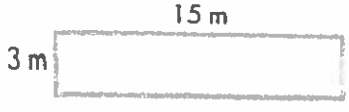
6. Square

7. Rectangle

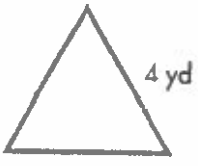


In **8** and **9**, find the perimeter of each polygon.

8. Rectangle



9. Equilateral triangle



*For another example, see Set C on page 335.

McKeesport Area School District

Flexible Instruction Days – Elementary Lesson Plan

GRADE / SUBJECT: 3/ Science			LESSON TITLE: Animals Classification	
☐LESSON 1:	☐ LESSON 2:	☐ LESSON 3:	☐ LESSON 4:	☐ LESSON 5:

STANDARDS AND SEQUENCE:

Standard - 3.1.3.A1
Describe characteristics of living things that help to identify and classify them.

Standard - 3.1.3.C2
Describe animal characteristics that are necessary for survival.

INSTRUCTIONAL OUTCOMES:

Students will:
Identify and categorize invertebrates and vertebrates
Identify animals in the 5 classes of vertebrates
Identify warm blooded and cold blooded animals

STUDENT PARTICIPATION:

Students will:

1. Read the Animals Classification Information sheet
2. Read about the 5 classes of vertebrates and answer the questions pertaining to each
3. Categorize the given pictures as vertebrates or invertebrates
4. Classify each of the given pictures as a mammal, reptile, bird, amphibian, or fish
5. Review animal classification vocabulary and complete the matching
6. Define warm blooded and cold blooded and create an organized list of animals that fit into those categories
7. Complete the Word Search
8. Complete the animal pocket activity
9. Complete the animal accordion activity
10. Play the "Guess the Animal" Game

ACCOMMODATIONS:

For struggling learners:
The students will use a Venn diagram to compare and contrast 2 of the animals from the 5 classes of vertebrates

For advanced learners: Research and write a paragraph about an animal that has not been mentioned. Include if it is a vertebrate or invertebrate and whether it is warm blooded or cold blooded.

RESOURCES

Animals Classification Information
Animal Classification Nonfiction Passages
Venn Diagram
Animal Research page

Guess the Animal Game
EVIDENCE OF LEARNING Students will distinguish between vertebrates and invertebrates Students will distinguish between cold blooded and warm blooded animals Students will identify animals that belong to the 5 classes of vertebrates

Lesson 7: Animal Classification

Students should:

1. **Read the Animals Classification Information sheet**
2. **Read about the 5 classes of vertebrates and answer the questions pertaining to each**
3. **Categorize the given pictures as vertebrates or invertebrates**
4. **Classify each of the given pictures as a mammal, reptile, bird, amphibian, or fish**
5. **Review animal classification vocabulary and complete the matching**
6. **Define warm blooded and cold blooded and create an organized list of animals that fit into those categories**
7. **Complete the Word Search**
8. **Complete the animal pocket activity**
9. **Complete the animal accordion activity**
10. **Guess the Animal Game**

Animal Research

Animal Classification

Scientists classify animals into 2 large groups called vertebrates and invertebrates. Vertebrates are animals with a backbone. The 5 classes of vertebrates are Mammals, Reptiles, Amphibians, Birds, and Fish. Invertebrates are animals without a backbone. Butterflies, grasshoppers, and spiders are examples of invertebrates. Animals can also be grouped as cold blooded or warm blooded. Cold-blooded animals' body temperature depends on whether it is hot or cold outside. Reptiles, fish, and amphibians are cold-blooded. Warm-blooded animals maintain a constant body temperature regardless of the temperature outside. Mammals and birds are warm-blooded.

Mammals

There are about 4,000 kinds of mammals. Dogs, Elephants, and horses are considered mammals, but did you know that humans are mammals too? Yes! You are a mammal! Being a mammal means that you are warm-blooded. Your body temperature stays the same whether it is cold or hot outside. Mammals control their body temperature by sweating, shivering, or panting.

Other characteristics of mammals include having glands to produce milk for their babies to drink, having fur or hair, and breathing air using their lungs. Fur and fat help mammals who live in the cold. Bats are the only mammals that can fly. Mammals are vertebrates meaning that they have backbones. They might look different, but they all have bony skeletons.

You can find mammals in all types of habitats. For example, you can find polar bears living in the cold areas of the world and camels living in the hot areas. Whales and dolphins are mammals that live in the ocean, and moles and groundhogs live underground.

Different types of mammals eat different types of food. For example, mammals that eat meat are called carnivores like tigers and polar bears. Mammals that eat only plants are called herbivores like elephants and giraffes. Mammals that eat both plants and meat are called omnivores. Humans are considered omnivores because they can eat both.

Name: _____

Mammals

Read the passage and answer the questions.

There are about 4,000 kinds of mammals. Dogs, Elephants, and horses are considered mammals, but did you know that humans are mammals too? Yes! You are a mammal! Being a mammal means that you are warm-blooded. Your body temperature stays the same whether it is cold or hot outside. Mammals control their body temperature by sweating, shivering, or panting.

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You can find mammals in all types of habitats. For example, you can find polar bears living in the cold areas of the world and camels living in the hot areas. Whales and dolphins are mammals that live in the ocean, and moles and groundhogs live underground.

Different types of mammals eat different types of food. For example, mammals that eat meat are called carnivores like tigers and polar bears. Mammals that eat only plants are called herbivores like elephants and giraffes. Mammals that eat both plants and meat are called omnivores. Humans are considered omnivores because they can eat both.

1. True or False. Humans are cold-blooded mammals.

2. What does being warm-blooded mean?

_____

_____

_____

3. Why do mammals sweat or shiver?

_____

_____

_____

4. What are two characteristics of mammals?

_____

_____

_____

5. What does it mean to be a vertebrate?

_____

_____

6. True or False. You can find mammals in hot and cold areas of the world.

7. What do we call mammals that eat only plants?

_____

8. What is one example of a mammal that is a carnivore?

_____

Name: _____

Mammals

Answer Key

Read the passage and answer the questions.

There are about 4,000 kinds of mammals. Dogs, Elephants, and horses are considered mammals, but did you know that humans are mammals too? Yes! You are a mammal! Being a mammal means that you are warm-blooded. Your body temperature stays the same whether it is cold or hot outside. Mammals control their body temperature by sweating, shivering, or panting.

Other characteristics of mammals include having glands to produce milk for their babies to drink, having fur or hair, and breathing air using their lungs. Fur and fat help mammals who live in the cold. Bats are the only mammals that can fly. Mammals are vertebrates meaning that they have backbones. They might look different, but they all have bony skeletons.

You can find mammals in all types of habitats. For example, you can find polar bears living in the cold areas of the world and camels living in the hot areas. Whales and dolphins are mammals that live in the ocean, and moles and groundhogs live underground.

Different types of mammals eat different types of food. For example, mammals that eat meat are called carnivores like tigers and polar bears. Mammals that eat only plants are called herbivores like elephants and giraffes. Mammals that eat both plants and meat are called omnivores. Humans are considered omnivores because they can eat both.

1. True or (False.) Humans are cold-blooded mammals.

2. What does being warm-blooded mean?

Being warm-blooded means that your body temperature stays the same whether it is cold or hot outside.

3. Why do mammals sweat or shiver?

Mammals sweat or shiver to control their body temperature.

4. What are two characteristics of mammals?

(Any of these are correct) having glands to produce milk, having fur or hair, breathing air using lungs

5. What does it mean to be a vertebrate?

Having a backbone

6. (True) or False. You can find mammals in hot and cold areas of the world.

7. What do we call mammals that eat only plants?

Herbivores

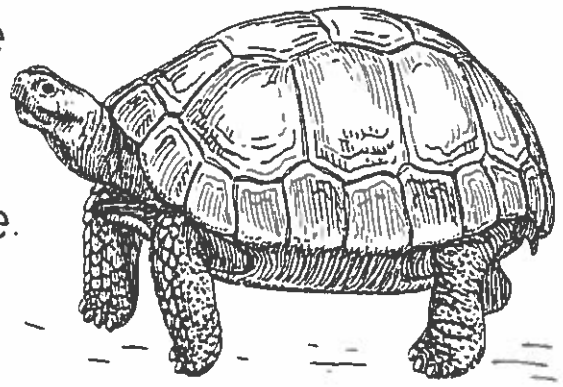
8. What is one example of a mammal that is a carnivore?

Tigers or Polar bears are correct answers

Reptiles

There are about 6500 different reptile species. They are animals that are cold- blooded meaning that their body temperature relies on the environment. For example, when a turtle gets too warm, it can go into the water or shade to cool off. Unlike the smooth skin humans have, reptiles are covered with scales for protection. Scales can be hard or soft, large or small.

Unlike mammals, reptiles are born with strong instincts so they can survive on their own without needing their parents for food or care. Reptiles are vertebrates, or animals with a backbone. Most reptiles lay eggs and they cannot breathe under water. They have to breathe air through their lungs, just like humans!



There are many types of reptiles. The four basic groups of reptiles include lizards, snakes, crocodiles and alligators, and turtles. Lizards and snakes make up the largest number of different reptiles. Even dinosaurs were reptiles! Did you know that turtles don't have ears to hear with, but they have great eye sight and sense of smell? Another interesting fact about turtles is that they can live for more than a 100 years.

You can find reptiles on land, in fresh water, in slightly salty water, and in sea water. Reptiles hate the cold which is why you find more snakes in the hot sunny weather.

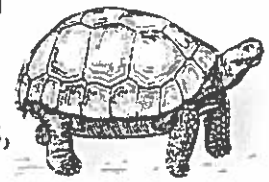
Name: _____

Reptiles

Read the passage and answer the questions.

There are about 6500 different reptile species. They are animals that are cold- blooded meaning that their body temperature relies on the environment. For example, when a turtle gets too warm, it can go into the water or shade to cool off. Unlike the smooth skin humans have, reptiles are covered with scales for protection. Scales can be hard or soft, large or small.

Unlike mammals, reptiles are born with strong instincts so they can survive on their own without needing their parents for food or care. Reptiles are vertebrates, or animals with a backbone. Most reptiles lay eggs and they cannot breathe under water. They have to breathe air through their lungs, just like humans!



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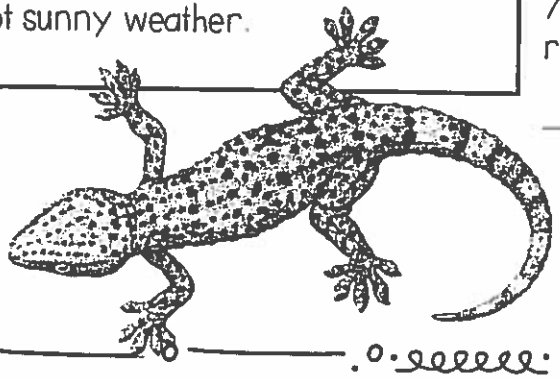


1. How many different reptiles species are there?

_____

2. What does it mean to be cold-blooded?

_____

_____

_____

3. Why are reptiles covered with scales?

_____

4. Explain one difference between mammals and reptiles according to the passage?

_____

_____

_____

5. True or False. Most reptiles do not lay eggs.

6. What are the four basic groups of reptiles?

_____

_____

_____

7. What makes up the largest number of the reptile species?

_____

Name: _____

Reptiles

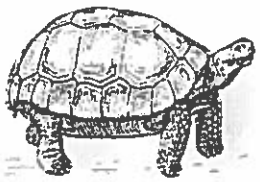
Answer Key

Read the passage and answer the questions.

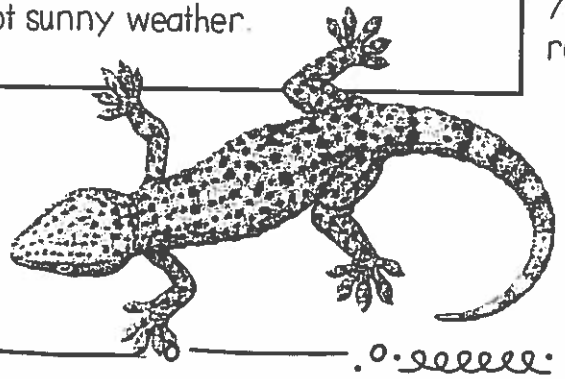
There are about 6500 different reptile species. They are animals that are cold- blooded meaning that their body temperature relies on the environment. For example, when a turtle gets too warm, it can go into the water or shade to cool off. Unlike the smooth skin humans have, reptiles are covered with scales for protection. Scales can be hard or soft, large or small.

Unlike mammals, reptiles are born with strong instincts so they can survive on their own without needing their parents for food or care. Reptiles are vertebrates, or animals with a backbone. Most reptiles lay eggs and they cannot breathe under water. They have to breathe air through their lungs, just like humans!

There are many types of reptiles. The four basic groups of reptiles include lizards, snakes, crocodiles and alligators, and turtles. Lizards and snakes make up the largest number of different reptiles. Even dinosaurs were reptiles! Did you know that turtles don't have ears to hear with, but they have great eye sight and sense of smell? Another interesting fact about turtles is that they can live for more than a 100 years.



You can find reptiles on land, in fresh water, in slightly salty water, and in sea water. Reptiles hate the cold which is why you find more snakes in the hot sunny weather.



1. How many different reptiles species are there?

6500

2. What does it mean to be cold-blooded?

Their body temperature relies on the environment.

3. Why are reptiles covered with scales?

For protection

4. Explain one difference between mammals and reptiles according to the passage?

Reptiles can survive on their own without needing their parents for food or care, unlike mammals.

5. True or (False) Most reptiles do not lay eggs.

6. What are the four basic groups of reptiles?

Lizards, snakes, crocodiles and alligators, and turtles.

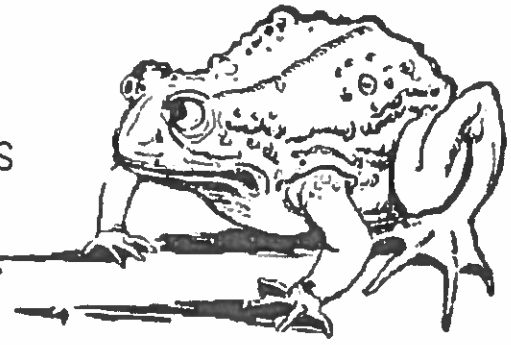
7. What makes up the largest number of the reptile species?

Lizards and snakes

Amphibians

Amphibians are a class of vertebrate animals like mammals and reptiles. The word amphibian means two lives. They live the first part of their lives in water and the last part on land. They lay eggs just like reptiles and birds, but the only difference is that they lay them in water.

When the eggs hatch, the amphibians develop gills to be able to breathe under water and fins to swim with. We call these young amphibians tadpoles. As they grow, their bodies undergo changes called metamorphoses. They start to develop lungs and legs to be able to live on land which is where they end up spending most of their time. However, they need to stay close to the water to keep their skin moist.



There are more than 4,000 different species of amphibians. Types of amphibians include frogs, toads, salamanders, newts, and caecilians. Caecilians don't have legs or arms and they look a lot like worms or snakes. Amphibians are all cold-blooded meaning that they're the same temperature as the air or water around them.

Adult amphibians like to live in damp places such as streams, meadows, forests, and swamps. The main diet of most amphibians include any live food they can catch such as insects, spiders, snails, and earthworms. Most amphibians are carnivores so they like to eat flesh.

Name: _____

Amphibians

Read the passage and answer the questions.

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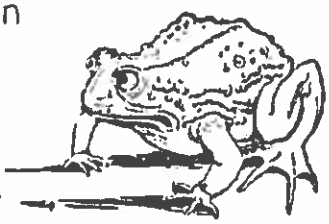

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1. What does it mean when we say that amphibians have two lives?

_____

_____

_____

2. What is the difference between how an amphibian lays eggs and how reptiles lay eggs?

_____

_____

3. What does the word metamorphosis mean?

_____

_____

4. Why do amphibians need to stay close to the water?

_____

_____

5. What are some types of amphibians?

_____

_____

6. What do amphibians like to eat?

_____

_____

_____

Name: _____

Amphibians

Answer Key

Read the passage and answer the questions.

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1. What does it mean when we say that amphibians have two lives?

The first part of their lives are spent in the water and the last part on land.

2. What is the difference between how an amphibian lays eggs and how reptiles lay eggs?

Amphibians lay eggs in the water and reptiles lay eggs on land

3. What does the word metamorphosis mean?

When the amphibian's body undergoes changes, it is called metamorphosis.

4. Why do amphibians need to stay close to the water?

To keep their skin moist

5. What are some types of amphibians?

Frogs, toads, salamanders, newts, and caecilians

6. What do amphibians like to eat?

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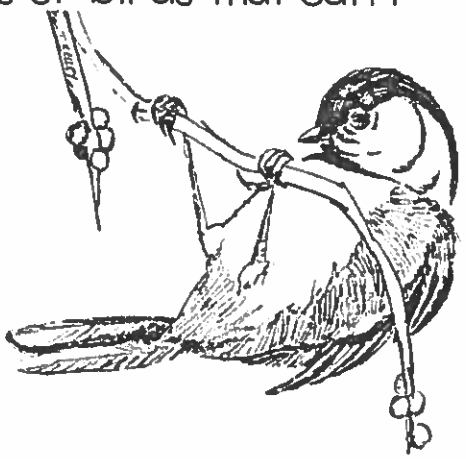
Birds

Do you know what makes a bird different from other animals? Feathers! All birds have feathers and they are very important to them. Feathers allow birds to fly, keep them warm in cold weather, and help them to camouflage. When you think of birds, you probably automatically think that they all can fly. That is not true because not all birds fly. Examples of birds that can't fly are penguins, kiwis, and ostriches.



Other features of birds are their wings, hollow bones, and a beak. They are warm-blooded animals that can lay eggs. Their eggs are usually laid in a nest. After they hatch, the mother bird takes care of the baby birds for an extended period of time.

There are about 10,000 species of birds which make them one of the most numerous vertebrates. Some examples of birds are hummingbirds, seagulls, woodpeckers, and owls.

What a bird eats depends on the type of bird. Some birds eat plants while others eat insects. There are also birds that eat other animals like fish or snakes.

Birds are also known for migrating. When birds migrate, they travel thousands of miles each year or season. The main reasons for migration are food and weather. For example, when it is winter, food becomes scarce so they move to warmer places to search for food.

Name: _____

Birds

Read the passage and answer the questions.

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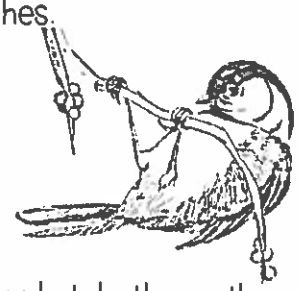

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1. Why are feathers important to birds?

_____

_____

_____

2. True or False. All birds can fly.

3. Where do birds usually lay their eggs?

_____

4. About how many species of birds are there?

_____

5. List 4 examples of birds.

_____

_____

_____

6. True or False. Some birds like to eat fish while others like to eat plants.

7. What does the word migration mean?

_____

_____

_____

8. What are the main reasons for migration?

_____

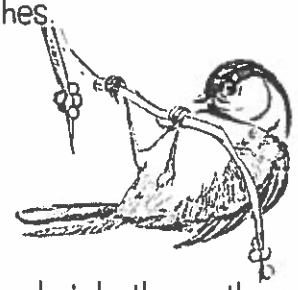
Name: _____

Birds

Answer key

Read the passage and answer the questions.

Do you know what makes a bird different from other animals? Feathers! All birds have feathers and they are very important to them. Feathers allow birds to fly, keep them warm in cold weather, and help them to camouflage. When you think of birds, you probably automatically think that they all can fly. That is not true because not all birds fly. Examples of birds that can't fly are penguins, kiwis, and ostriches.



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1. Why are feathers important to birds?

   Feathers allow birds to fly, keep them warm, and help them to camouflage.

2. True or (False.) All birds can fly.

3. Where do birds usually lay their eggs?

   In a nest

4. About how many species of birds are there?

   10,000

5. List 4 examples of birds.

   Hummingbirds, seagulls, woodpeckers, and owls

6. (True) or False. Some birds like to eat fish while others like to eat plants.

7. What does the word migration mean?

   Migration is when birds travel thousands of miles each year or season for a reason.

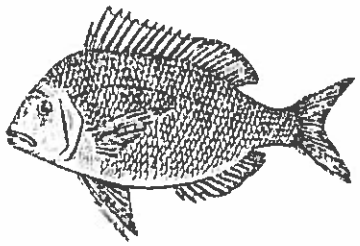
8. What are the main reasons for migration?

   Food and Weather

Fish

Did you know that fish are one of the oldest animal families to live on earth? They were here about 500 million years ago – way before the dinosaurs! There are more fish species than reptiles, amphibians, birds, and mammals combined – over 25,000 to be exact.

Fish have a backbone, therefore, they are classified as vertebrates. Fish also have fins, gills, and scales. They live and breathe underwater using their gills. They definitely do not have lungs which is why they die when you take them out of the water. Most fish have scales to protect their soft bodies and to help them move through the water. If you take a close look at a shark, they have small pointed scales that are like teeth. Some fish do not have scales like the catfish and lamprey.



Fish are cold-blooded so they can't control their body temperature. They come in all colors and sizes. They live in every large body of the world including streams, rivers, oceans, lakes, and ponds. Some fish only live in freshwater while others live in salt water.

Some fish are carnivores so they like to eat other fish and small animals and insects. Other fish are omnivores so they like to eat both plants and animals.

The largest fish is the whale shark which can grow up to 41 feet long. The tiniest fish is called the Philippine Goby which is about the size of your pinky fingernail.

Name: _____

Fish

Read the passage and answer the questions.

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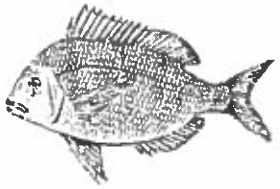

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1. True or false. Dinosaurs existed before fish existed.

2. About how many fish species are there?

_____

3. How are gills helpful to fish?

_____

_____

4. How are scales helpful to fish?

_____

_____

_____

5. True or false. Not all fish have scales.

6. Fish are cold-blooded. What does that mean?

_____

_____

7. What do fish like to eat?

_____

_____

_____

Name: _____

Fish

Answer Key

Read the passage and answer the questions.

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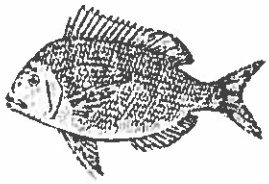

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3. How are gills helpful to fish?

   Gills help fish breathe under water.

4. How are scales helpful to fish?

   Scales protect their soft bodies and helps them move through the water.

5. (True) or false. Not all fish have scales.

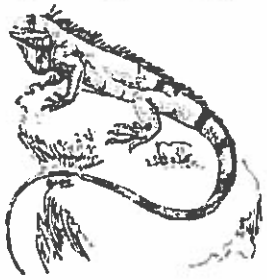
6. Fish are cold-blooded. What does that mean?

   They can't control their body temperature.

7. What do fish like to eat?

   Some like to eat other fish and small animals and insects. Others like to eat both plants and animals.

Name: _____



Animal Classification

PowerPoint Review

1. Why do scientists group animals into classes?

2. All animals are divided into two main groups - _____ and _____

3. What is a vertebrate?

4. What does being warm-blooded mean?

5. List three examples of mammals.

6. _____ are born in the water and breathe with gills but when they grow up, they develop lungs and can live on land.

7. True or False: Amphibians are warm-blooded. If False, Explain your answer.

8. List three examples of reptiles.

9. _____ are the only animals that have feathers.

10. Fish have _____ to help them breathe.

11. True or false. There are more vertebrates than invertebrates.. If false, explain your answer.

12. What is an invertebrate?

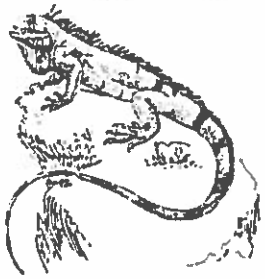
13. List three examples of invertebrates.

Name: _____

Answer Key

Animal Classification

PowerPoint Review



1. Why do scientists group animals into classes? To make it easier to study them

2. All animals are divided into two main groups - Vertebrates and Invertebrates

3. What is a vertebrate? An animal that has a spine or backbone

4. What does being warm-blooded mean? The body temperature stays the same when it is cold or hot outside.

5. List three examples of mammals. Any of these are correct: humans, elephants, horses, whales, giraffes, and dogs

6. Amphibians are born in the water and breathe with gills but when they grow up, they develop lungs and can live on land.

7. True or False: Amphibians are warm-blooded. If False, Explain your answer. False. Amphibians are cold-blooded.

8. List three examples of reptiles. (Any of these) Snakes, lizards, alligators, turtles

9. Birds are the only animals that have feathers.

10. Fish have Gills to help them breathe.

11. True or false. There are more vertebrates than invertebrates.. If false, explain your answer. False. Over 96% of the world's animals are invertebrates.

12. What is an invertebrate? An animal that does not have a spine.

13. List three examples of invertebrates. (Any of these): butterflies, grasshoppers, worms, spiders, starfish, squid

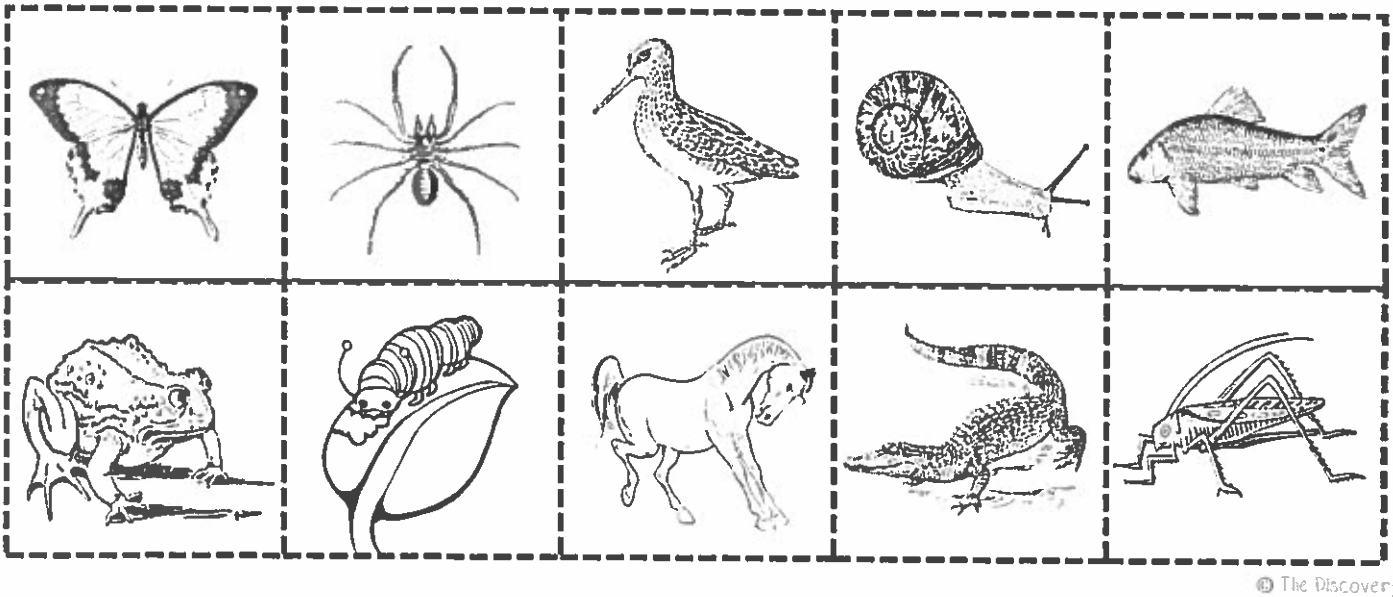
Name: _____

Vertebrates vs. Invertebrates

Cut the pictures below and glue them under the correct category.

Vertebrates

Invertebrates

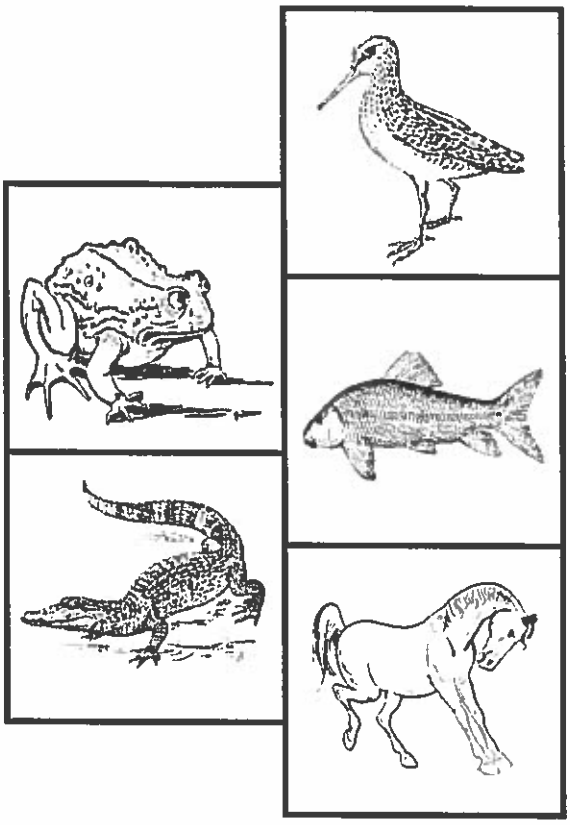


Name: _____

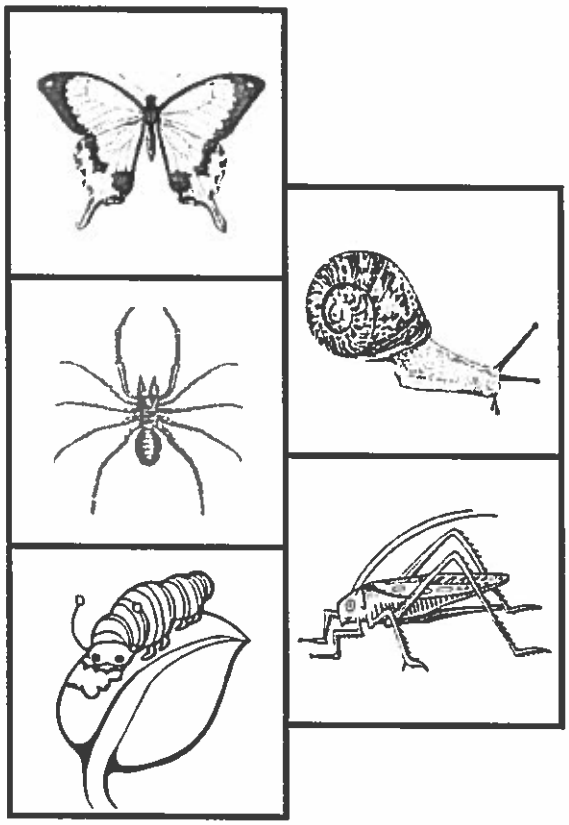
Vertebrates vs. Invertebrates Answer key

Cut the pictures below and glue them under the correct category.

Vertebrates



Invertebrates



Name: _____

Classifying Animals

Cut the pictures below and glue them under the correct class or category.

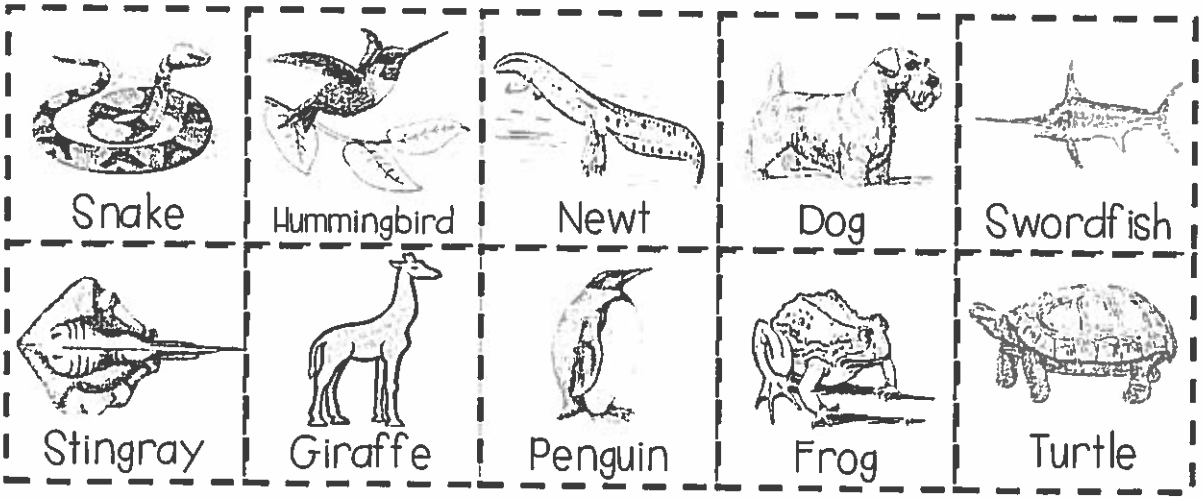
Mammals

Reptiles

Birds

Amphibians

Fish



Name: _____

Classifying Animals

Answer key

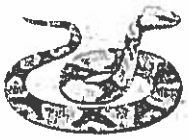
Cut the pictures below and glue them under the correct class or category.

Mammals

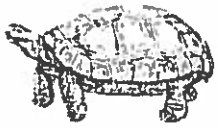
Dog

Giraffe

Reptiles



Snake



Turtle

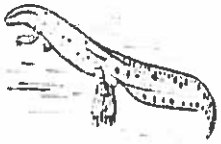
Birds

Hummingbird

Penguin

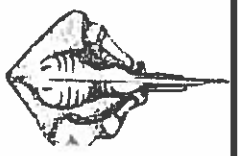
Amphibians

Frog



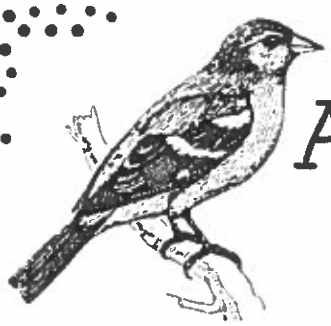
Newt

Fish



Stingray

Swordfish



Animal Classification Vocabulary

Vertebrate An animal that has a spine or backbone

Invertebrate An animal that does not have a spine or backbone

Classification Putting things into groups

Cold-Blooded The animal's body temperature depends on whether it is hot or cold outside.

Warm-Blooded Animals that maintain a constant body temperature regardless of the temperature outside

Metamorphosis The physical change some animals go through to become adults

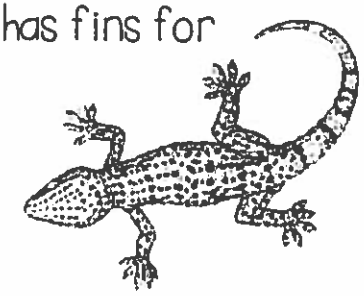
Mammals A warm-blooded vertebrate animal that feed its young with milk, have fur or hair, and breathe air with lungs

Amphibians A cold-blooded vertebrate animal that have gills and live in water when born and then grow lungs and live on land as adults

Reptiles A cold-blooded animal that breathes air and has scaly skin

Fish A cold-blooded animal that lives in water and has fins for swimming and gills for breathing

Bird A warm-blooded animal that lays eggs, has feathers, wings, and a beak.



Name: _____

Animal Classification Vocab Match

Match each word to its definition. Write the correct letter in the space provided.

1. Vertebrate _____
2. Invertebrate _____
3. Warm-Blooded _____
4. Cold-Blooded _____
5. Classification _____
6. Metamorphosis _____
7. Amphibians _____
8. Reptiles _____
9. Mammals _____
10. Bird _____
11. Fish _____

a The animal's body temperature depends on whether it is hot or cold outside.

b A cold-blooded vertebrate animal that have gills and live in water when born and then grow lungs and live on land as adults

c A warm-blooded vertebrate animal that feed its young with milk, have fur or hair, and breathe air with lungs

d An animal that does not have a spine

e Putting things into groups

f An animal that has a spine or backbone

g A cold-blooded animal that breathes air and has scaly skin

h A cold-blooded animal that lives in water and has fins for swimming and gills for breathing

i The physical change some animals go through to become adults

j Animals that maintain a constant body temperature regardless of the temperature outside

k A warm-blooded animal that lays eggs, has feathers, wings, and a beak.

Name: _____ Answer key

Animal Classification Vocab Match

Match each word to its definition. Write the correct letter in the space provided.

1. Vertebrate f
2. Invertebrate d
3. Warm-Blooded j
4. Cold-Blooded a
5. Classification e
6. Metamorphosis i
7. Amphibians b
8. Reptiles g
9. Mammals c
10. Bird k
11. Fish h

a The animal's body temperature depends on whether it is hot or cold outside.

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Animal Classification

Warm-Blooded Animals	Cold-Blooded Animals
Definition:	Definition:
List of Animals:	List of Animals:

Animal Classification

Warm-Blooded Animals

Definition:

The body temperature stays the same when it is cold or hot outside.

List of Animals:

- Elephant
- Horse
- Dog
- Cat
- Eagle
- Whale
- Giraffe
- Penguin
- Lion
- Chicken

Cold-Blooded Animals

Definition:

Their bodies do not automatically regulate their temperature. Their body temperature depends on whether it is cold or hot outside.

List of Animals:

- Fish
- Alligator
- Frog
- Lizard
- Snake
- Spiders
- Scorpion
- Dragonfly
- Newt
- Turtle

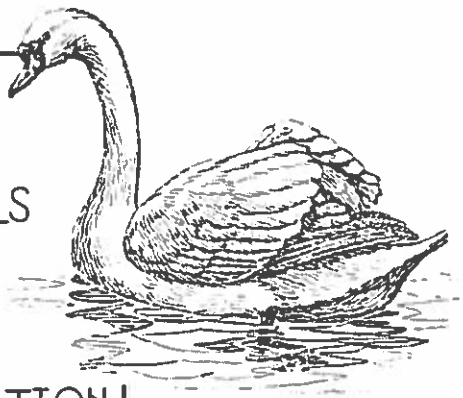
Name: _____

Animal Classification Word Search

A	H	P	E	N	I	N	S	U	L	A	N	F	D	E	C	M	O
M	E	T	A	M	O	R	P	H	O	S	I	S	K	I	A	A	I
X	V	C	E	C	I	D	E	N	E	R	G	A	T	E	N	S	N
R	U	A	H	C	P	G	U	P	F	I	L	H	N	S	I	R	V
A	A	W	L	A	L	D	U	S	T	A	S	E	I	A	M	H	E
M	W	A	A	L	D	A	L	I	O	I	T	M	W	C	A	A	R
P	L	A	C	L	E	A	S	S	F	L	L	O	A	A	L	M	T
H	R	T	R	A	M	Y	E	S	M	O	U	E	T	A	S	N	E
I	H	E	E	M	L	S	S	C	I	B	R	R	S	I	V	O	B
B	G	N	A	O	B	U	O	E	A	F	A	N	R	E	Y	H	R
I	A	M	S	O	E	L	U	A	N	N	I	O	F	N	R	D	A
A	S	A	A	L	E	E	O	N	Y	E	T	C	A	S	U	C	T
N	I	C	O	L	D	B	L	O	O	D	E	D	A	I	P	D	E
S	S	Y	C	G	I	Y	E	V	D	A	Z	Z	L	T	R	A	N
E	S	S	N	O	N	E	E	N	E	E	A	B	U	I	I	L	A
R	I	G	E	O	T	H	R	R	M	A	D	H	B	S	O	O	I
V	E	R	T	E	B	R	A	T	E	E	L	A	G	O	N	I	N

word bank

ANIMALS COLDBLOODED FISH
VERTEBRATE METAMORPHOSIS MAMMALS
INVERTEBRATE AMPHIBIANS BIRD
WARMBLOODED REPTILES CLASSIFICATION



Name: _____

Animal Classification Word Search

A	H	P	E	N	I	N	S	U	L	A	N	F	D	E	C	M	O
M	E	T	A	M	O	R	P	H	O	S	I	S	K	I	A	A	I
X	V	C	E	C	I	D	E	N	E	R	G	A	T	E	N	S	N
R	U	A	H	C	P	G	U	P	F	I	L	H	N	S	I	R	V
A	A	W	L	A	L	D	U	S	T	A	S	E	I	A	M	H	E
M	W	A	A	L	D	A	L	I	O	I	T	M	W	C	A	A	R
P	L	A	C	L	E	A	S	S	F	L	L	O	A	A	L	M	T
H	R	T	R	A	M	Y	E	S	M	O	U	E	T	A	S	N	E
I	H	E	E	M	L	S	S	C	I	B	R	R	S	I	V	O	B
B	G	N	A	O	B	U	O	E	A	F	A	N	R	E	Y	H	R
I	A	M	S	O	E	L	U	A	N	N	I	O	F	N	R	D	A
A	S	A	A	L	E	E	O	N	Y	E	T	C	A	S	U	C	T
N	I	C	O	L	D	B	L	O	O	D	E	D	A	I	P	D	E
S	S	Y	C	G	I	Y	E	V	D	A	Z	Z	L	T	R	A	N
E	S	S	N	O	N	E	E	N	E	E	A	B	U	I	I	L	A
R	I	G	E	O	T	H	R	R	M	A	D	H	B	S	O	O	I
V	E	R	T	E	B	R	A	T	E	E	L	A	G	O	N	I	N

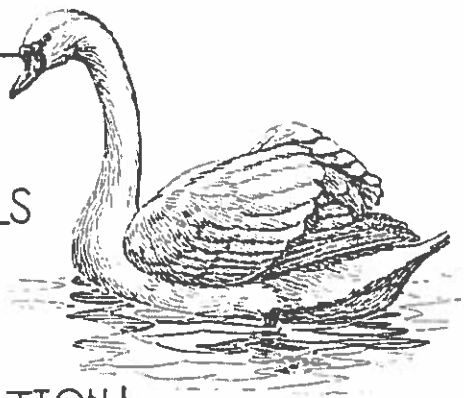
Word Bank

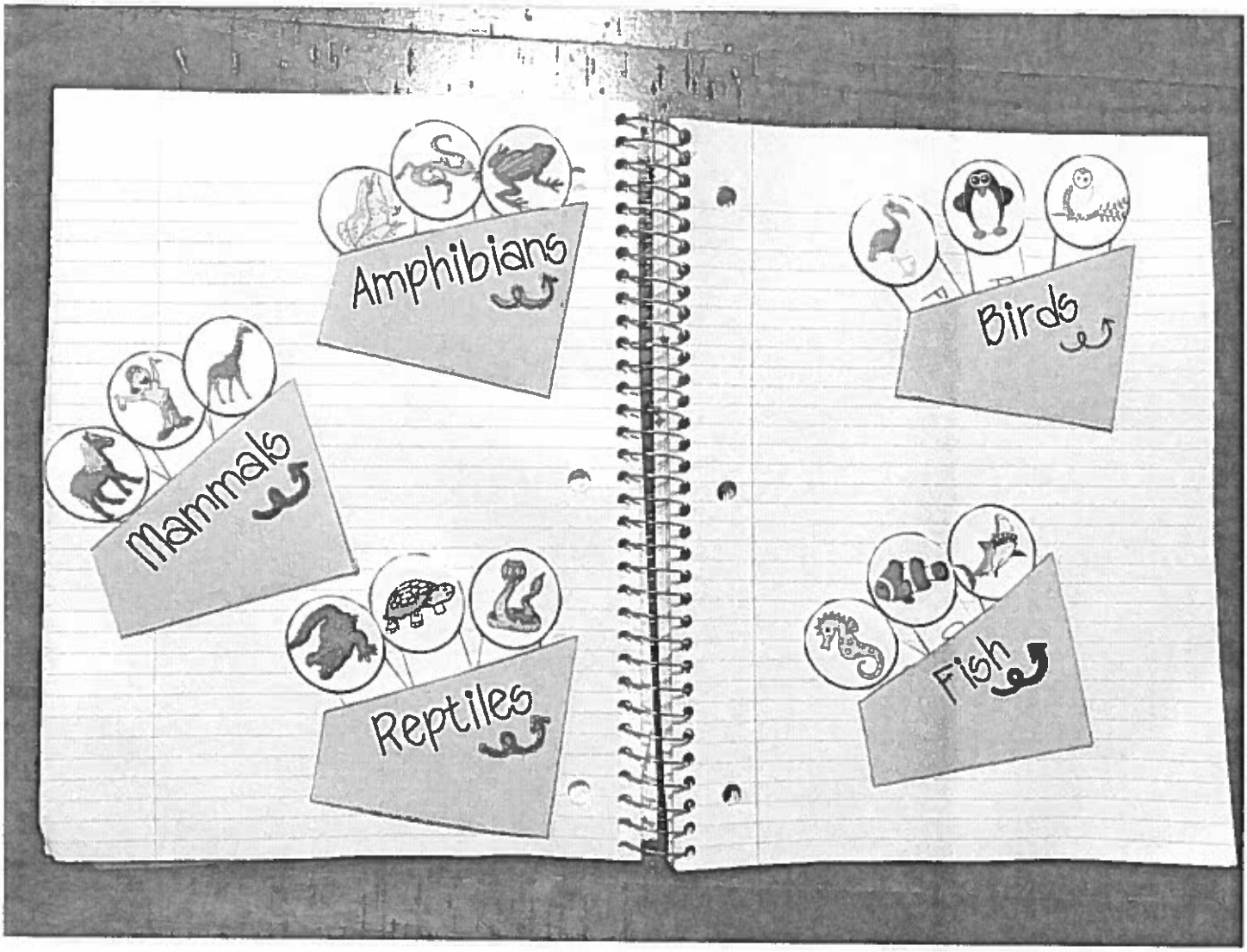
ANIMALS COLDBLOODED FISH

VERTEBRATE METAMORPHOSIS MAMMALS

INVERTEBRATE AMPHIBIANS BIRD

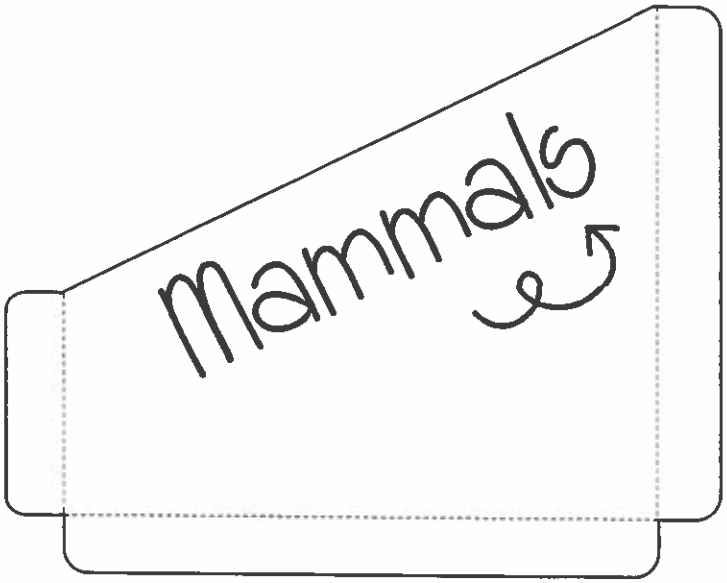
WARMBLOODED REPTILES CLASSIFICATION

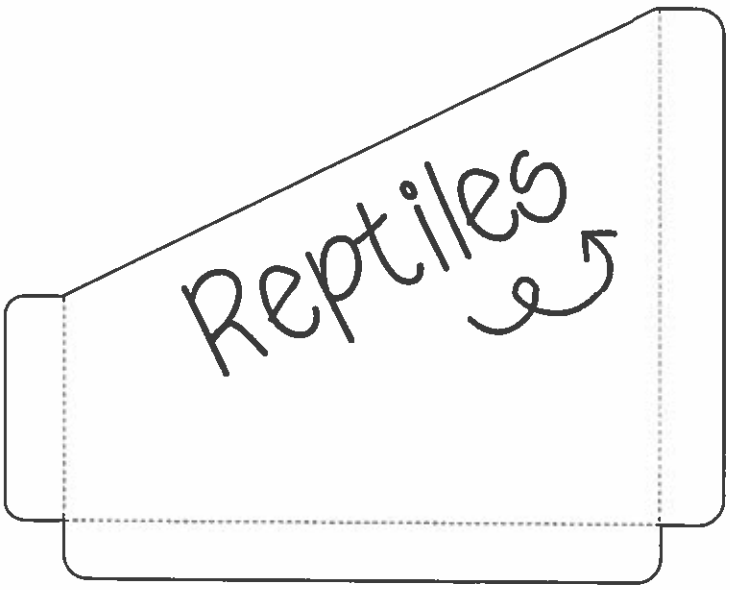


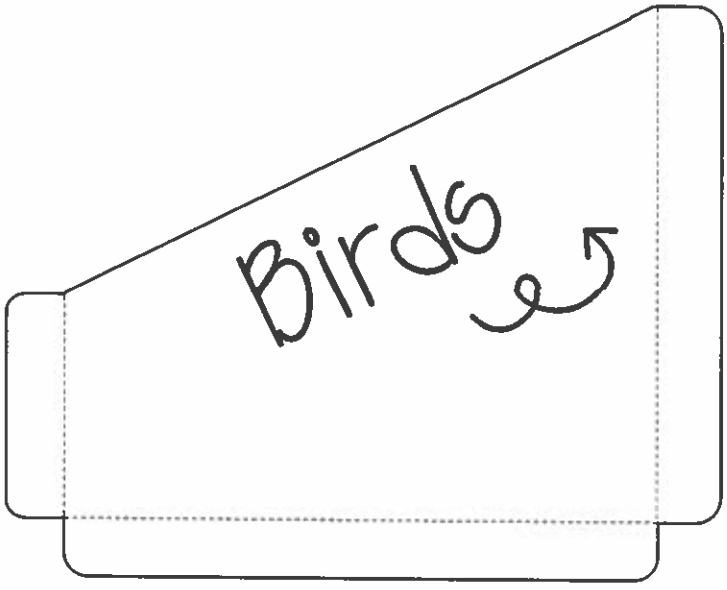


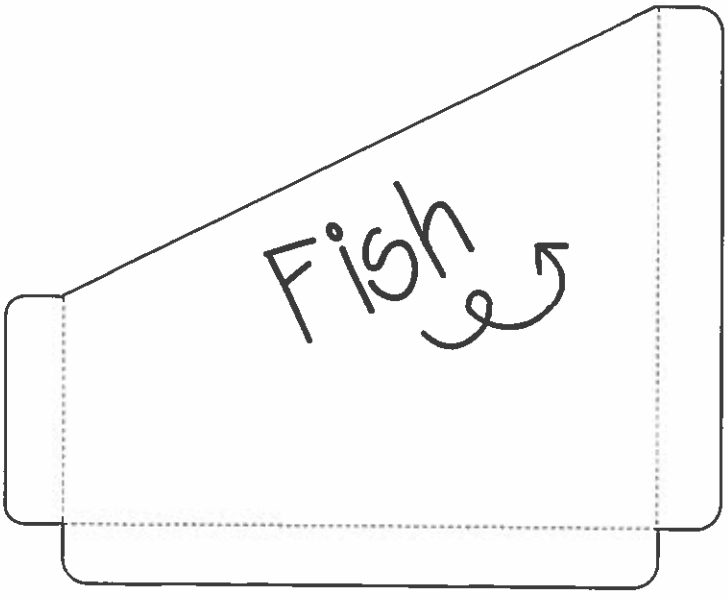
Students will cut the "pockets" and glue them in their notebooks or construction paper. They will cut the inserts (each one has a picture of an animal) and will place each one in the correct pocket. Each pocket should have 3 inserts as shown in the picture above.

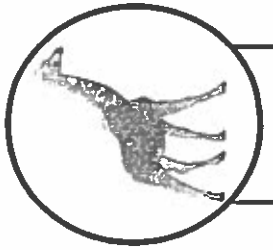
This project should show the student's understanding of vertebrates.



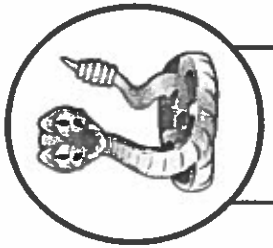




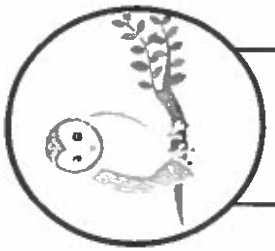




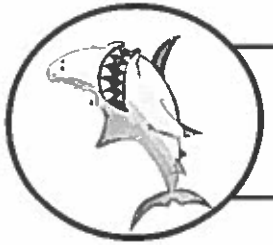
Giraffe



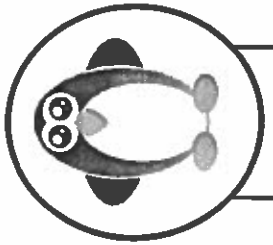
Snake



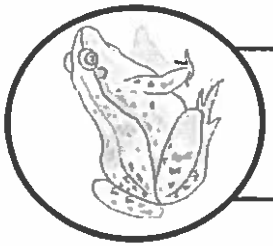
Owl



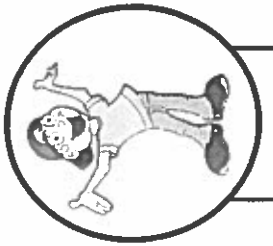
Shark



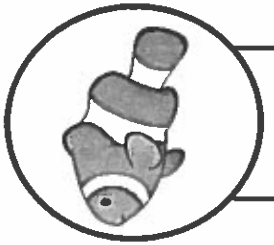
Penguin



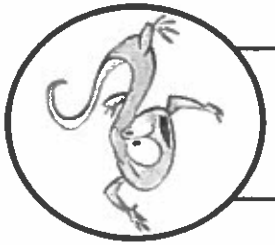
Toad



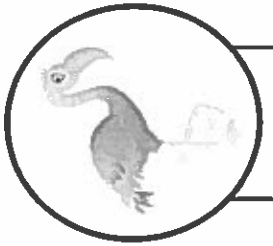
Human



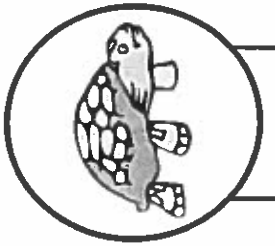
Clownfish



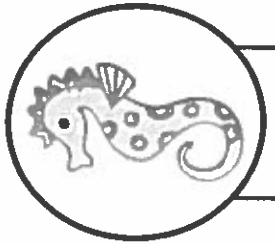
Newt



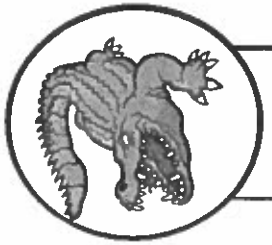
Flamingo



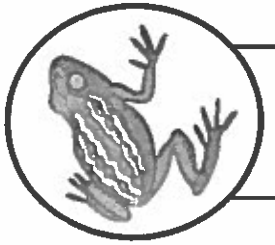
Turtle



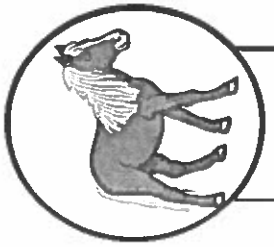
Seahorse



Alligator

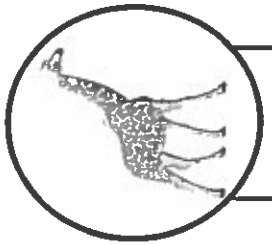


Frog



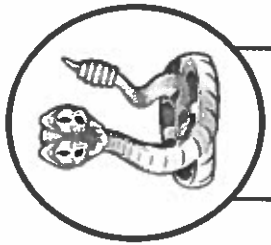
Horse

Answer Key



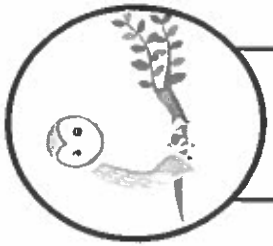
Mammal

Giraffe



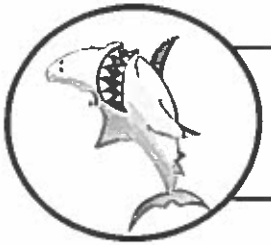
Reptile

Snake



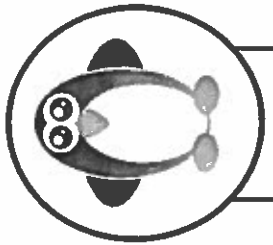
Bird

Owl



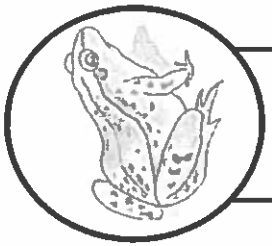
Fish

Shark



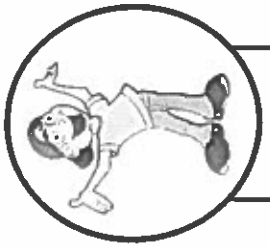
Bird

Penguin



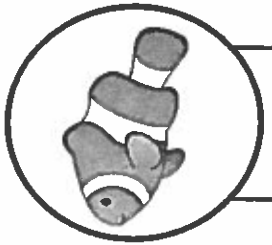
Amphibian

Toad



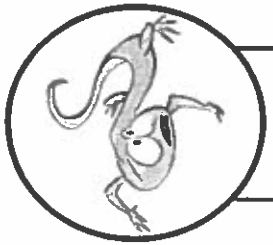
Amphibian

Human



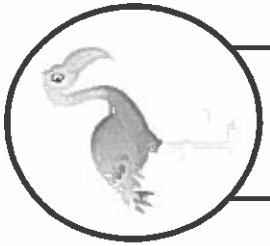
Fish

Clownfish



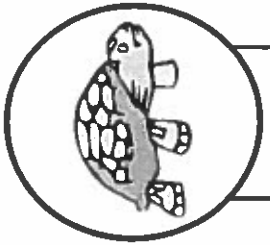
Amphibian

Newt



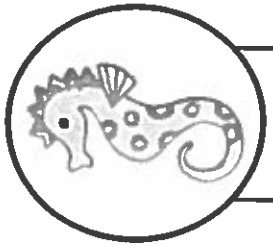
Bird

Flamingo



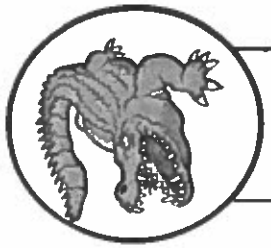
Reptile

Turtle



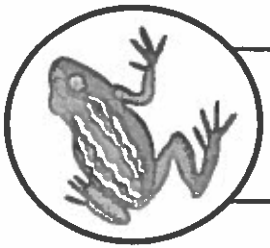
Fish

Seahorse



Reptile

Alligator

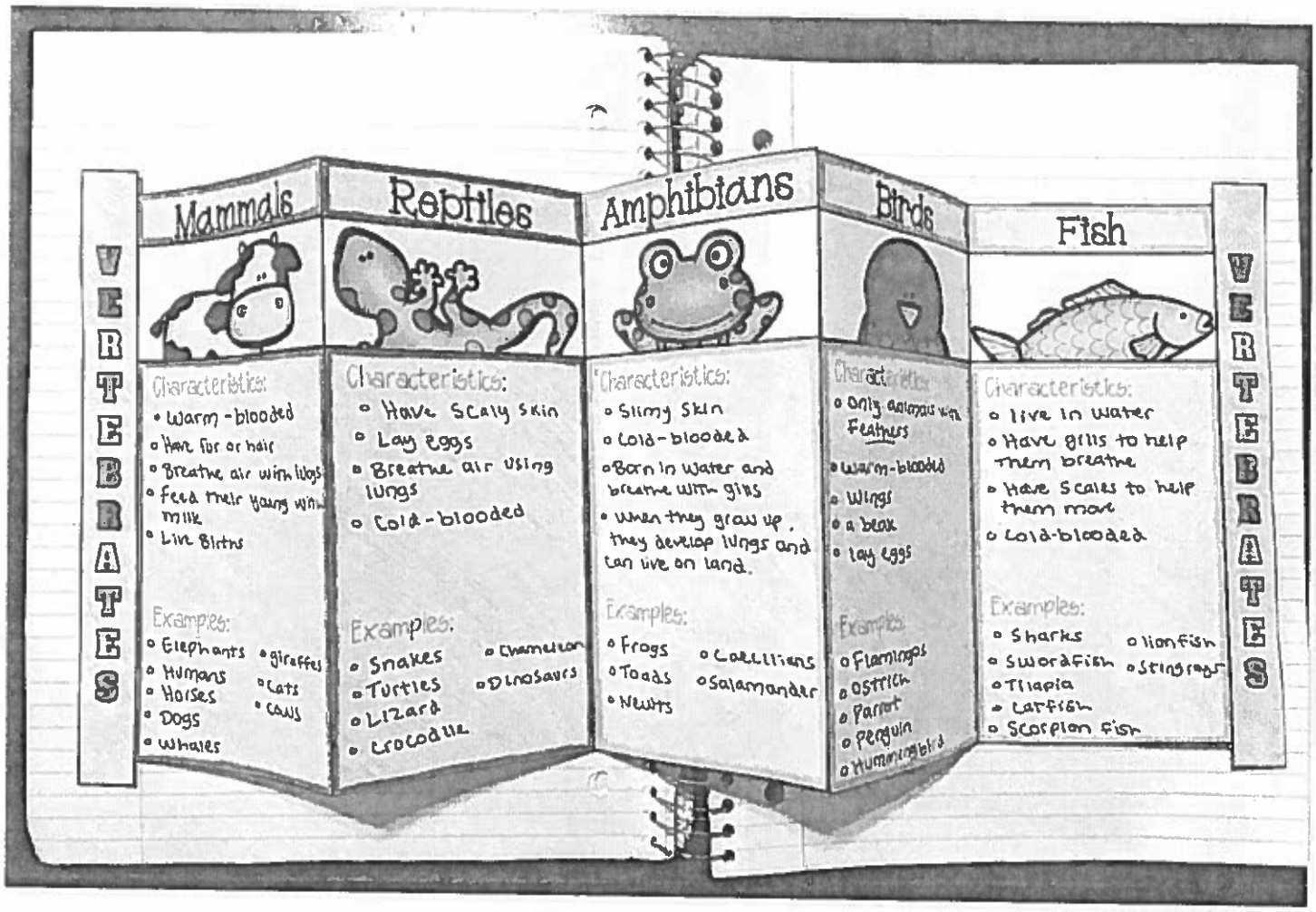


Amphibian

Frog

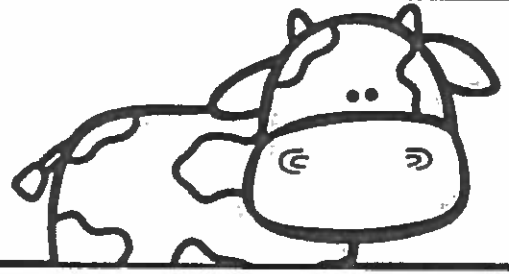
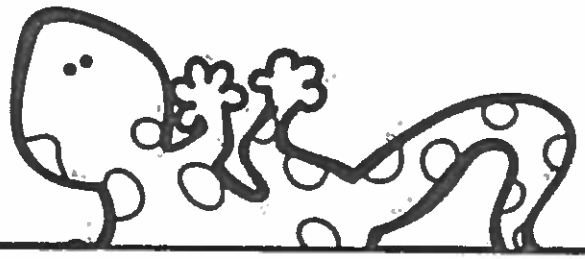
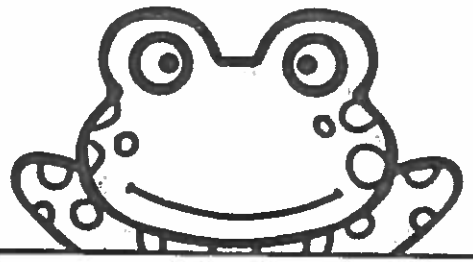
Mammal

Horse

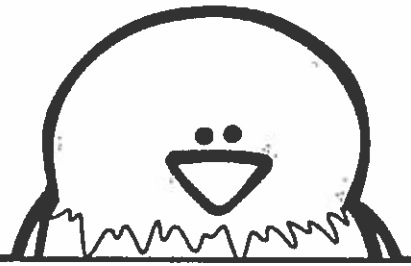
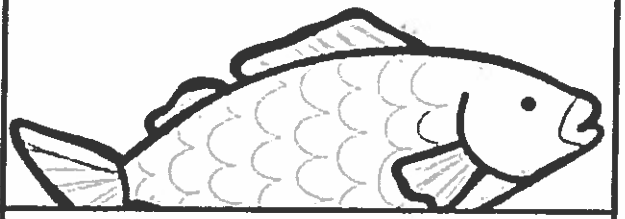


Students will fill in characteristics and examples under each vertebrate category. For example, a characteristic of reptiles is that they have scaly skin and an example is a lizard. They should write as many characteristics and examples as they can think of. (You can have them get their information from the PowerPoint included in this pack). Then, the students can color each part a different color. They will then cut both templates and glue the two pieces together (next to the bird section where it says glue here is to be glued under amphibians) to make a long "accordion" as shown in the picture above.

VERTEBRATES

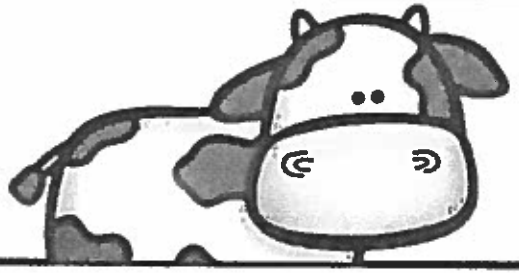
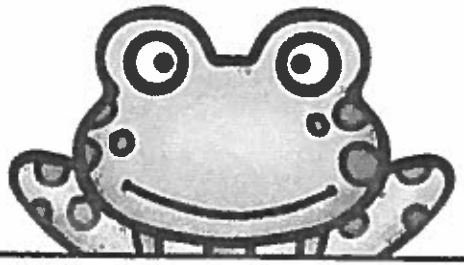
Mammals	Reptiles	Amphibians
		
Characteristics: Examples:	Characteristics: Examples:	Characteristics: Examples:

VERTEBRATES

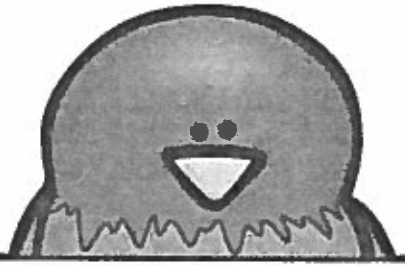
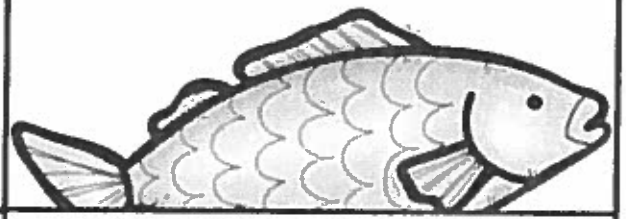
Birds	Fish
	
Characteristics:	Characteristics:
Examples:	Examples:

Glue Here

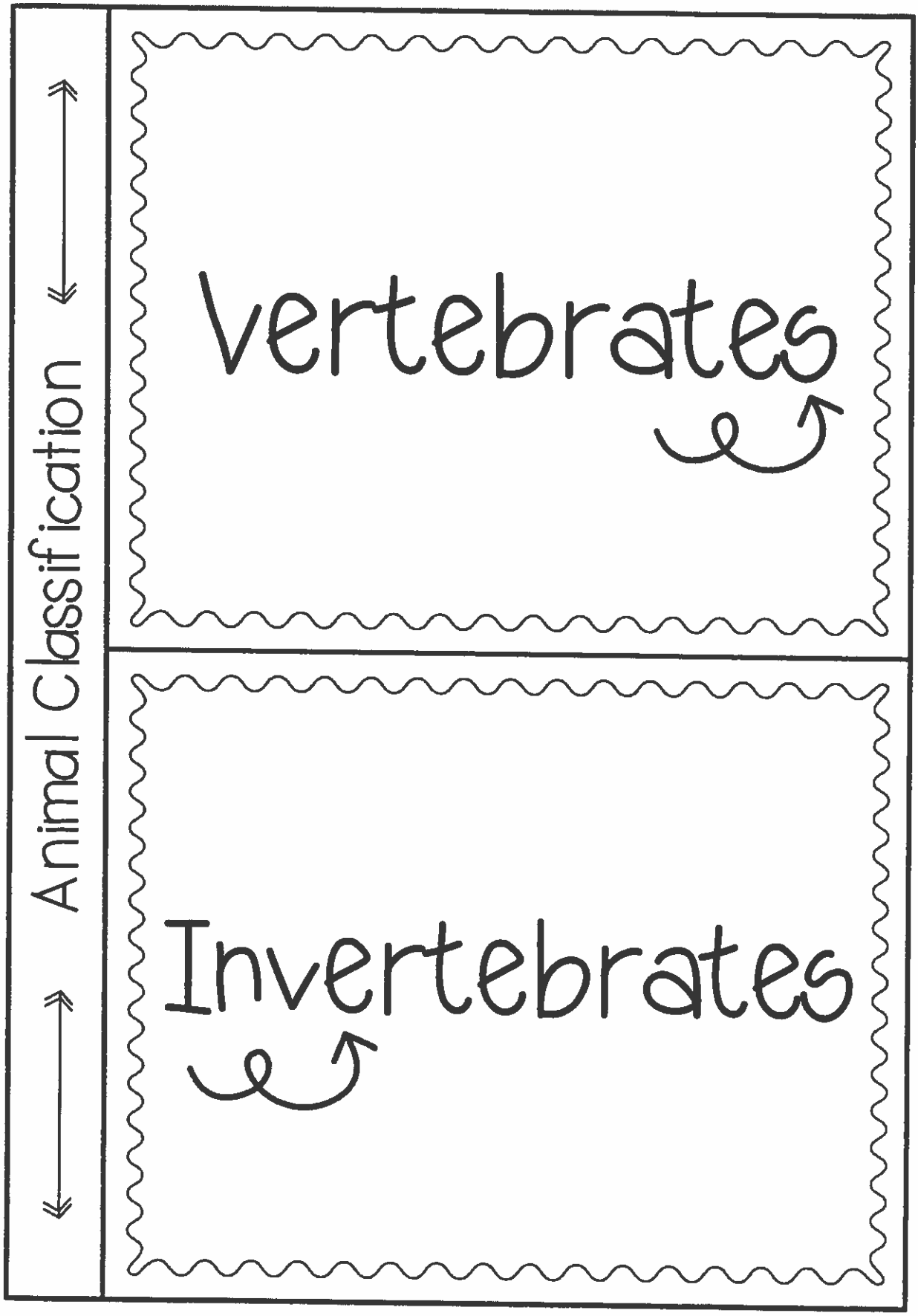
VERTEBRATES

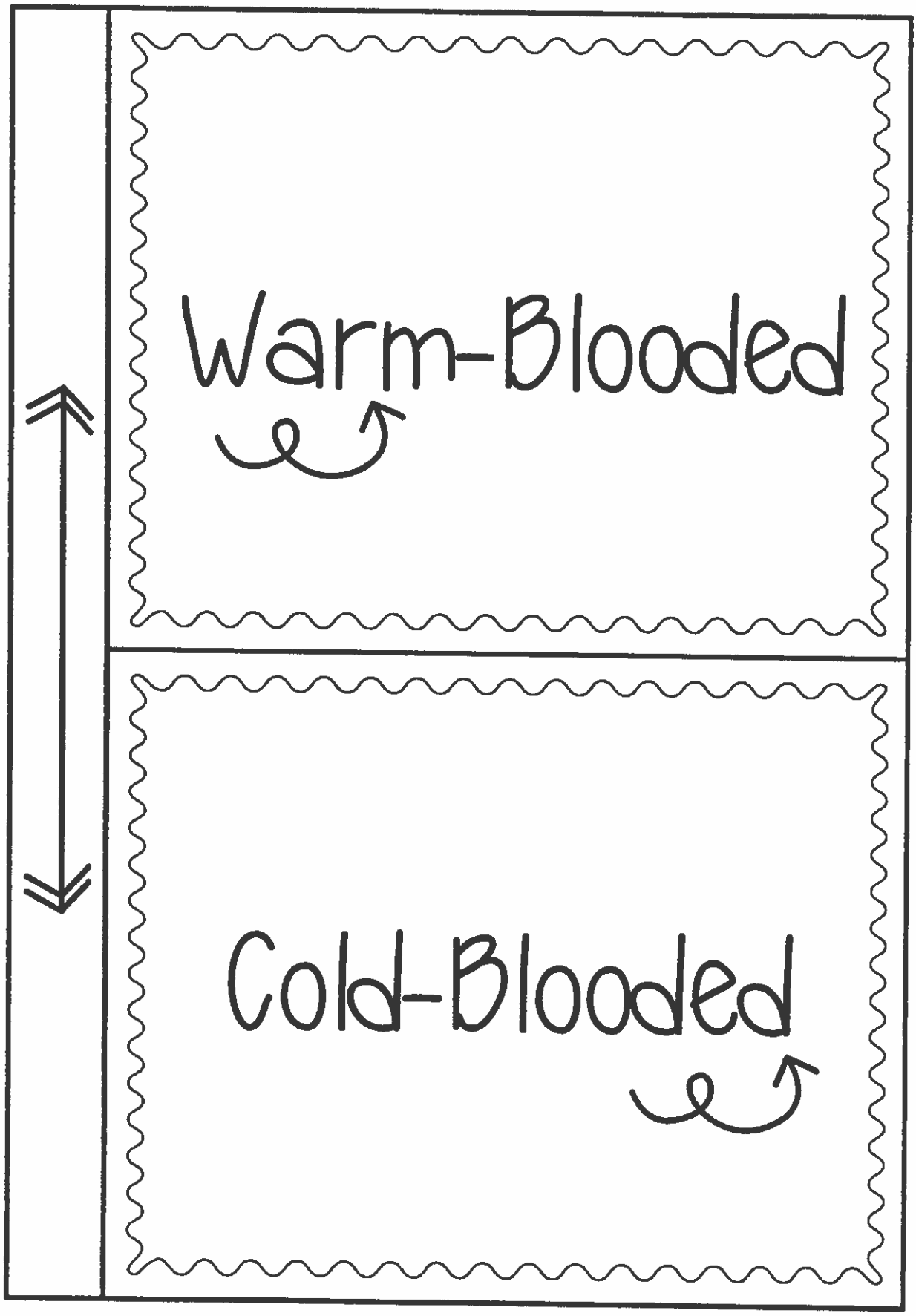
Mammals	Reptiles	Amphibians
		
Characteristics: Examples:	Characteristics: Examples:	Characteristics: Examples:

VERTEBRATES

Birds	Fish
	
Characteristics:	Characteristics:
Examples:	Examples:

Glue Here





McKeesport Area School District

Flexible Instruction Days – Elementary Lesson Plan

GRADE / SUBJECT: 3/ Science			LESSON TITLE: Animal Behavior and Adaptations cont.	
☐LESSON 1:	☐ LESSON 2:	☐ LESSON 3:	☐ LESSON 4:	☐ LESSON 5:

STANDARDS AND SEQUENCE:

Standard - 3.1.3.A2

Describe the basic needs of living things and their dependence on light, food, air, water, and shelter.

Standard - 3.1.3.A1

Describe characteristics of living things that help to identify and classify them.

Standard - 3.1.3.C1

Recognize that many plants and animals can survive harsh environments because of seasonal behaviors (e.g. hibernation, migration, trees shedding leaves).

Standard - 3.1.3.C2

Describe animal characteristics that are necessary for survival.

INSTRUCTIONAL OUTCOMES:

Students will:

Identify animals that have specific behaviors and adaptations that help them to survive

Identify reasons that specific animals migrate

Identify adaptations of specific animals

STUDENT PARTICIPATION:

Students will:

1. **Read the nonfictions passages and answer the questions and vocabulary**
2. **Complete the chart with the appropriate adaptations of each animal**
3. **Complete the chart with the specific reason the animal listed will migrate**

ACCOMMODATIONS:

For struggling learners:

The students will use a Venn diagram to compare and contrast 2 of the animals and their adaptations

For advanced learners: Research and write a paragraph describing another animal that migrates for survival purposes

RESOURCES

Migration Passage and questions

Nocturnal Passage and Questions

Venn Diagram

Animal Migration Research page

Animals Behaviors, Adaptations, Traits

EVIDENCE OF LEARNING

Students will identify the adaptations of specific animals

Students will identify reasons specific animals will migrate

Lesson 6: Adaptations and Behaviors continued

Students should:

1. Read the nonfiction passages about Migrations and Nocturnal Animals
2. Complete comprehension questions and activities that follow
3. Complete the vocabulary activities pertaining to animal behaviors, adaptations, and traits

Animals that Migrate

Name: _____

Animal Migration

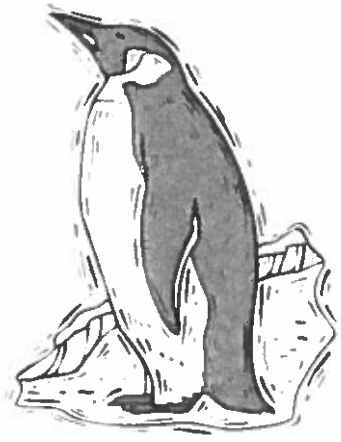
by Kimberly M. Hutmacher

Have you ever noticed that we only see certain animals in certain seasons? Many animals move from one area to another at different times during the year. This movement is called migration.

Animals migrate for different reasons. Some, like the manatee and the Ruby-Throated Hummingbird, migrate to stay warm in the winter.

Some animals migrate for food, water, and protection. Caribou move south each winter to evergreen forests. The forests protect them from the cold winds and provide a better food supply.

Other animals, like the Emperor Penguin, migrate for their children. These penguins choose the coldest time of year and the coldest place on the planet- Antarctica- to raise their young. They migrate inland, away from the sea, so they are far away from predators when their eggs hatch.



These journeys are often thousands of miles. It's amazing that so many animals are able to find their way back to the very same places in the world year after year.

Loggerhead Turtles travel thousands of miles to lay their eggs on the very same beach where they were hatched themselves.

Monarch butterflies often end up migrating thousands of miles to the very same tree that their ancestors roosted in generations before.

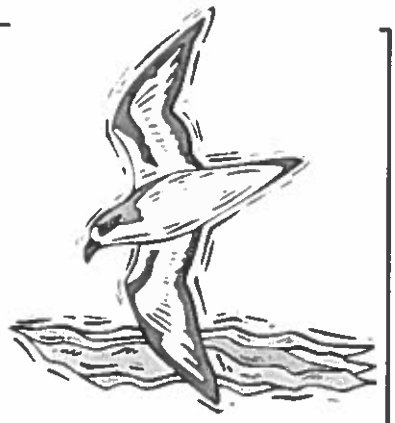
California Gray Whales have the longest migration journey of any mammal. They travel 10,000-14,000 miles round trip each year.

We know the many reasons why animals migrate, but no one really knows how they find their way. They do not have a map, compass or GPS to guide them. Maybe you will become the famous scientist that solves the mystery of animal migration.

Name: _____

Animal Migration

by Kimberly M. Hutmacher



1. What is migration?
   - **a.** animals sleeping through the winter
   - **b.** animals preparing to hatch eggs
   - **c.** animals traveling long distances
   - **d.** animals getting lost

2. Complete the table with information from the article.

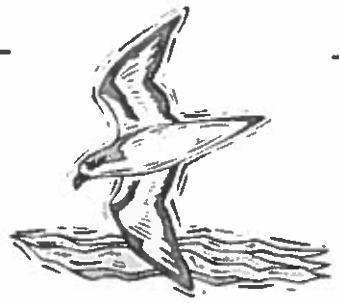
Species	Reason for Migrating
Ruby-Throated Hummingbird	
	Protection from cold winds and to find more food
Emperor Penguin	

3. Which animals hold the record for the longest migration? _____

4. Where do Emperor Penguins go when they migrate?
   - **a.** inland, near the North Pole
   - **b.** towards the sea, near the North Pole
   - **c.** inland, near the South Pole
   - **d.** towards the sea, near the South Pole

5. What information about animal migration is not known?
   - **a.** where the animals migrate to
   - **b.** why animals migrate
   - **c.** which species of animals migrate
   - **d.** how animals find their way when they migrate

Name: _____



Animal Migration

Vocabulary

Part 1: Reread "Animal Migration" by Kimberly M. Hutmacher.
As you read highlight the following vocabulary words in the article.

seasons	caribou	journey	hatch
ancestors	compass	GPS	famous

Part 2: Match each vocabulary word on the left with its definition on the right.

_____ **1.** seasons

_____ **2.** caribou

_____ **3.** journey

_____ **4.** hatch

_____ **5.** ancestors

_____ **6.** compass

_____ **7.** GPS

_____ **8.** famous

a. well-known

b. tool with a needle that points north

c. family members who lived before you were born

d. trip from one place to another

e. times of the year: winter, spring, summer, and fall

f. large reindeer that live near the North Pole

g. to come out from inside an egg

h. electronic computer that tells your location

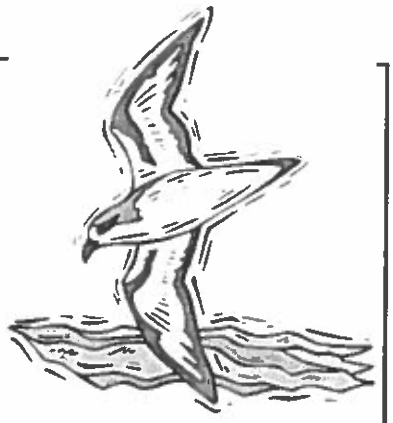
Part 3: Find the vocabulary words in the puzzle and circle them.

F	N	C	H	A	T	S	E	A	J	B	L	S
J	A	O	A	N	C	E	S	T	O	R	S	E
O	K	M	C	A	R	I	B	O	U	H	D	A
U	L	P	O	J	O	U	G	K	R	A	E	S
G	U	A	K	U	C	K	P	K	N	T	H	O
S	P	S	L	O	S	I	J	I	E	C	X	N
Z	Q	S	C	A	R	B	P	L	Y	H	T	S

ANSWER KEY

Animal Migration

by Kimberly M. Hutmacher



1. What is migration? c
   - a. animals sleeping through the winter
   - b. animals preparing to hatch eggs
   - c. animals traveling long distances
   - d. animals getting lost

2. Complete the table with information from the article.

Species	Reason for Migrating
Ruby-Throated Hummingbird	to stay warm in the winter
caribou	*Protection from cold winds and to find more food*
Emperor Penguin	to move to a safer place to hatch eggs; to move away from predators

3. Which animals hold the record for the longest migration? California Gray Whales

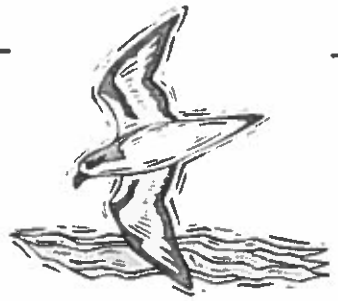
4. Where do Emperor Penguins go when they migrate? c
   - a. inland, near the North Pole
   - b. towards the sea, near the North Pole
   - c. inland, near the South Pole
   - d. towards the sea, near the South Pole

5. What information about animal migration is not known? d
   - a. where the animals migrate to
   - b. why animals migrate
   - c. which species of animals migrate
   - d. how animals find their way when they migrate

Name: _____

Animal Migration

Vocabulary



Part 1: Reread "Animal Migration" by Kimberly M. Hutmacher.
As you read highlight the following vocabulary words in the article.

seasons	caribou	journey	hatch
ancestors	compass	GPS	famous

Part 2: Match each vocabulary word on the left with its definition on the right.

e 1. seasons	a. well-known
f 2. caribou	b. tool with a needle that points north
d 3. journey	c. family members who lived before you were born
g 4. hatch	d. trip from one place to another
c 5. ancestors	e. times of the year: winter, spring, summer, and fall
b 6. compass	f. large reindeer that live near the North Pole
h 7. GPS	g. to come out from inside an egg
a 8. famous	h. electronic computer that tells your location

Part 3: Find the vocabulary words in the puzzle and circle them.

F		C							J			S
	A	O	A	N	C	E	S	T	O	R	S	E
		M	C	A	R	I	B	O	U	H		A
		P	O						R	A		S
G		A		U					N	T		O
	P	S			S				E	C		N
		S							Y	H		S

Name: _____

Rise and Shine! It's Nighttime!

by Guy Belleranti

Animals that sleep during the day and come out at night are called nocturnal.

For desert-dwelling animals, being active at night allows them to escape the heat of day and to conserve water. Many snakes and rodents are examples of desert animals that prefer the night.

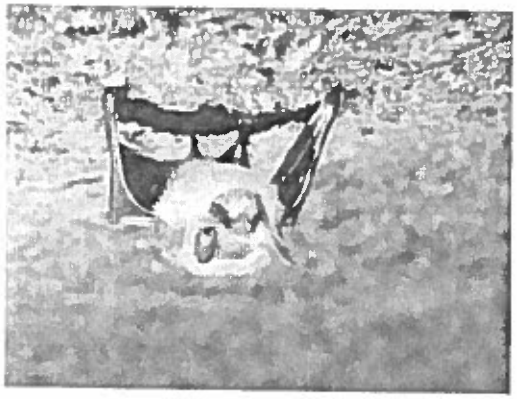
The darkness of night makes it easier for some animals to escape predators, especially if the animal is dark enough to blend into its surroundings. Some animals are always listening with their extra good hearing while others keep close watch with great night vision.

Then there's the hedgehog, a small nocturnal mammal that rolls up into a ball of spiny hairs when danger comes near. Because it is active only at night, it can usually wander around unseen. The skunk, another nocturnal animal, has a most smelly way to defend itself. Its fur is mostly black, which blends in with the darkness.

Of course, there are predators that are especially adapted for night hunting, so no prey animal is safe simply because it's nocturnal. Owls and certain species of cats are very effective nocturnal hunters because they have great night vision and excellent hearing. In addition to this, owls have softer feathers than most other birds so they can swoop silently down upon prey. Of course cats don't have feathers, but the soft pads on their feet allow them to quietly sneak up on small animals. Cats also use their whiskers to help feel their way in the dark.

Another predator that's well-known for its nocturnal behavior

is the insect-eating bat. You've probably heard the expression "blind as a bat." Many people are surprised to learn that most bats aren't really blind- they're just color blind. Instead of using their eyes to hunt for an insect dinner they use echolocation. What is echolocation? It works like this: The bat emits a very high-pitched sound. The sound is so high that people can't even hear it. However, the bat has specially adapted ears so it can hear these sounds just fine. When the sound hits an object it bounces, or echoes, back. From the sound of the echo the bat immediately knows the object's size and location. Its echolocation can also determine if an object is a yummy insect or something that can't be eaten like a plant or a tree.



About the Author

Guy Belleranti works as a docent at Reid Park Zoo in Tucson, Arizona. The information in this article comes from his experiences working with animals and teaching others.

Name: _____

Rise and Shine! It's Nighttime!

by Guy Belleranti

1. According to the information in the article, why are many desert snakes and rodents nocturnal?

_____

_____

2. Fill in table below to show ways animals have adapted to survive at night. Use only information from the article. Some boxes have already been filled in.

	adaptation 1	adaptation 2	adaptation 3	adaptation 4
bat				
skunk		sprays a smelly chemical		
owl	excellent night vision			
cat				excellent hearing

3. What is echolocation?

   a. A way of making high-pitched sounds that bats use to communicate.
   b. A method of making high-pitched sounds that bats use to avoid being eaten.
   c. A high-pitched sound that helps bats fly after dark.
   d. The ability to make a high-pitched sound that bats use to locate things in the dark.

4. Reread the following sentence from the article.

   For desert dwelling animals, being active at night allows them to escape the heat of day and to conserve water.

   Which is the best definition for the underlined word?

   a. living or residing
   b. nighttime hunter
   c. heat-loving
   d. healthy

Name: _____

Rise and Shine! It's Nighttime!

by Guy Belleranti

Match each vocabulary word from the article with the correct definition.

_____ **1.** conserve	**a.** move downward from the air
_____ **2.** wander	**b.** saying; commonly used phrase
_____ **3.** emits	**c.** protect
_____ **4.** swoop	**d.** ability to see
_____ **5.** expression	**e.** move around aimlessly
_____ **6.** immediately	**f.** sound waves bouncing off a hard surface
_____ **7.** vision	**g.** gives off
_____ **8.** echos	**h.** right away

Name: _____

Rise and Shine! It's Nighttime!

by Guy Belleranti

In the article, "Rise and Shine! It's Nighttime!", you learned about several different nocturnal animals.

Choose one animal mentioned in the article. Research the animal using books, the encyclopedia, or the Internet. Write a paragraph with interesting facts about the animal you chose.

ANSWER KEY

Rise and Shine! It's Nighttime!

by Guy Belleranti

1. According to the information in the article, why are many desert snakes and rodents nocturnal?

   Being active at night allows them to escape the heat and conserve water

2. Fill in table below to show ways animals have adapted to survive at night. Use only information from the article. Some boxes have already been filled in.

	adaptation 1	adaptation 2	adaptation 3	adaptation 4
bat	echolocation			
skunk	black fur	sprays a smelly chemical		
owl	excellent night vision	excellent hearing	soft feathers for quiet flights	
cat	whiskers for feeling	soft pads on feet	excellent night vision	excellent hearing

3. What is echolocation? d

   a. A way of making high-pitched sounds that bats use to communicate.
   b. A method of making high-pitched sounds that bats use to avoid being eaten.
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   d. healthy

ANSWER KEY

Rise and Shine! It's Nighttime!

by Guy Belleranti

Match each vocabulary word from the article with the correct definition.

c 1. conserve

e 2. wander

g 3. emits

a 4. swoop

b 5. expression

h 6. immediately

d 7. vision

f 8. echos

a. move downward from the air

b. saying; commonly used phrase

c. protect

d. ability to see

e. move around aimlessly

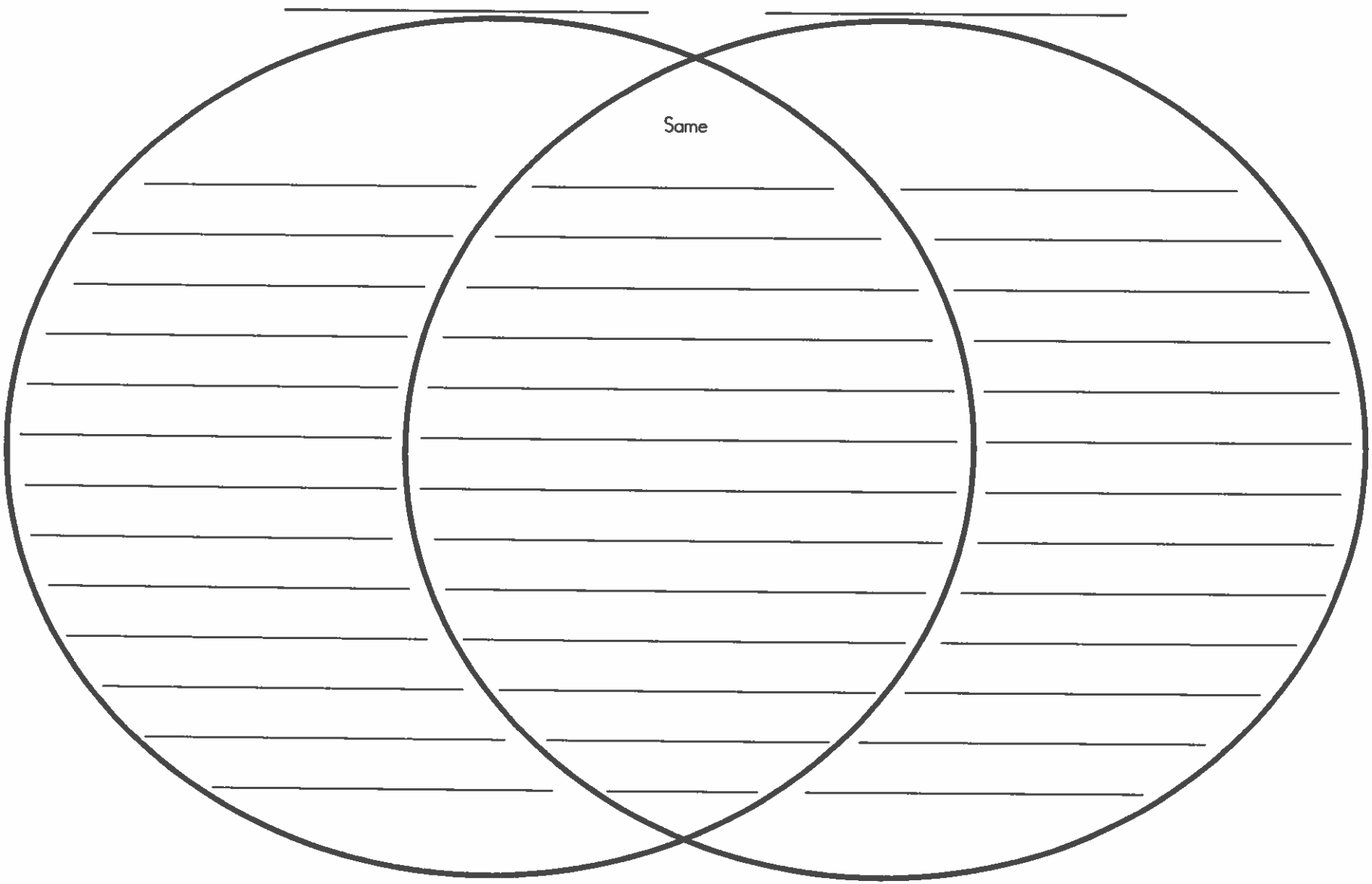
f. sound waves bouncing off a hard surface

g. gives off

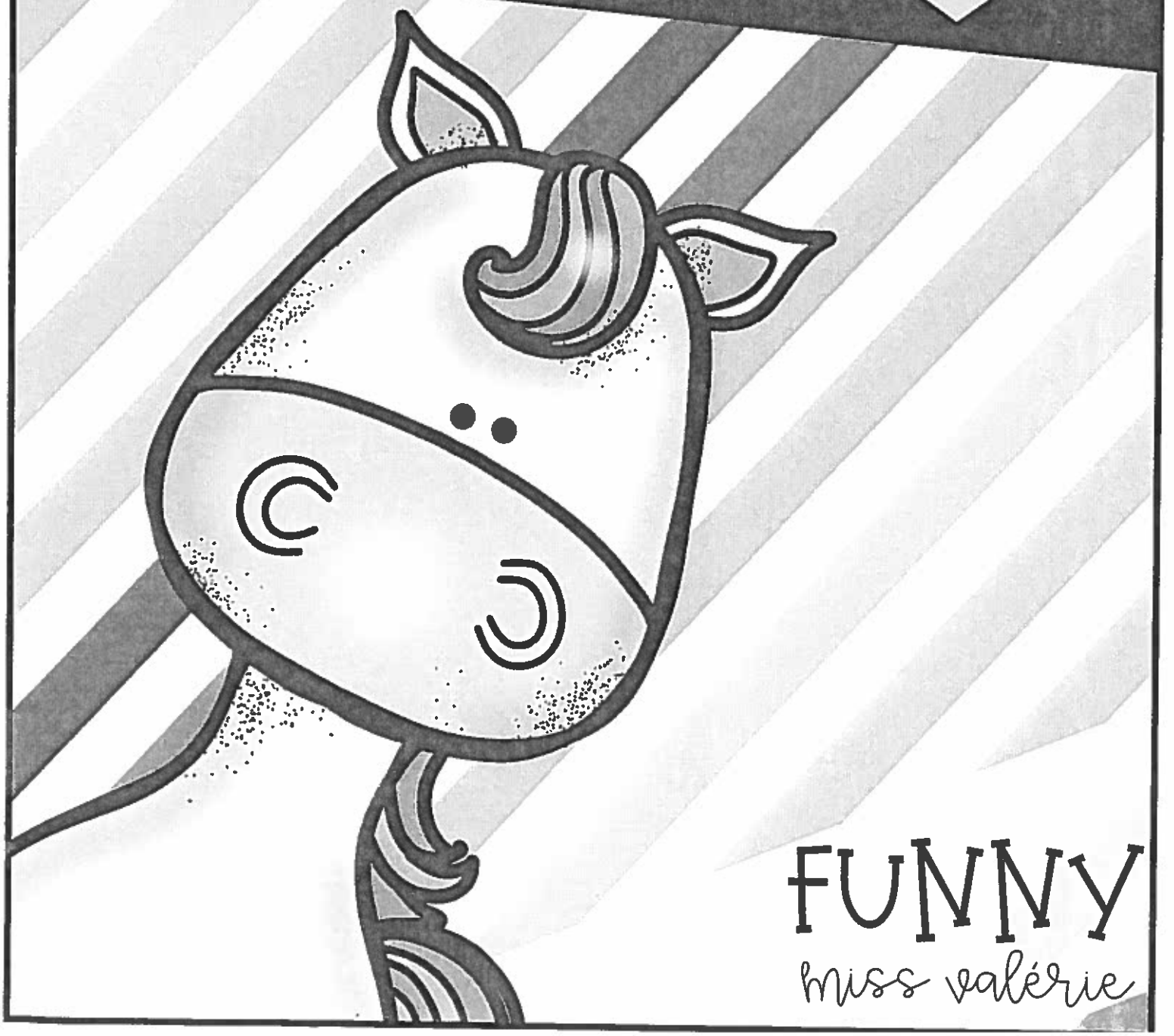
h. right away

Name: _____

Venn Diagram



ANIMAL GUESS WHO? GAME



FUNNY

miss valérie

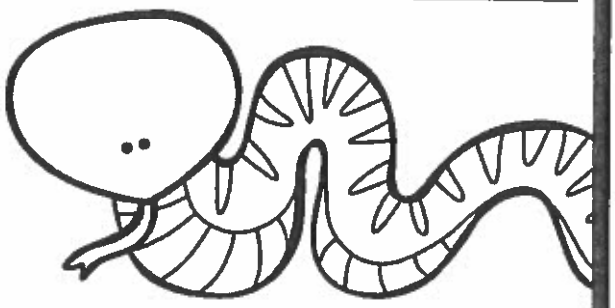
ANIMAL GUESS WHO? GAME

DIRECTIONS

1. Each player chooses a game board and picks one small animal card.
2. The youngest person starts first.
3. Players take turns asking questions until one player makes a guess.
4. Each question must have either a " Yes" or a " No" answer. For example, one player could ask "Does your animal live on a farm?" or "Is your animal big?". After the opponent answers, the player may be able to eliminate one or more animals.
5. Players need to cover up animals with the answers received during each turn.
6. The winner of the game is the one who correctly guesses the opponent's mystery animal.

ANIMAL GUESS WHO?

NAME: _____



PLACES WHERE IT LIVES

Does your animal live _____?

* on a farm
* in the jungle
* in the sea

PHYSICAL DESCRIPTION

Is your animal _____?

* big
* small
* tall
* long
* short
* dangerous
* harmless
* furry
* fluffy

Does your animal have _____?

* a long / short tail
* long / short ears
* horns
* a wattle
* a beak
* fins
* a long / short neck
* big / small ears
* arms
* a comb
* a trunk
* gills
* a long / short tongue
* whiskers
* wings
* a snout
* a mane
* stripes
* two / four legs
* paws
* hooves
* a nose
* feathers
* spots

ACTIONS

Can your animal _____?

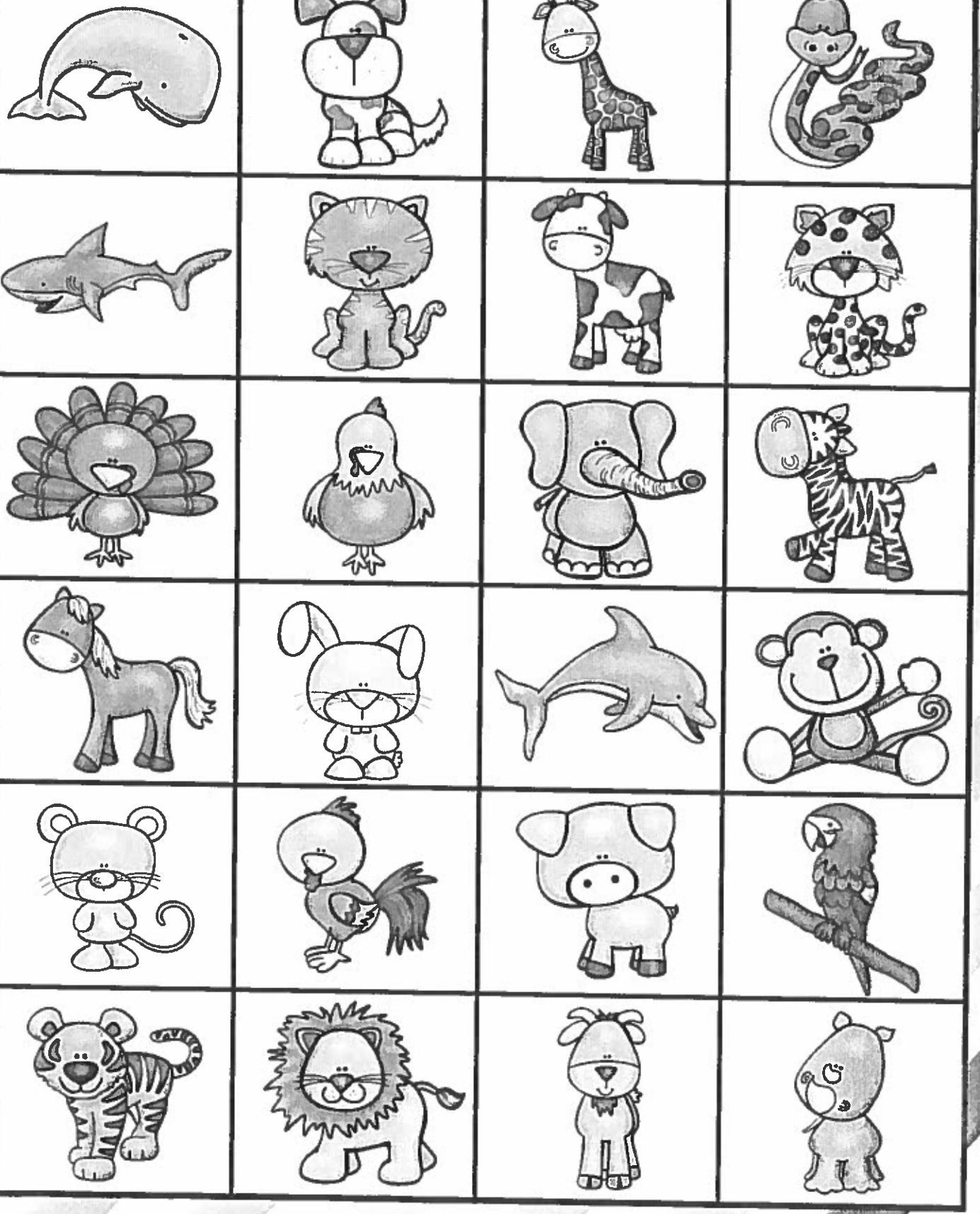
* jump
* swim
* run
* fly
* climb
* bite
* crawl
* gallop and trot
* lay eggs

TAKE A GUESS

Is your animal a _____?

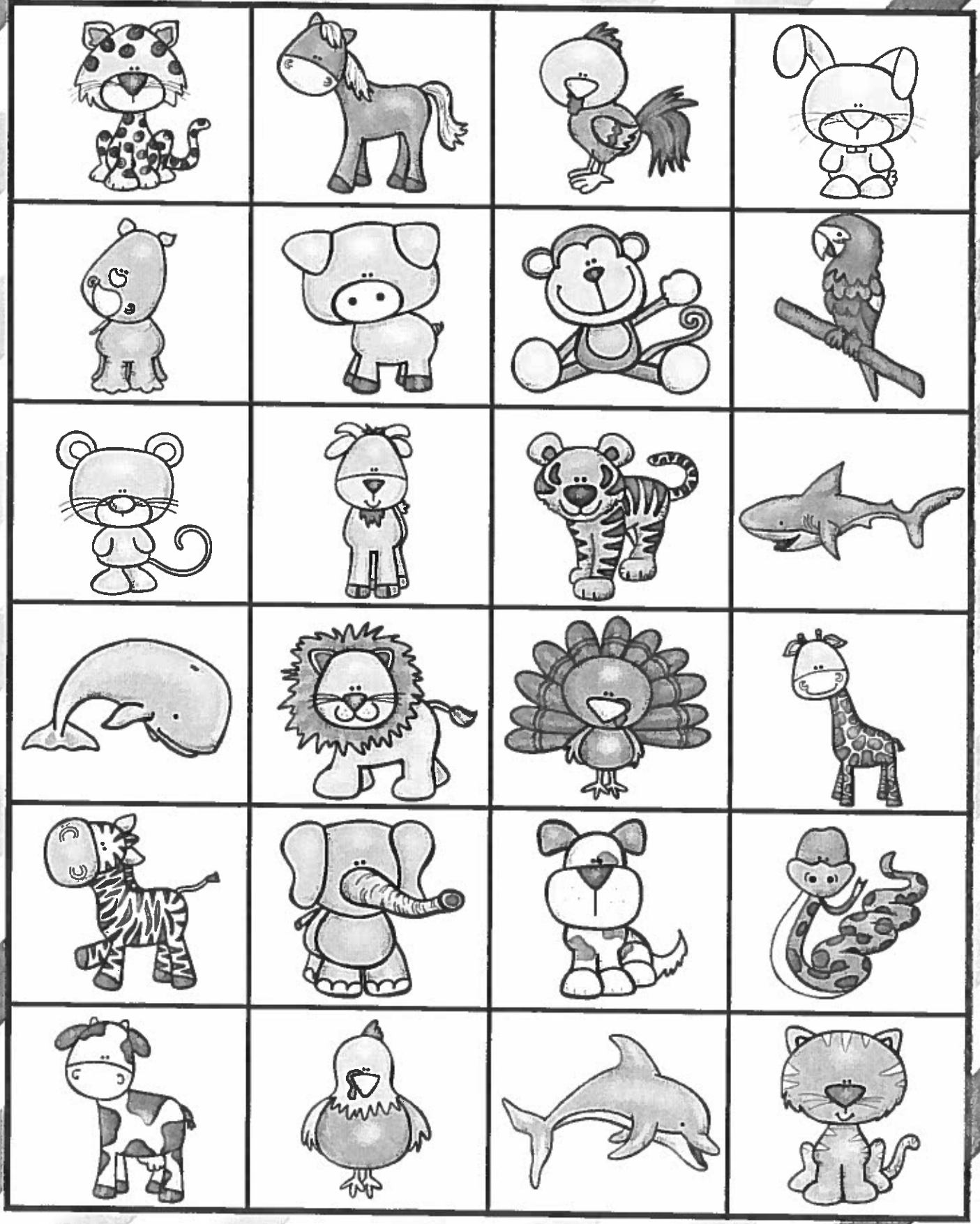
ANIMAL GUESS WHO?

GAME BOARD #1



ANIMAL GUESS WHO?

GAME BOARD #2



FUNNY MISS VALERIE

Cut out all cards.

Cut out all cards. Use them to cover up the animal that does not fit the answer.

Cut out all cards. Use them to cover up the animal that does not fit the answer.

Name: _____

Venn Diagram