

# Launching into the Next Millennium

## 4-H Achieves Liftoff!



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Keith L. Smith, Associate Vice President for Agricultural Administration and Director, OSU Extension

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# ***Launching into the Next Millennium***

## ***4-H Achieves Liftoff!***

### ***Introduction***

"Houston? This is the Space Shuttle Columbus."

"Good morning, Columbus. Is everyone aboard?"

"That's affirmative, Houston. We have assembled our group of 4-H members and volunteer leaders and are destined for educational experiences and hands-on individual and group activities which are out of this world."

"Roger, Columbus. Have you loaded sufficient resources to insure these educational experiences in orbital flight?"

"That's affirmative, Houston. We brought the 'Liftoff!' notebook and will begin instruction on using it, once we reach cruising speed in orbit."

"Columbus, we need some additional input in order for the computers to begin processing this information."

"No need to plug in the computers, Houston. The 'Liftoff!' notebook is simple and easy to use."

"Could you describe it for us, Columbus?"

"Affirmative, Houston. The 'Liftoff!' notebook is an educational resource, written by Extension professionals at The Ohio State University. It is arranged in Countdown Chapters, and will assist 4-H members and volunteers in getting their 4-H programs off of the ground."

"Tell us more about these Countdown Chapters, Columbus."

"Each Countdown Chapter focuses on a specific subject matter area in the 4-H Program. These include:

- Ten: Clothing
- Nine: Entomology and the Environment
- Eight: Engineering
- Seven: Human Development
- Six: Equine Science
- Five: Field and Garden
- Four: Food and Nutrition
- Three: Citizenship, International, Careers, Leadership, and Communications
- Two: Livestock
- One: Small Animals and Veterinary Science

“One last question before countdown, Columbus. How will you utilize this revolutionary new resource?”

“That’s an important question, Houston. There is a seemingly endless list of ways to utilize the ‘Liftoff!’ notebook in 4-H clubs, meetings, and activities.”

“Could you focus in on some of them, Columbus?”

“Affirmative, Houston. Here are a few of them:

- A volunteer in a project club might utilize only activities from one Countdown Chapter, which pertain specifically to the focus of that club, and the interests of its members.
- The leader of a community or organizational club might select different activities from different Countdown Chapters, depending upon the kinds of projects which the 4-H members are enrolled in.
- A volunteer could select two or three activities, duplicate enough copies of the original so that each 4-H member had one, and let everyone work on them individually.

“Are all of these activities designed to be administered individually, Columbus?”

“Negative, Houston. These activities can be completed either individually or in groups. Let’s cite some additional examples.”

- 4-H members could work in pairs or in teams. 4-H members choose their own teammate, or they could be matched up in any of a number of ways. These could include a random order, older members paired with younger members (in a mentoring relationship), more experienced members could be matched with less experienced members (in an information sharing mode) or groups of youth could be teamed (in a cooperative learning style).

“Are there any other ways in which these activities can be implemented, Columbus?”

“Affirmative, Houston.”

- A volunteer could delegate the teaching responsibility to a 4-H member. The 4-H member could select the activities and instruct the other youth on how to complete them.
- These activities could be utilized by volunteers as “busy work” for 4-H members who arrive early and those whose parents are late to pick them up. This will keep them busy on an educational activity.

“Can these activities be utilized if a volunteer is unfamiliar with the subject matter?”

“Affirmative, Houston. Each workshop includes objectives and instructions, with the answers printed on the back. The volunteer may choose not to duplicate the answers, but could provide them at the end of the experience.”

“Roger, Columbus. You’ve answered all of our questions. Are you ready for liftoff?”

“That’s affirmative, Houston. We’re ready to set forth on this exciting new journey.”

“We’ll start our countdown now, Columbus. Ten, nine, eight, seven, six, five, four, three, two, one, and liftoff! Congratulations, Columbus. We have achieved Liftoff!

And congratulations to you, as well! You’re about to embark on an exciting new journey. A journey filled with discovery and learning. Each of the activities contained in this notebook have been designed for use with 4-H club members and are arranged in a subject matter area. But these activities are designed to teach a lot more than subject matter information. Learning to make decisions, work together, and communicate effectively, to name just a few.

We want to acknowledge and express appreciation to several key individuals whose important contributions were invaluable to this project.

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Appreciation is expressed to Dr. Keith Smith, Director, and Dr. Jo Jones, Associate Director, Ohio State University Extension and the Innovative Grant which they awarded to fund this project. Through the generosity of this Innovative Grant, this project was funded, the resource was printed, with a complimentary copy distributed to every county Extension office in Ohio.

Special appreciation is expressed to Kim Wintringham and Liz Cutler Gates whose expertise in converting the printed drafts into an edited format and converting the edited version into a printed resource was instrumental in the completion of the project.

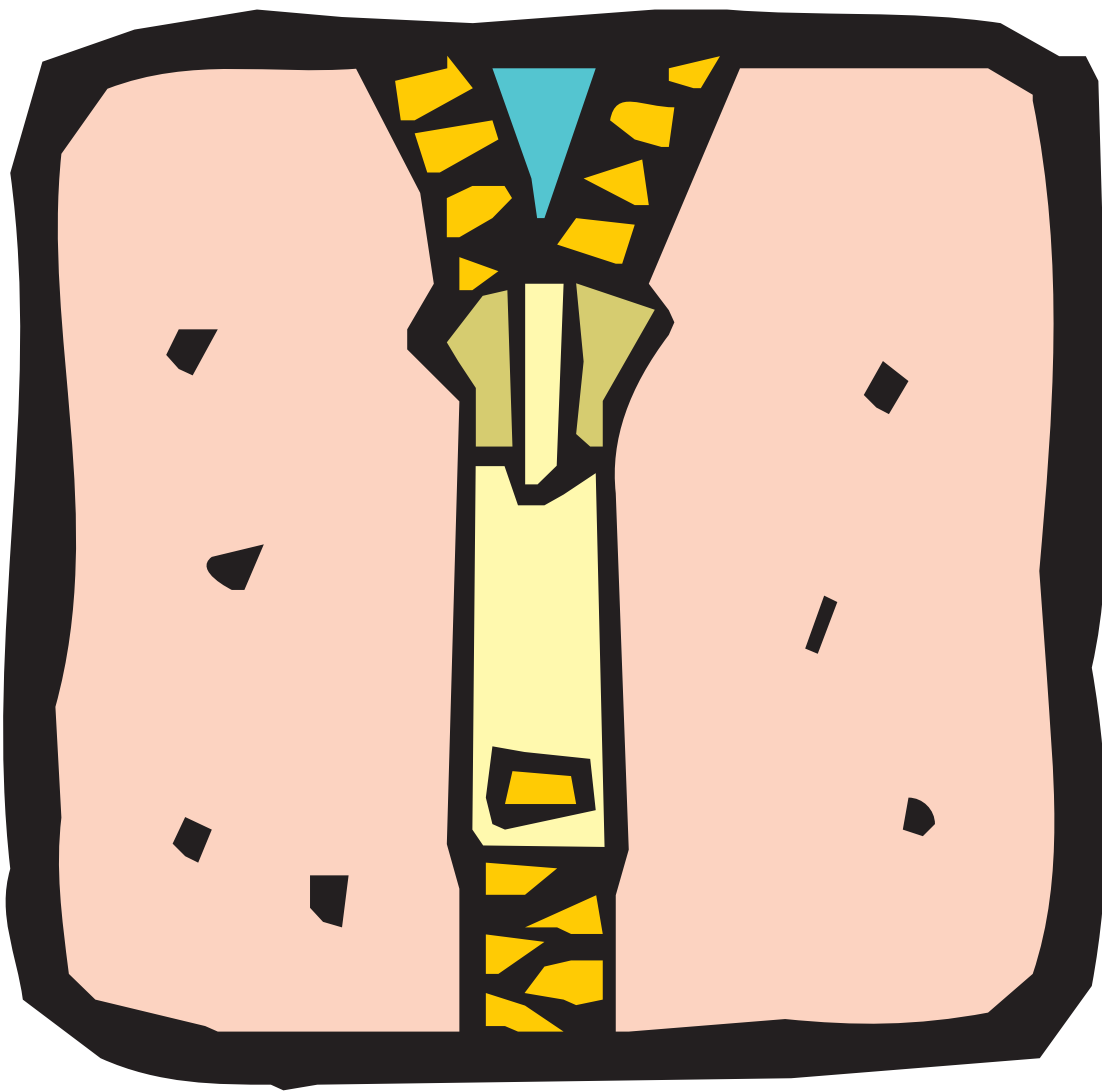
Several graphics were adapted from the Learning Laboratory Kits. These kits are available from Curriculum Materials Service, The Ohio State University, 2120 Fyffe Road, Columbus, OH 43210, (614) 292-4848.

This resource is dedicated to all Ohio 4-H volunteers and 4-H members, with the hope that this tool will make their 4-H club meetings, programs and activities more educational and more fun, thereby strengthening the Ohio 4-H Program at the grassroots level.

Ken Culp, III, Ph.D.  
Extension Specialist, Volunteerism  
4-H Youth Development  
"Liftoff!" Project Coordinator

# ***Countdown Chapter 10***

## ***Clothing***



# ***Countdown Chapter 10***

## ***Clothing***

### ***Contents***

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The Seven Clues to Achieve a Total Look .....	9

# Clothing

## Ready, Let's Sew

Find the clothing and sewing words in the word search puzzle. The words go up, down, across, and diagonally. Some are spelled backwards.

label	press	fabric	pattern	topstitch
fuse	grooming	scissors	pins	stitch
hem	slip stitch	sewing machine	seam	needle
appliqué	seven clues	button	measure	care label

## Word Search

### In this activity you will:

- identify terms used when making 4-H clothing projects.
- identify sewing equipment terms used when making 4-H outfits.

iron	marking pencil
hem gauge	thread

n	r	e	t	t	a	p	b	h	d	f	f	x	s	q
c	a	p	p	l	i	q	u	e	s	t	i	t	c	h
g	k	m	e	s	u	f	z	m	e	a	s	u	r	e
d	p	n	b	n	o	r	i	g	d	x	n	v	s	f
b	s	e	w	i	n	g	m	a	c	h	i	n	e	a
s	s	e	r	p	f	i	r	u	s	b	k	f	e	b
c	g	d	v	a	i	m	k	g	j	c	s	s	f	r
i	e	l	t	e	c	a	r	e	l	a	b	e	l	i
s	p	e	h	d	n	g	r	o	o	m	i	n	g	c
s	h	m	r	w	f	c	h	b	o	b	c	h	j	l
o	m	a	e	s	c	m	l	e	a	o	t	u	y	a
r	r	l	a	d	q	e	b	u	t	t	o	n	n	b
s	o	x	d	d	e	h	a	r	e	q	n	t	s	e
s	z	e	g	g	h	c	t	i	t	s	p	o	t	l
m	a	r	k	i	n	g	p	e	n	c	i	l	c	r
e	s	a	h	c	t	i	t	s	p	i	l	s	a	n

Developed by: Mary Forster, Extension Associate, 4-H Youth Development/Family and Consumer Sciences

# Clothing

## Ready, Let's Sew

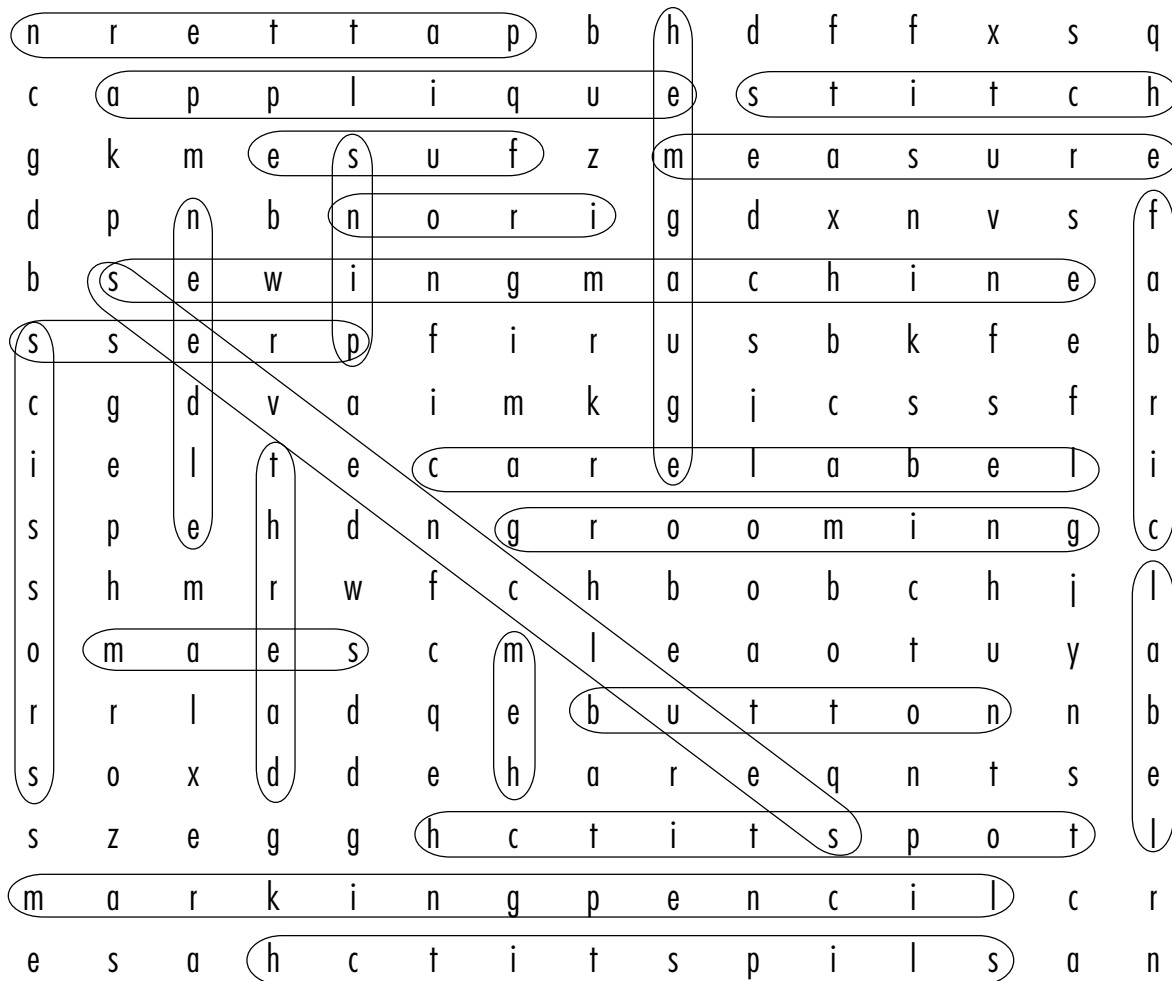
Find the clothing and sewing words in the word search puzzle. The words go up, down, across, and diagonally. Some are spelled backwards.

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### Word Search—Key

#### In this activity you will:

- identify terms used when making 4-H clothing projects.
- identify sewing equipment terms used when making 4-H outfits.



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# Clothing

## What's in the Sewing Box?

Match each term with its correct definition by writing the letter of the term in front of the correct definition.

### Definitions

- \_\_\_\_\_ 1. keeps sewing tools in one place
- \_\_\_\_\_ 2. used to cut fabric
- \_\_\_\_\_ 3. used to take body measurements and to measure fabric
- \_\_\_\_\_ 4. used to measure short distances
- \_\_\_\_\_ 5. used for hand sewing
- \_\_\_\_\_ 6. used to hold pieces of fabric together or to hold patterns to fabric
- \_\_\_\_\_ 7. stores pins
- \_\_\_\_\_ 8. used to transfer important markings from the pattern onto the fabric
- \_\_\_\_\_ 9. keeps the needle from hurting your finger when sewing by hand
- \_\_\_\_\_ 10. used in sewing stitches to hold fabric together
- \_\_\_\_\_ 11. used to remove stitching mistakes
- \_\_\_\_\_ 12. used to cut single or multiple layers of fabric; must be used with special cutting mat

## Matching

### In this activity you will:

- learn the names of the basic sewing tools needed for making 4-H clothing projects.
- learn the uses of each sewing tool.

### Word List

- A. pin cushion
- B. seam ripper
- C. rotary cutter
- D. thimble
- E. hem gauge
- F. marking tools
- G. sewing box
- H. pins
- I. needles
- J. shears
- K. thread
- L. tape measure

# Clothing

## What's in the Sewing Box?

Match each term with its correct definition by writing the letter of the term in front of the correct definition.

### Definitions

- G**   1. keeps sewing tools in one place
- J**   2. used to cut fabric
- L**   3. used to take body measurements and to measure fabric
- E**   4. used to measure short distances
- I**   5. used for hand sewing
- H**   6. used to hold pieces of fabric together or to hold patterns to fabric
- A**   7. stores pins
- F**   8. used to transfer important markings from the pattern onto the fabric
- D**   9. keeps the needle from hurting your finger when sewing by hand
- K**   10. used in sewing stitches to hold fabric together
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- H. pins
- I. needles
- J. shears
- K. thread
- L. tape measure

# Clothing

## The Parts of the Sewing Machine

Look at the drawing of a sewing machine. How many parts do you already know? Fill in as many parts as you know and then turn the page to check your answers.

### Identification

In this activity you will:

- identify the sewing machine parts.

A. \_\_\_\_\_

D. \_\_\_\_\_

G. \_\_\_\_\_

B. \_\_\_\_\_

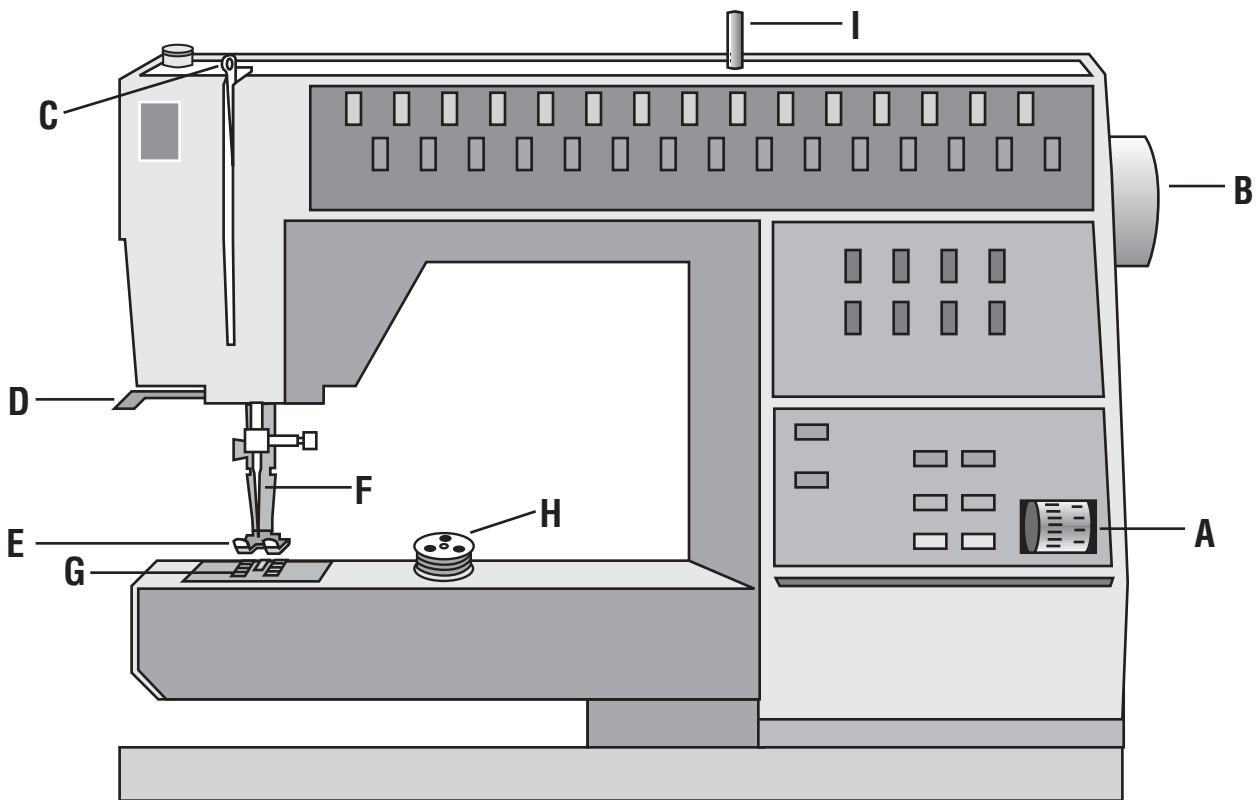
E. \_\_\_\_\_

H. \_\_\_\_\_

C. \_\_\_\_\_

F. \_\_\_\_\_

I. \_\_\_\_\_



After completing this activity, find these parts on your own sewing machine. Do some of the parts of your machine look different than the picture?  Yes  No

Which parts? \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Developed by: Mary Forster, Extension Associate, 4-H Youth Development/Family and Consumer Sciences

# Clothing

## The Parts of the Sewing Machine

Look at the drawing of a sewing machine. How many parts do you already know? Fill in as many parts as you know and then turn the page to check your answers.

### Identification—Key

In this activity you will:

- identify the sewing machine parts.

A. stitch length adjustment

B. balance wheel

C. thread takeup lever

D. presser bar lever

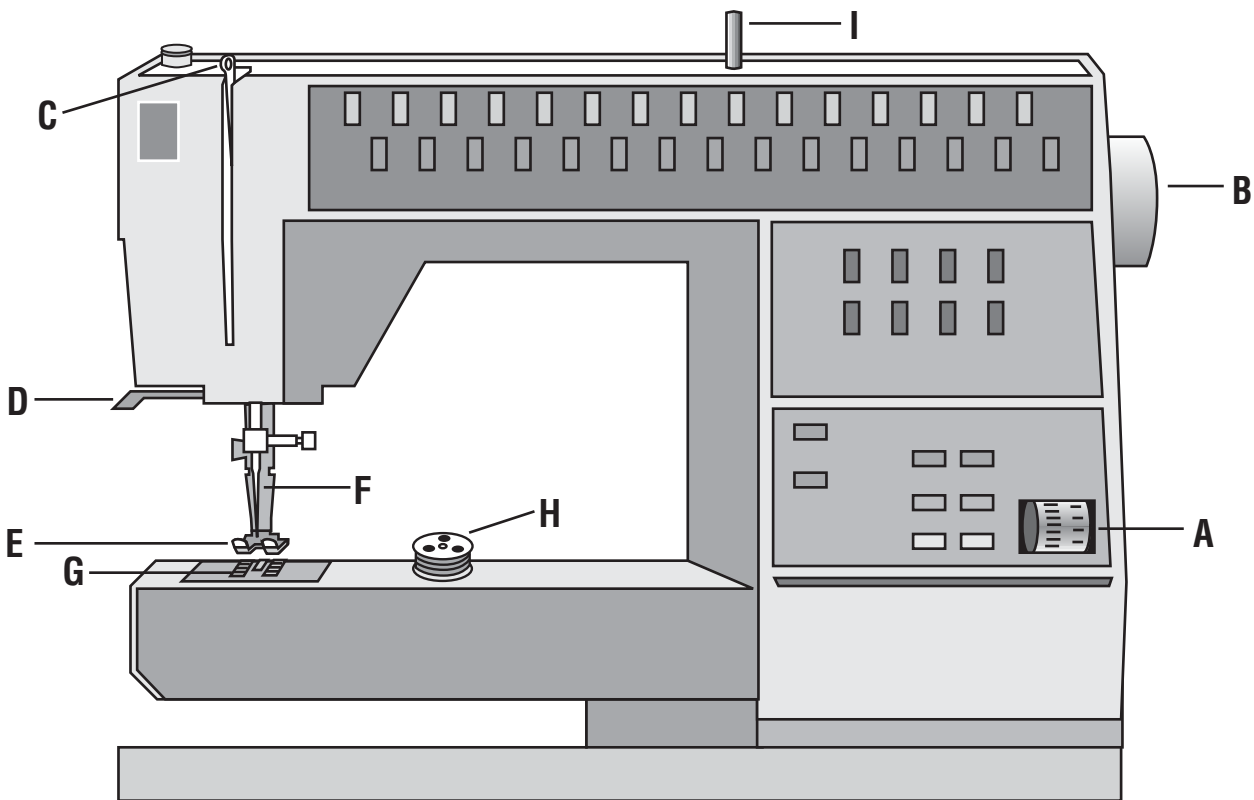
E. presser foot

F. needle

G. feed dog

H. bobbin

I. spool pin



After completing this activity, find these parts on your own sewing machine. Do some of the parts of your machine look different than the picture?  Yes  No

Which parts? **Answers will vary.**

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Developed by: Mary Forster, Extension Associate, 4-H Youth Development/Family and Consumer Sciences

# Clothing

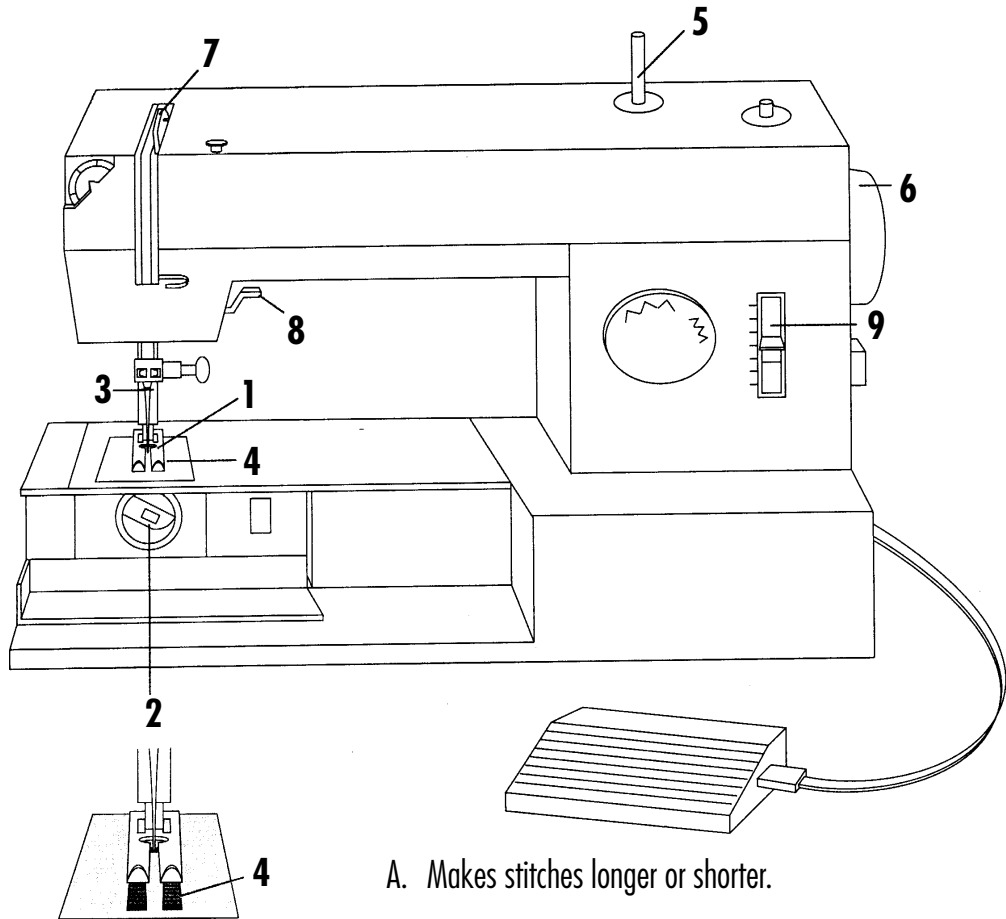
## The Functions of the Sewing Machine

Match the correct name of the sewing machine part with the the function it serves when sewing a garment. Place the letter of the correct answer in the blank provided.

### Matching

In this activity you will:

- learn what each part of the sewing machine does.



\_\_\_\_\_ 1. Presser foot

\_\_\_\_\_ 2. Bobbin

\_\_\_\_\_ 3. Needle

\_\_\_\_\_ 4. Feed dog

\_\_\_\_\_ 5. Spool pin

\_\_\_\_\_ 6. Balance wheel

\_\_\_\_\_ 7. Thread takeup lever

\_\_\_\_\_ 8. Presser bar lever

\_\_\_\_\_ 9. Stitch length adjustment

A. Makes stitches longer or shorter.

B. Holds the spool of thread in place.

C. Small teeth that move fabric to needle as you sew.

D. Holds the fabric in place as you sew.

E. Moves up and down guiding the upper thread to the needle.

F. Carries the top thread to make stitches.

G. Helps the needle run up and down smoothly.

H. Holds the thread for the underside of the seam.

I. Raises and lowers the presser foot.

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# Clothing

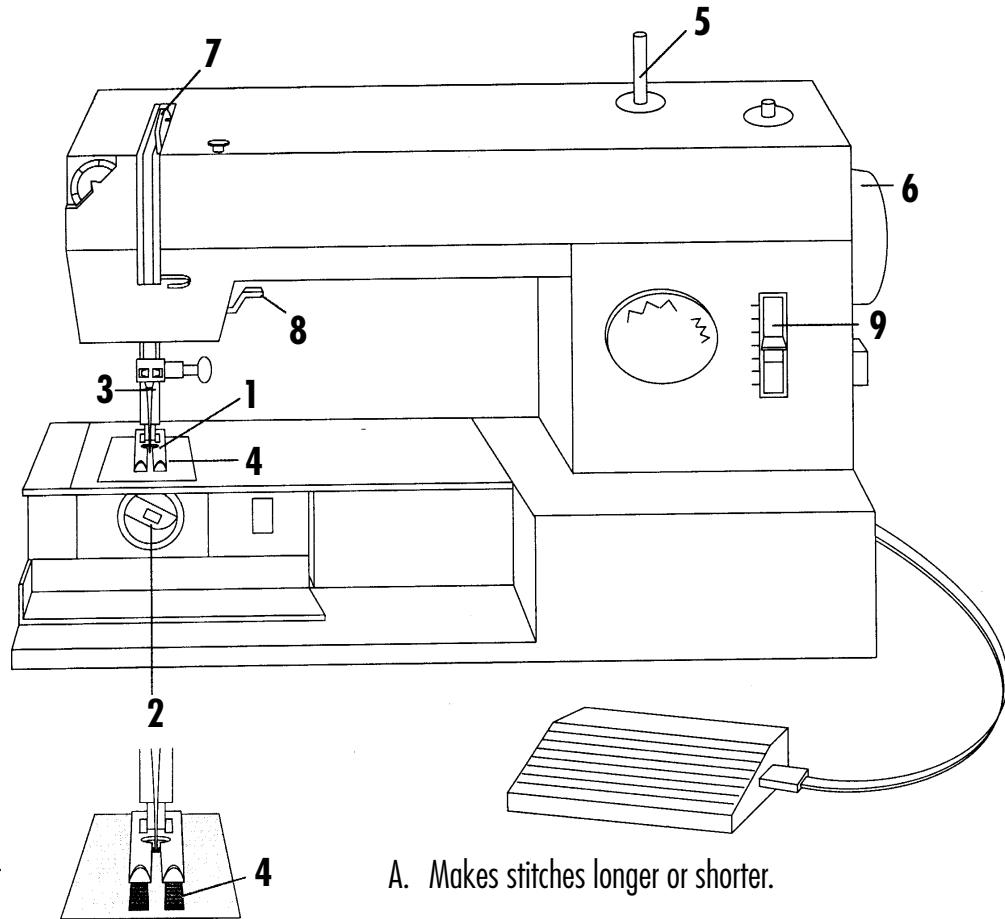
## The Functions of the Sewing Machine

Match the correct name of the sewing machine part with the the function it serves when sewing a garment. Place the letter of the correct answer in the blank provided.

### Matching—Key

In this activity you will:

- learn what each part of the sewing machine does.



  D   1. Presser foot

  H   2. Bobbin

  F   3. Needle

  C   4. Feed dog

  B   5. Spool pin

  G   6. Balance wheel

  E   7. Thread takeup lever

  I   8. Presser bar lever

  A   9. Stitch length adjustment

A. Makes stitches longer or shorter.

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F. Carries the top thread to make stitches.

G. Helps the needle run up and down smoothly.

H. Holds the thread for the underside of the seam.

I. Raises and lowers the presser foot.

Developed by: Mary Forster, Extension Associate, 4-H Youth Development/Family and Consumer Sciences

# Clothing

## The Seven Clues to Achieve a Total Look

Unscramble these words that are the seven clues to achieving a total look.

niohfas \_\_\_\_\_  
siedng \_\_\_\_\_  
ift \_\_\_\_\_  
nsttoirucnoc \_\_\_\_\_  
oomgingr \_\_\_\_\_  
turosep nda esipo \_\_\_\_\_  
lbeaonsrep lituaqies \_\_\_\_\_

### Word Scramble and Matching

**In this activity you will:**

- learn the seven clues to a total look.
- learn how to use the seven clues to achieve the total look in a 4-H clothing project.

Write each of the seven clues in the blank after its correct description below.

1. Is influenced through fabric, color, style, lines, garment, details, accessories, and/or personal presentation.

\_\_\_\_\_

2. Positive presentation of self, pleasant smile. \_\_\_\_\_

3. Garment is balanced, overall smooth look, hangs on the body correctly. \_\_\_\_\_

4. Total outfit looks "smart" and put together. It is coordinated. Outfit is becoming to wearer. \_\_\_\_\_

5. Body and clothes are clean and neat. \_\_\_\_\_

6. Overall appearance is smooth. The proper techniques are used to have edges of collars smooth, even, and flat. Seams are clipped and trimmed to prevent bulk. Darts are smoothly stitched and pressed. Hem is neat and smooth.

\_\_\_\_\_

7. The person walks, sits, and stands straight and tall. Movements are easy and smooth.

\_\_\_\_\_

*Developed by: Mary Forster, Extension Associate, 4-H Youth Development/Family and Consumer Sciences*

# Clothing

## The Seven Clues to Achieve a Total Look

Unscramble these words that are the seven clues to achieving a total look.

niohfas

**fashion**

siedng

**design**

ift

**fit**

nsttoirucnoc

**construction**

oomgingr

**grooming**

turosep nda esipo

**posture and poise**

lbeaonsrep lituaqies

**personable qualities**

## Word Scramble and Matching—Key

**In this activity you will:**

- learn the seven clues to a total look.
- learn how to use the seven clues to achieve the total look in a 4-H clothing project.

Write each of the seven clues in the blank after its correct description below.

1. Is influenced through fabric, color, style, lines, garment, details, accessories, and/or personal presentation.

**fashion**

2. Positive presentation of self, pleasant smile. **personable qualities**

3. Garment is balanced, overall smooth look, hangs on the body correctly. **fit**

4. Total outfit looks “smart” and put together. It is coordinated. Outfit is becoming to wearer. **design**

5. Body and clothes are clean and neat. **grooming**

6. Overall appearance is smooth. The proper techniques are used to have edges of collars smooth, even, and flat. Seams are clipped and trimmed to prevent bulk. Darts are smoothly stitched and pressed. Hem is neat and smooth.

**construction**

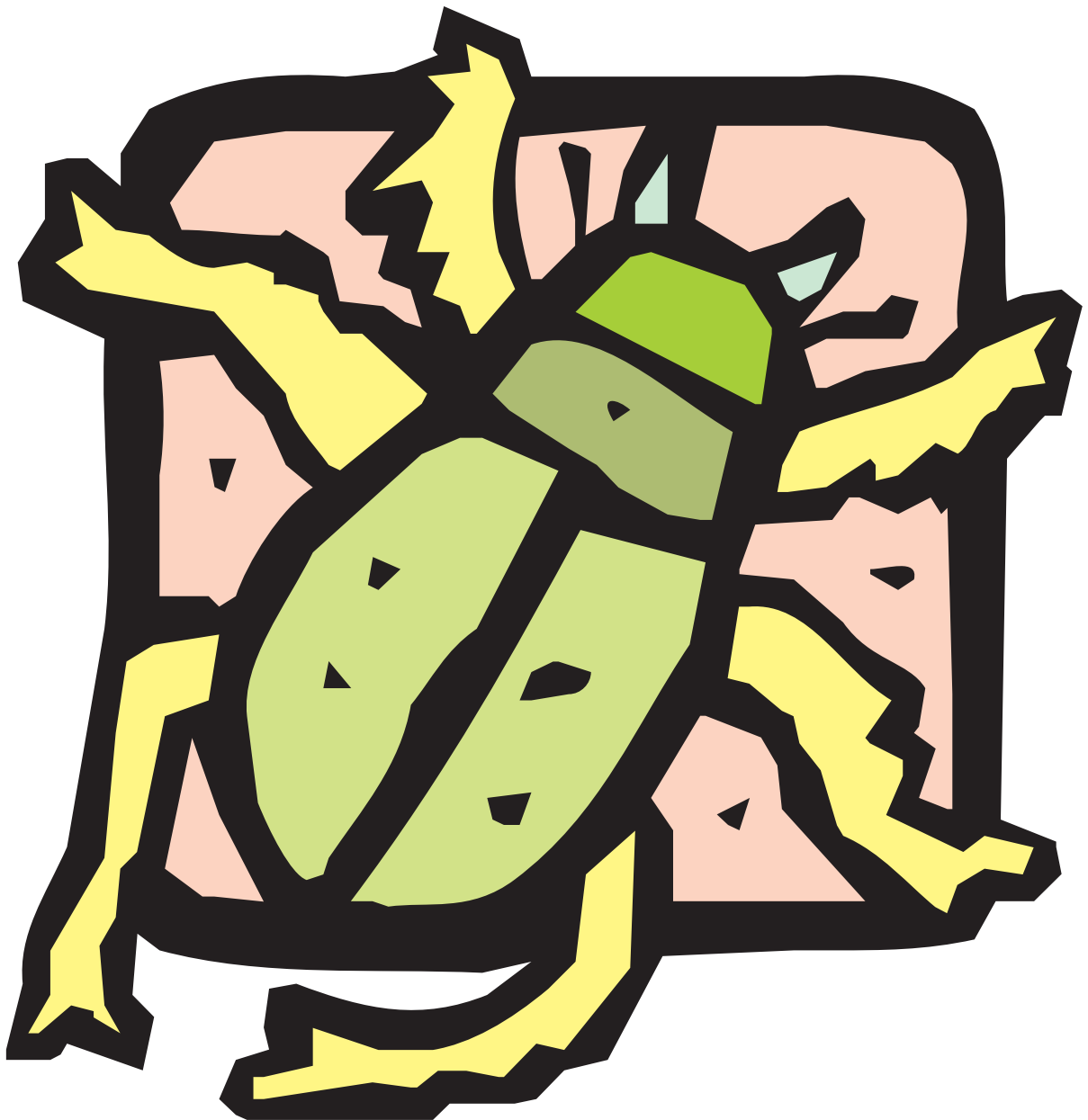
7. The person walks, sits, and stands straight and tall. Movements are easy and smooth.

**posture and poise**

*Developed by: Mary Forster, Extension Associate, 4-H Youth Development/Family and Consumer Sciences*

## ***Countdown Chapter 9***

# ***Entomology and the Environment***



# **Countdown Chapter 9**

## **Entomology and the Environment**

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# Entomology

## Word Scramble

In this activity you will:

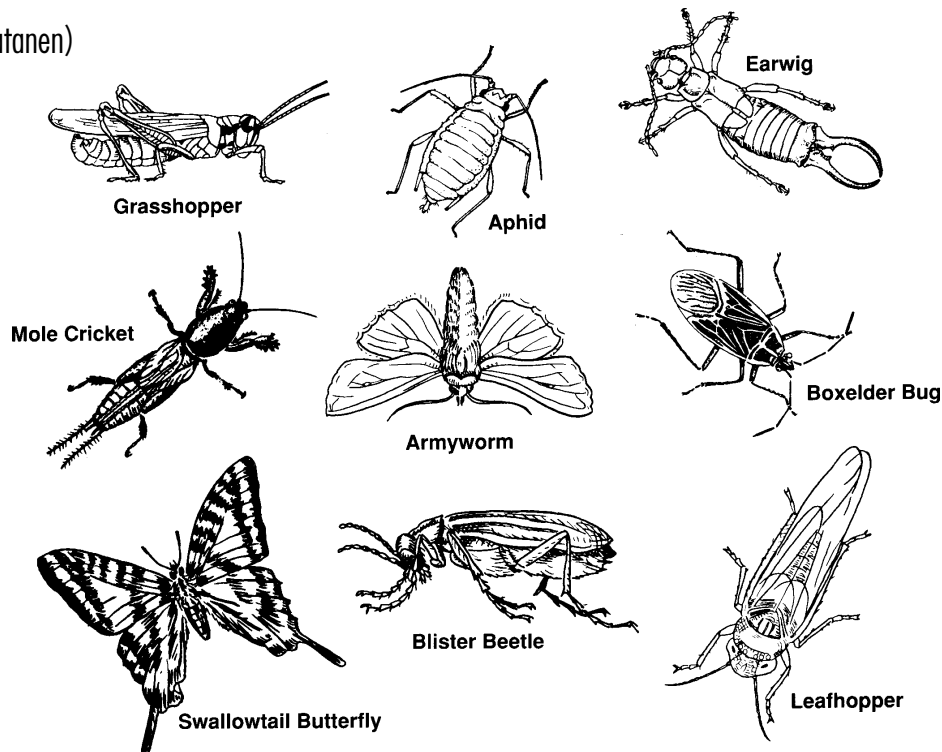
- learn what differentiates insects from all other animals.

### What Makes an Insect an Insect?

Using the group of words below, unscramble the words in parentheses to complete the sentences.

abdomen      antennae      arthropod      head  
phyla      protection      thorax      three

1. The Animal Kingdom is divided into large groups called \_\_\_\_\_ which have similar characteristics. (hlayp)
2. Insects have no backbone or an outer skeleton and are known as invertebrates. They are included in the Phylum \_\_\_\_\_. (rapodhrot)
3. The skeleton on the outside of the insect's body provides it with \_\_\_\_\_ from predators and threats from the environment. (tncorptioe)
4. Insects have three body regions: the \_\_\_\_\_, the \_\_\_\_\_, and the \_\_\_\_\_. (ehad, axothr, modbena)
5. All insects have \_\_\_\_\_ pairs of legs. One pair is attached to each segment of the thorax. (heret)
6. Insects have two \_\_\_\_\_ on the front of the head which serve as organs of touch and sometimes taste, smell, and hearing. (enatanen)



Developed by: Tina Milenovic, Extension Associate, 4-H Youth Development

# Entomology

## What Makes an Insect an Insect?

Using the group of words below, unscramble the words in parentheses to complete the sentences.

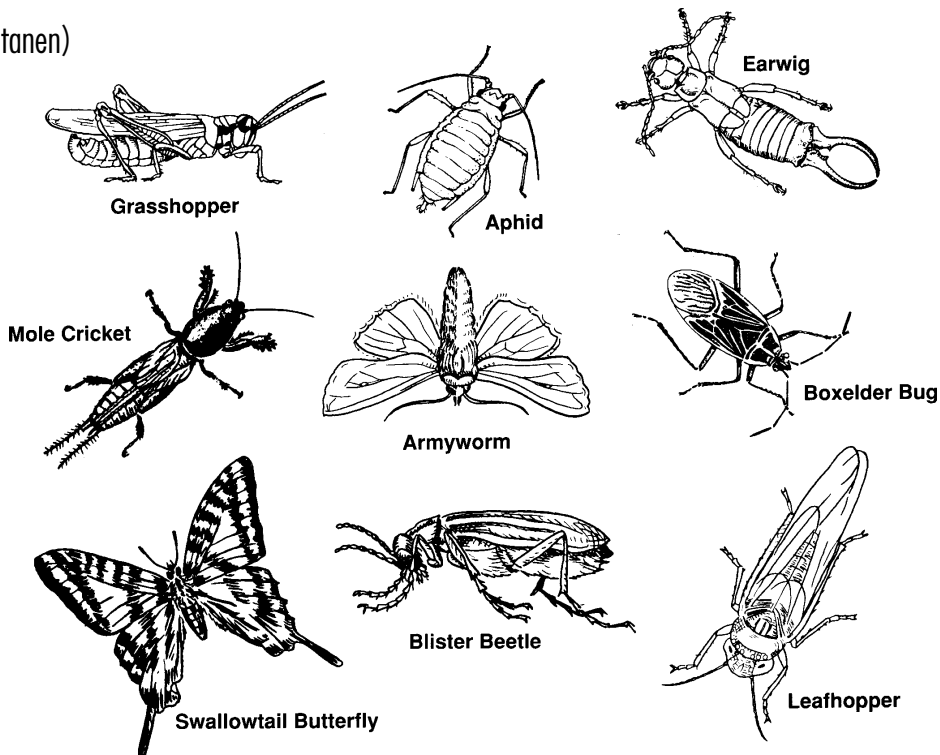
abdomen      antennae      arthropod      head  
phyla      protection      thorax      three

### Word Scramble—Key

#### In this activity you will:

- learn what differentiates insects from all other animals.

1. The Animal Kingdom is divided into large groups called phyla which have similar characteristics. (hlayp)
2. Insects have no backbone or an outer skeleton and are known as invertebrates. They are included in the Phylum arthropod. (rapodhrot)
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# Entomology

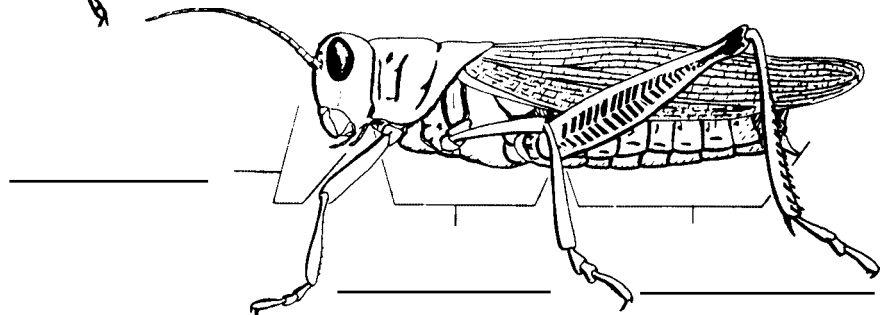
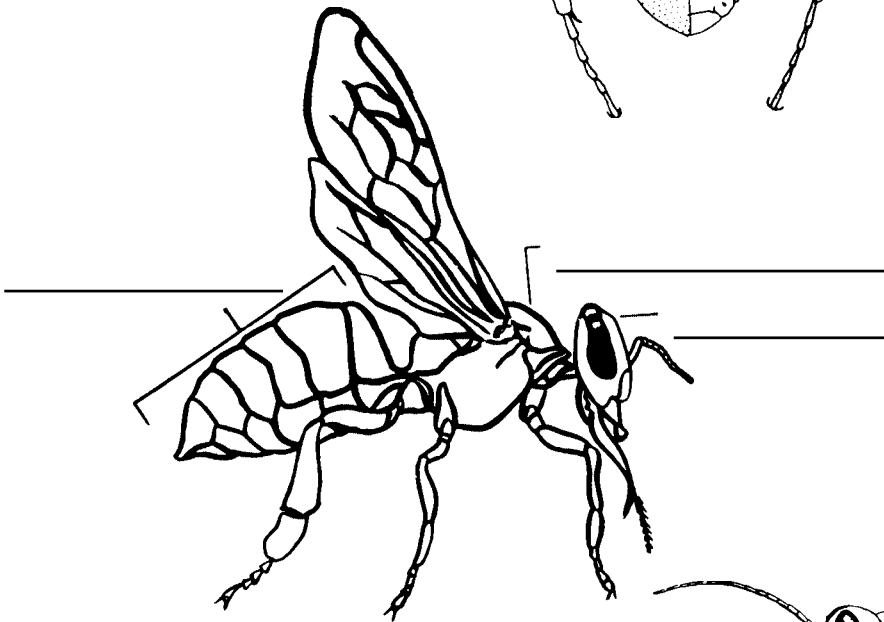
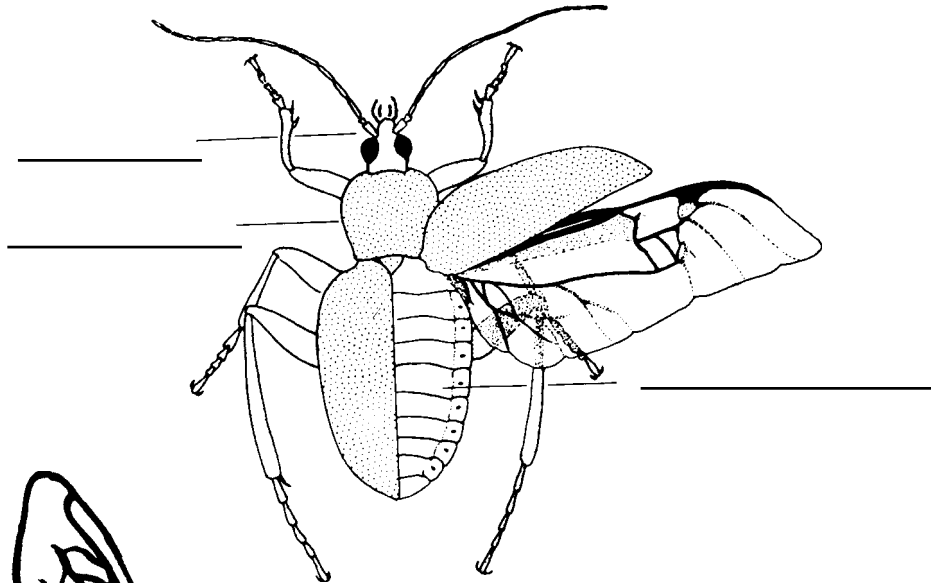
## Parts of an Insect

Learn about the three main body regions of insects: the head (which holds the eyes, mouth parts, and antenna or feelers), the thorax (to which the legs and wings are attached), and the abdomen (which contains the organs of digestion and reproduction). On the three insect pictures below, locate and identify the head, thorax, and abdomen regions by writing their names on the respective line.

### Identification

**In this activity you will:**

- learn what differentiates insects from all other animals.



*Developed by: Tina Milenovic, Extension Associate, 4-H Youth Development*

# Entomology

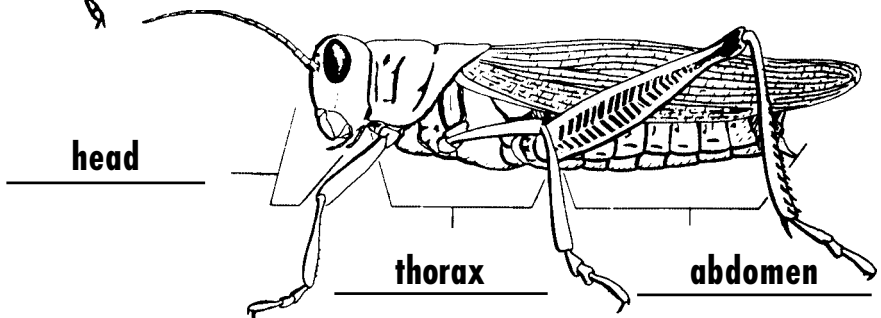
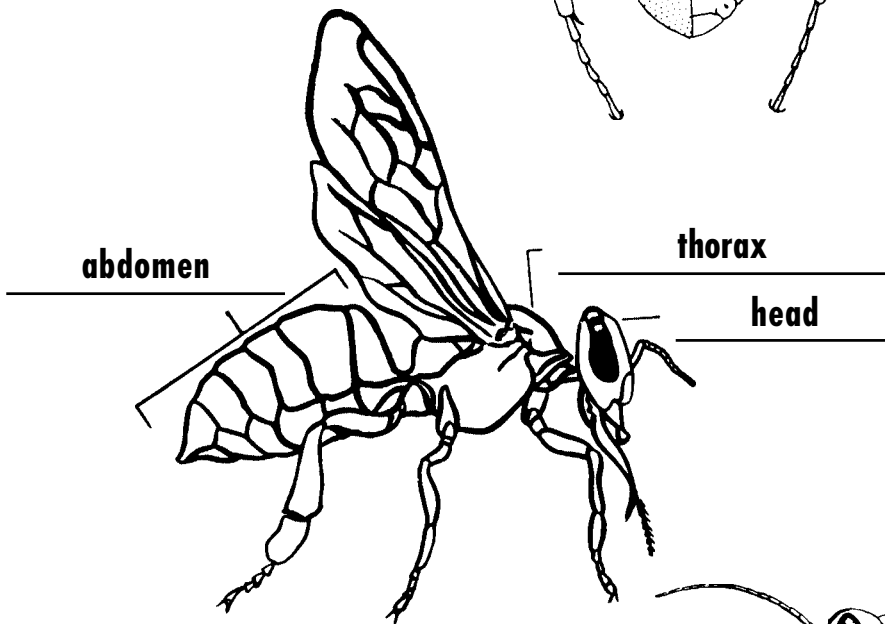
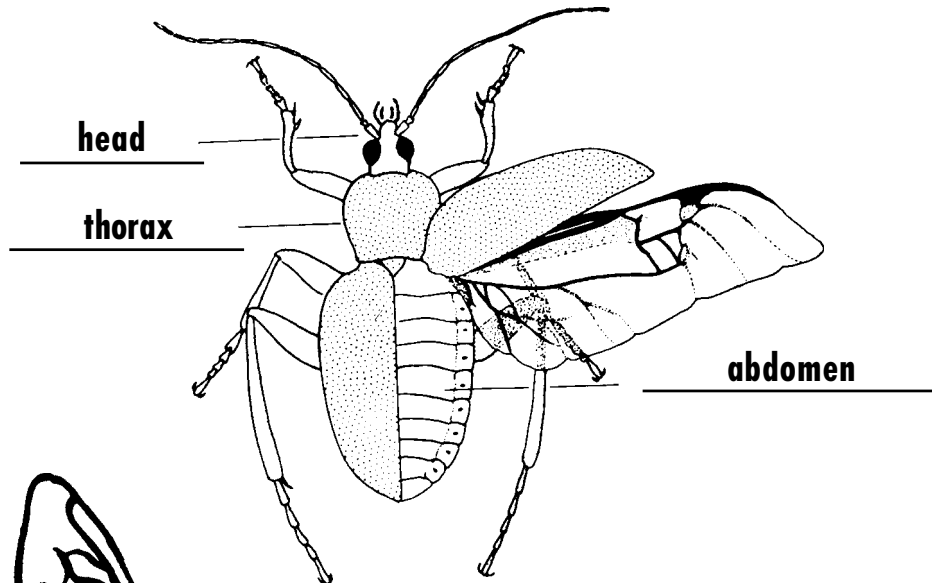
## Parts of an Insect

Learn about the three main body regions of insects: the head (which holds the eyes, mouth parts, and antenna or feelers), the thorax (to which the legs and wings are attached), and the abdomen (which contains the organs of digestion and reproduction). On the three insect pictures below, locate and identify the head, thorax, and abdomen regions by writing their names on the respective line.

### Identification—Key

**In this activity you will:**

- learn what differentiates insects from all other animals.



*Developed by: Tina Milenovic, Extension Associate, 4-H Youth Development*

# The Environment

## Litter Walk

Litter is a problem through much of the United States. It can be categorized by human sources and type of litter. Take a walk as a club. List the litter you find. Using the information below, note from where you think the litter came and whether it is recyclable. (Don't leave that litter behind!) Use this activity as a service project for your club—just collect and properly dispose of the litter you find.

<b>Type</b>	<b>Examples</b>
Paper	newspaper, bags, boxes, wrappers, diapers, cups
Glass	bottles, broken glass
Metal	cans, nails, auto parts, old appliances
Cloth	rags, old clothes
Plastics	jugs, bottles
Polystyrene	foam cups, foam boxes
Rubber	tires
Miscellaneous	wood, food, any other

### *Listing*

***In this activity you will:***

- learn about the litter found in the outdoors.

Record your findings using this table.

Date \_\_\_\_\_

<i>Item Seen</i>	<i>Type of Litter</i>	<i>Probable Source</i>	<i>Recyclable</i>

*Developed by: Tina Milenovic, Extension Associate, 4-H Youth Development*



# The Environment

## Being a “Waste-Wise” Shopper

### Identification

#### In this activity you will:

- learn about the amount of packaging that is included in some of the food and household products bought at the grocery store.

Packaging has five purposes:

1. **contain** to hold the product
2. **inform** to provide information such as the brand name or content information
3. **protect** to prevent spoilage, leakage, breakage, theft, tampering, and to seal out contaminants
4. **transport** to easily and safely move the product from manufacturer to retailer to consumer
5. **display** to attractively display and use as a method of marketing the product

Although packaging can be an important part of the product, often products include excessive packaging, which can increase the cost as well as the amount of waste produced.

Collect several grocery store advertisement flyers (usually found in the weekend newspaper) and/or several magazines that include pictures of food and household products. Ask each participant to cut out ten pictures of food or household products that fit into the following three categories:

1. **Minimal Packaging**—Either no packaging is used (such as fresh fruit and vegetables) or the only packaging is for safety purposes (medicines in glass containers, certain liquids and foods).
2. **Recyclable**—Items are packaged in recyclable or reusable container (plastic liter bottles, plastic milk jugs, steel soup cans).
3. **Substantial Packaging**—Items are excessively, and possibly unnecessarily, packaged. (The product is wrapped several times in containers beyond what is necessary for safety or to provide product information or is wrapped in small, individual serving packages that could be purchased in slightly larger quantities, but with less packaging.)

After the pictures have been separated into the above categories, tape or glue each on separate poster boards that are labeled with the category names.

Discuss the items on each poster board.

- How did you know that the products belonged to the specific categories?
- Do you have any items that may not fit into one of the categories? If so, to what category would they belong?
- Does the packaging increase or decrease the price of the product?
- Could the amount of packaging be reduced on any of the products?
- What are some of the items you throw in your trash that are examples of excess packaging?
- How can you be a better “waste-wise” shopper when purchasing food or household items?

Give prizes to the individuals who found a food or household item that has the most packaging or who had the best idea for reducing the amount of packaging.

*Developed by: Tina Milenovic, Extension Associate, 4-H Youth Development*



# The Environment

## Exploring the Diversity of Nature

### Observation

#### In this activity you will:

- learn about the biological diversity that exists in different habitats.
- learn to identify plants and animals.

You will need:

- one Hula-Hoop for every three to five people.
- paper and pencils for each person.

Dependent on the group's knowledge of natural surroundings, it may be necessary to utilize a number of wildlife guide books.

Prior to the club meeting, locate different habitats in which your group can explore. Examples of such habitats are: beach, grassy field, wooded area, pond edge, wetland, ecotone area between woods and grassy field, parking lot, neighborhood garden, etc. Also, an adult advisor should become familiar with and be able to define the following terms:

- *biological diversity or biodiversity*—the full range of variety and variability of living organisms within a specific habitat. This includes the species richness and the relative abundance of each species (number of individuals for each species found).
- *species richness*—the number of different species found within a specific habitat.

Give each group a Hula-Hoop, pencils, and paper. Travel to the first habitat and have each group place their Hula-Hoops on the ground at different spots in the habitat. Instruct each group to try to count, draw, and possibly identify the different plant and animal species that are located within the circumference of the Hula-Hoop. In addition, they will want to count how many of each species they are able to find. For example, how many individual grass plants (not blades of grass) or how many ants are within the Hula-Hoop? You may also encourage them to dig into the ground an inch or so to look beyond the plants and animals on the surface. They should carefully examine any plants to see if there are any animals living or feeding on the plant matter.

After five to ten minutes, ask each group for a summary of what they found. How many different species and how many of each species did they find? Share and describe some of their drawings. Comparing the different groups, did they find the same or different flora and/or fauna in each of their Hula-Hoops?

Move on to the next habitat and repeat the process. Ask the same questions, but also ask the groups to compare and contrast the first and second habitats. What flora and fauna were the same? What was different about the two habitats? For a species found in both habitats, which habitat had more individuals?

Continue this process with the additional habitats, and encourage them to think about the species diversity and richness they have discovered. After all habitats have been visited, close the program with a summary discussion on the number of species that were found, the number of individuals of each species, and the differences between each of the habitats.

Developed by: Tina Milenovic, Extension Associate, 4-H Youth Development

*Developed by: Tina Milenovic, Extension Associate, 4-H Youth Development*

# The Environment

## Exploring a Web of Life

You will need:

- markers
- index cards
- tape
- string

Use the markers to write the following wildlife names on the index cards (one name per card): grass, flower, plant seeds, crane fly, ovenbird, owl, mouse, rabbit, squirrel, snake, fox, deer, wolf. Choose as many wildlife names as needed according to the size of group. Names of animals or plants also can be selected for this activity, and you may wish to select wildlife indigenous to the natural area that surrounds you: coniferous or deciduous woods, wetland, pond, etc.

Turn the cards face down on the ground. Ask each participant to select one card. Their card will identify the part of the food web which they will play. Have them wear the card like a name badge so they can be easily identified.

Review with the group the functions that each one of them has in a food web. Ask where their plant or animal would fit into the food web. Discussion can be as simple as from where each of the plants and animals receive energy and nutrients, to identification of which plants and animals are producers (plants), consumers (crane fly, mouse, squirrel, deer, rabbit, etc.), or predators (ovenbird, snake, owl, fox, wolf, etc.).

Select one participant to begin the food web. Ask all the members what of the remaining wildlife would eat or be eaten by the first student selected. For example, if the first person is representing the squirrel, then those who are portraying the plant seeds and owl would be the next to join the food web. When the owl and plant seeds members join the food web, they are to be connected to the squirrel with long pieces of string. Select subsequent members of the food web by what eats or is eaten by the members who have already joined the food web. Continue to join the new members to the food web with the string.

After all wildlife has been included in the food web, briefly summarize the importance of each food web member. Discuss how the diversity of wildlife is important to the existence of many species. What would happen if one of the food web members was removed, such as a squirrel? Members should note that two consequences would occur. First, the animals who depend on the squirrel for food will not be able to prey upon the squirrel population. Greater predatory pressure would be placed on the other animals the owl eats, and/or the owl would have to move to another habitat to find food. Second, the squirrel would not be in the food web to feed on the plant seeds. If no other animals fed on the plant seeds, there would no longer be a natural control for the reproduction of these plants, which could result in a population explosion.

## Observation

### In this activity you will:

- learn about natural food webs and the importance of individual plant and animal species within a food web.
- explore the functions of different animals and plants in an ecosystem.

*Developed by: Tina Milenovic, Extension Associate, 4-H Youth Development*

# The Environment

## Touch and Feel Hike

Make a copy of the following list for each person (or groups of two to three people). Instruct each person or group to touch and feel, not take, any of the objects found. They are to look for:

- the hairiest leaf
- the smoothest rock
- the roughest twig
- something warm
- something bumpy
- the softest leaf
- the roughest rock
- something cool
- something dry
- something crunchy

Ask questions like:

What did you find that was dry?

Why was it dry?

How might it be different tonight?

How might it be next summer/winter?

How did it get there?

Does it belong there?

Did people have anything to do with it being there? Has it always been the way it is?

## Observation

### In this activity you will:

- learn how the natural environment is made of many textures.

### **“Leaves of three, let it be!”**

Before this activity, teach your group to beware of poison ivy. Poison ivy can appear as a plant or thick vine growing up trees and around fences. Its leaves are arranged in groups of three (“leaves of three, let it be”) and usually have a shiny surface. The plant has white berries, is toxic year round, and is especially harmful if breathed while being burned.



## Nature Grab Bag

Collect about 15 nature items such as pine cones, nuts, shells, leaves, rocks, etc., and place each in a small paper sack. Pass the sacks around the group and let each person try to identify the objects by feeling inside the bag, and without looking. After each member has attempted to identify the contents of the bag, remove the items and briefly discuss each item.

*Developed by: Tina Milenovic, Extension Associate, 4-H Youth Development*

*Developed by: Tina Milenovic, Extension Associate, 4-H Youth Development*

# The Environment

## Outdoor Fun!

Using the group of words below, fill in the blanks to complete the sentences.

copperhead	pocket knife
poison ivy	bandana
insect repellent	field guides
canteen	first aid
backpack	raisins

### Fill in the Blanks

#### In this activity you will:

- learn about some basics of outdoor fun.

1. \_\_\_\_\_ helps to keep away insects when you are in a wooded area.
2. When hiking on a hot day or a long trip, you should carry a \_\_\_\_\_ to provide you with a supply of water.
3. A \_\_\_\_\_ kit should contain a few adhesive bandages (such as Band-Aids®), some antiseptic and adhesive tape, a needle and thread, burn ointment, a few aspirins, and some cotton.
4. When using a \_\_\_\_\_, you should never cut toward you or use it for prying or as a screwdriver.
5. The rattlesnake, massasauga, and \_\_\_\_\_ are the only poisonous snakes in Ohio.
6. \_\_\_\_\_ is a climbing vine that grows with its leaves arranged in groups of three and has a shiny surface pebbled with sickly-looking warts.
7. Books called \_\_\_\_\_ are excellent resources for identifying birds, trees, insects, and flowers and learning more about the flora and fauna you find while in nature.
8. A small box of \_\_\_\_\_ makes an excellent snack for long hikes.
9. Bring along a large \_\_\_\_\_ to protect your neck and face from the sun or to use as a sling.
10. Use a small \_\_\_\_\_ to carry your outdoor equipment.

*Developed by: Tina Milenovic, Extension Associate, 4-H Youth Development*

# The Environment

## Outdoor Fun!

Using the group of words below, fill in the blanks to complete the sentences.

copperhead	pocket knife
poison ivy	bandana
insect repellent	field guides
canteen	first aid
backpack	raisins

### Fill in the Blanks—Key

#### In this activity you will:

- learn about some basics of outdoor fun.

1. **Insect repellent** helps to keep away insects when you are in a wooded area.
2. When hiking on a hot day or a long trip, you should carry a **canteen** to provide you with a supply of water.
3. A **first aid** kit should contain a few adhesive bandages (such as Band-Aids®), some antiseptic and adhesive tape, a needle and thread, burn ointment, a few aspirins, and some cotton.
4. When using a **pocket knife**, you should never cut toward you or use it for prying or as a screwdriver.
5. The rattlesnake, massasauga, and **copperhead** are the only poisonous snakes in Ohio.
6. **Poison ivy** is a climbing vine that grows with its leaves arranged in groups of three and has a shiny surface pebbled with sickly-looking warts.
7. Books called **field guides** are excellent resources for identifying birds, trees, insects, and flowers and learning more about the flora and fauna you find while in nature.
8. A small box of **raisins** makes an excellent snack for long hikes.
9. Bring along a large **bandana** to protect your neck and face from the sun or to use as a sling.
10. Use a small **backpack** to carry your outdoor equipment.

*Developed by: Tina Milenovic, Extension Associate, 4-H Youth Development*

# The Environment

## Leaf Scavenger Hunt

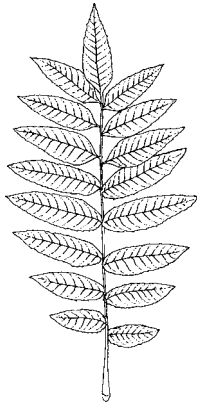
### Identification

#### In this activity you will:

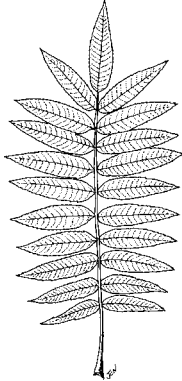
- learn to tell the difference between the different type of leaf shapes.
- learn to understand the terms used to describe the different type of leaf shapes.

To complete this activity, you will need to be close to an area that has a lot of different tree species (a wooded or residential area with a variety of tree plantings). Divide the group into teams of two to three people. Each team should have a copy of the leaf guide and terms below. Have each team find sets of leaves that match each of the descriptions and drawings. Set a limit of about ten minutes. Teams should collect only those leaves which have fallen to the ground instead of removing them from a tree.

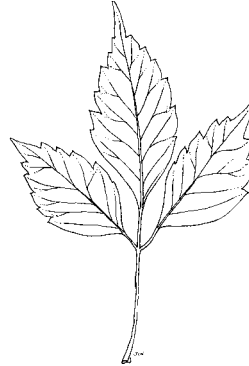
**Alternate Branching**—  
Leaves are located on the twig at alternating intervals.



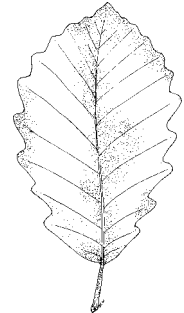
**Opposite Branching**—  
Leaves grow in pairs at opposite sides of the same point on the twig.



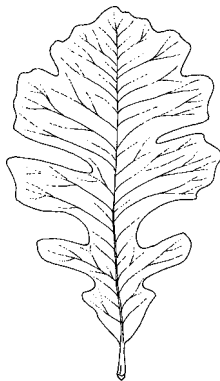
**Compound Leaves**—The leaf is divided into several different *leaflets* that are attached to the leaf stalk.



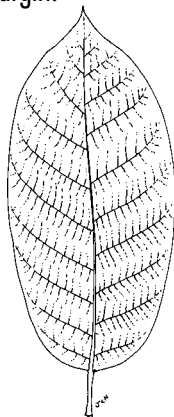
**Simple Leaves**—Only one blade is attached. Its stalk is attached to a twig or branch. The leaf is not divided into separate *leaflets*.



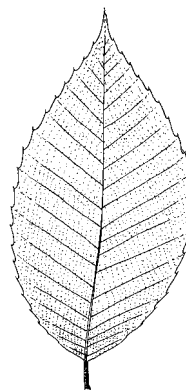
**Lobed Leaves**—The edge of these leaves is deeply cut, forming lobes.



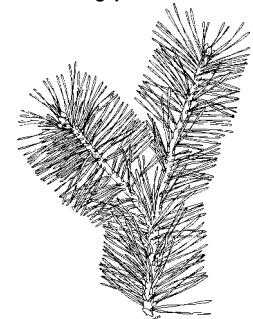
**Leaf outline is smooth**—  
There are no teeth or lobes on leaf margin.



**Toothed Leaves**—The edge of the leaf is jagged with teeth-like indentations.

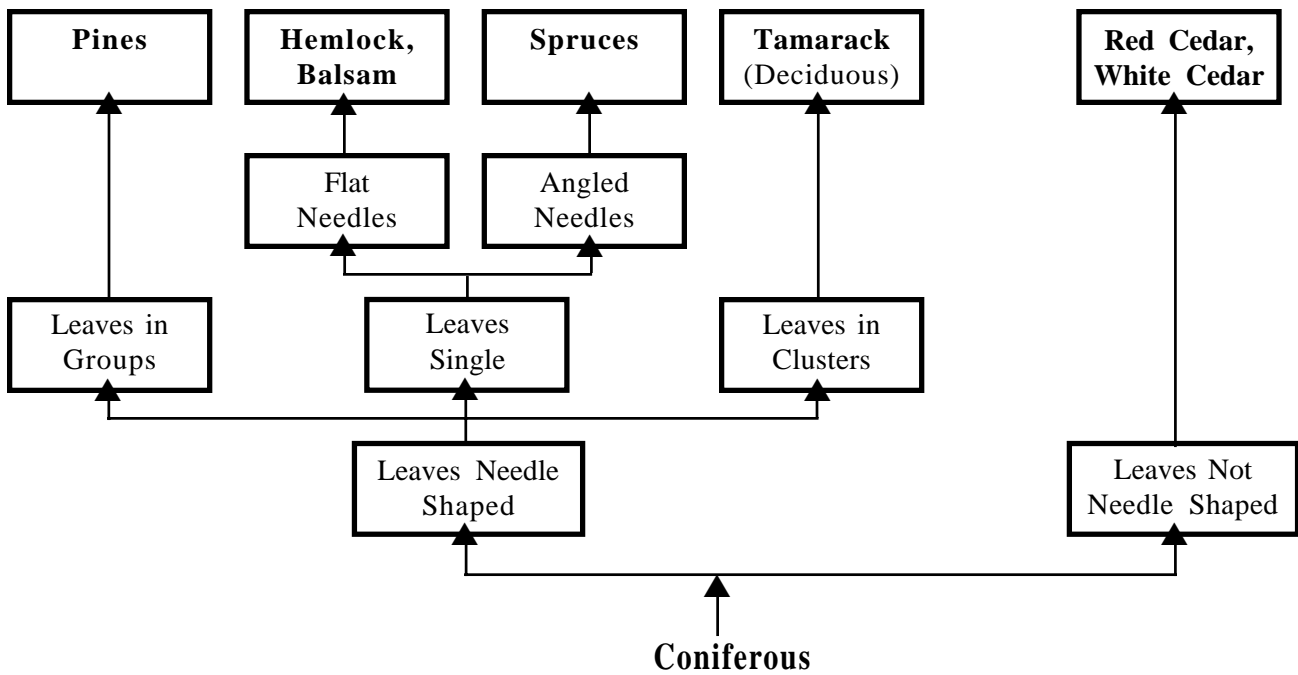


**Needle-Shaped Leaves**—  
Trees such as pine, spruce, and fir have needle-shaped leaves and these leaves are attached to the branches either singly or in bundles.

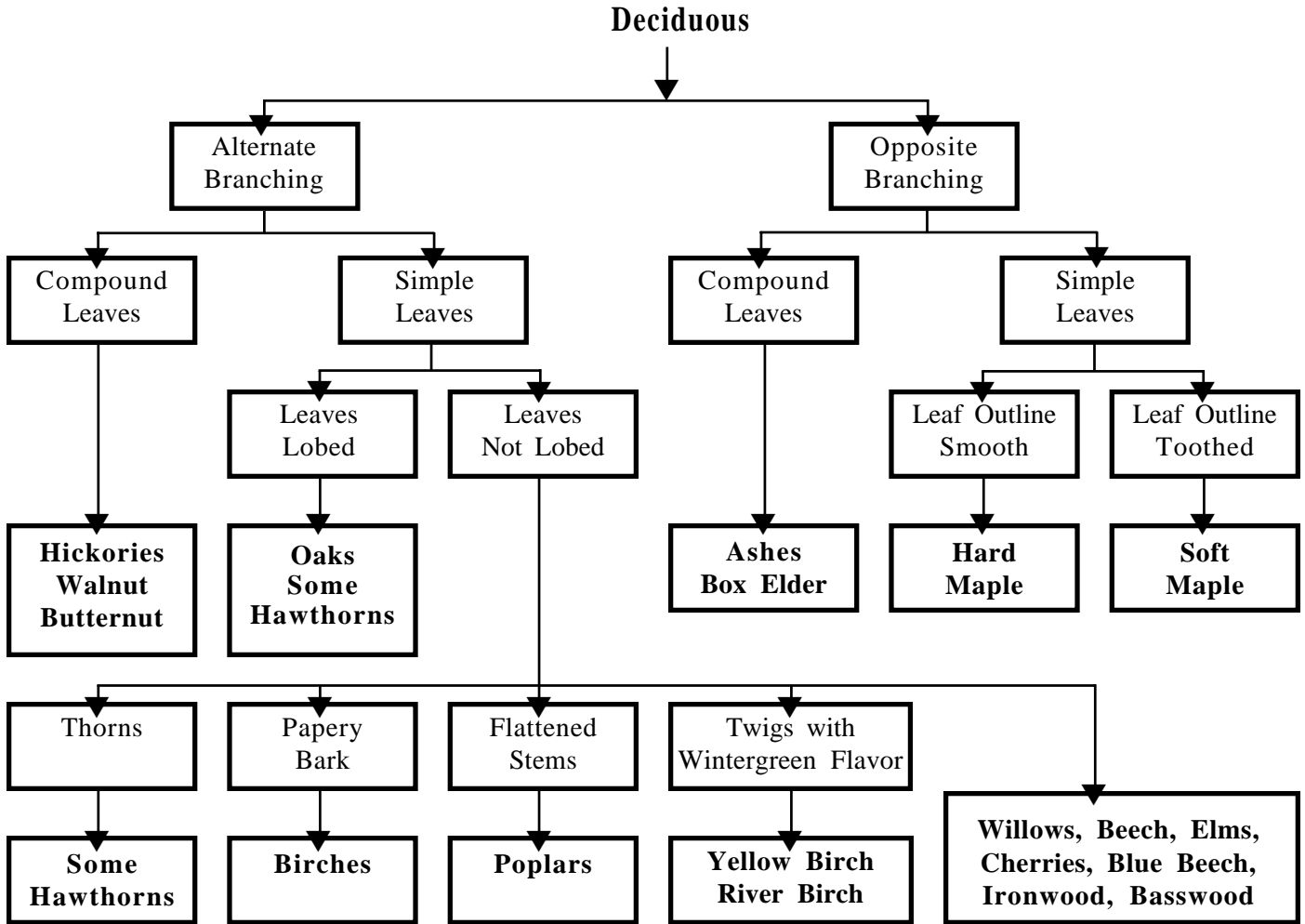


Once you have collected and shared your leaves with the group, use the Tree Road Map on page 18 to determine what kind of tree your leaves came from.

Developed by: Tina Milenovic, Extension Associate, 4-H Youth Development



What kind is your tree?  
**Tree Road Map**  
 Read The Signs and  
 Follow The Arrows!



# The Environment

## Seeds of Trees

A picture of the seed plus a brief description of the tree will be given. Write in the tree name on the line provided.

### Identification

#### In this activity you will:

- learn to identify some of the different types of tree seeds found in your backyard or a wooded area.



This tree has 3- to 5-lobed leaves. Its wood is hard and close-grained and is used for cabinetwork. Its sap is a main source of delicious syrup. \_\_\_\_\_



Deer love to eat the acorns produced by this tree and its wood is used to make fine furniture. \_\_\_\_\_



This coniferous evergreen tree has slender elongated needles and is valuable as timber or as an ornamental tree. \_\_\_\_\_



A tree with hard strong heavy dark brown wood and oily edible nuts. \_\_\_\_\_



This plant can be either a shrub or a tree and it produces a nut that has been compared to the eye of a buck deer. \_\_\_\_\_



A tall tree with star-shaped, toothed leaves which may be five- or seven-lobed. \_\_\_\_\_



This medium sized tree has three patterns of leaves: 3 "finger," a "thumb-and-mitten" outline, or a smooth egg-shaped leaf. Its roots are often used to make a soothing, medicinal tea. \_\_\_\_\_



Large thorns can be found on this tree. Its leathery seed pods grow to a foot or more in length and contain 12 to 14 dark brown seeds that are separated by a sweet, succulent pulp. \_\_\_\_\_



The nuts (seeds) from this tree may be dried, roasted, and ground for use as a coffee substitute, and are also used to provide flavoring to chewing gum. \_\_\_\_\_

Developed by: Tina Milenovic, Extension Associate, 4-H Youth Development

# The Environment

## Seeds of Trees

A picture of the seed plus a brief description of the tree will be given. Write in the tree name on the line provided.

### Identification—Key

#### In this activity you will:

- learn to identify some of the different types of tree seeds found in your backyard or a wooded area.



This tree has 3- to 5-lobed leaves. Its wood is hard and close-grained and is used for cabinetwork. Its sap is a main source of delicious syrup.

**Sugar Maple**



Deer love to eat the acorns produced by this tree and its wood is used to make fine furniture.

**Red Oak**



This coniferous evergreen tree has slender elongated needles and is valuable as timber or as an ornamental tree.

**Pine**



A tree with hard strong heavy dark brown wood and oily edible nuts.

**Black Walnut**



This plant can be either a shrub or a tree and it produces a nut that has been compared to the eye of a buck deer.

**Buckeye**



A tall tree with star-shaped, toothed leaves which may be five- or seven-lobed.

**Sweetgum**



This medium sized tree has three patterns of leaves: 3 "finger," a "thumb-and-mitten" outline, or a smooth egg-shaped leaf. Its roots are often used to make a soothing, medicinal tea.

**Sassafras**



Large thorns can be found on this tree. Its leathery seed pods grow to a foot or more in length and contain 12 to 14 dark brown seeds that are separated by a sweet, succulent pulp.

**Honey Locust**



The nuts (seeds) from this tree may be dried, roasted, and ground for use as a coffee substitute, and are also used to provide flavoring to chewing gum.

**American Beech**

*Developed by: Tina Milenovic, Extension Associate, 4-H Youth Development*



*Developed by: Tina Milenovic, Extension Associate, 4-H Youth Development*

# The Environment

## Leaves or Bark Rubbing Stationery

### Identification

#### In this activity you will:

- learn how the leaves and bark of trees differ from one species to another.

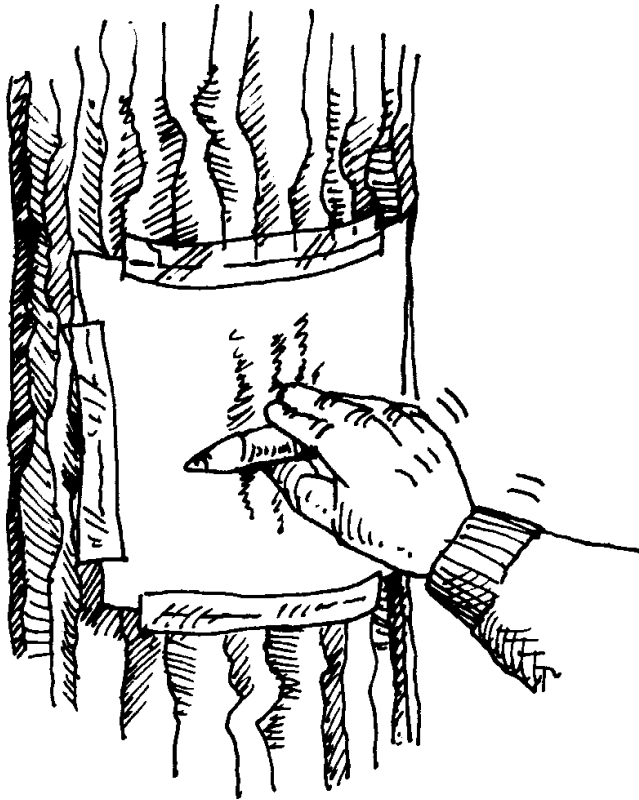
Trees differ in many ways, including the texture of their leaves and bark.

Visit an area with different species of trees. This could be your backyard, a school yard, or a local park. Identifying the different species will help, but it is not a must.

Ask each member to find an interesting patch of bark and use masking tape to tape a piece of colored construction paper over it. Or, gather a number of leaves from one of the trees and place them on a flat surface. Tape the paper over the arrangement of leaves.

Holding a crayon with its flat side against the tree (or flat on the arrangement of leaves), rub up and down over the paper, pressing firmly. Keep coloring until an interesting pattern emerges. Remove the tape and inspect the bark or leaf rubbing. Try different trees and look at the variety of patterns obtained.

Use the paper with bark or leaf rubbing as stationery. Hold up each of the bark or leaf rubbings and ask if the members of your group can identify the tree species by the bark or leaf shape. Also, have the members write a letter that explains how they made their stationery.



*Developed by: Tina Milenovic, Extension Associate, 4-H Youth Development*

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# The Environment

## Pond Map Symbols

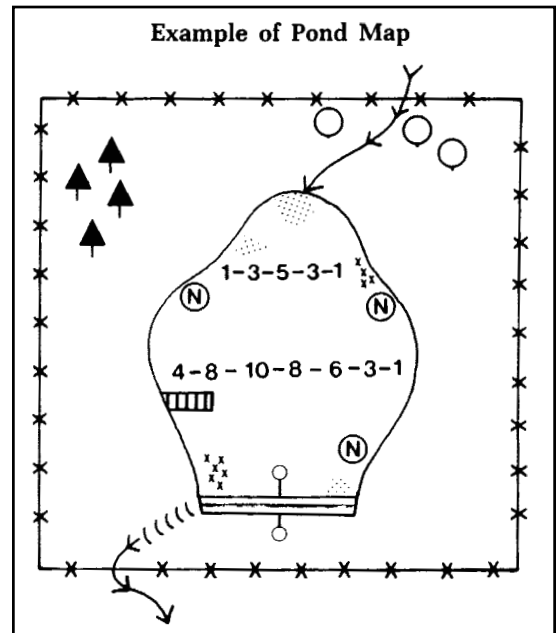
Write the letter of the description next to the appropriate map symbol. See the pond map for examples of how these symbols are used.

- |                              |  |
|------------------------------|--|
| A. Creek or stream           |  |
| B. Underwater mass           |  |
| C. Spillway                  |  |
| D. Spring                    |  |
| E. Trees (on bank)           |  |
| F. Fence                     |  |
| G. Pond shore line           |  |
| H. Pier or boat dock         |  |
| I. Water depth (in feet)     |  |
| J. Drain pipe                |  |
| K. Dam                       |  |
| L. Gully or water inlet      |  |
| M. Fish nesting area         |  |
| N. Shrubs or brush (on bank) |  |
| O. Shoreline plants          |  |

**Matching**

**In this activity you will:**

- learn about the different topographic symbols that can be used to make a pond map.



**Additional Activity**




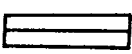

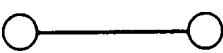








Contact the Ohio Department of Natural Resources to obtain copies of topographical maps of areas in proximity to the location where your club meets. Use these maps to find privately-owned ponds and compare the symbols with the symbols above.

*Developed by: Tina Milenovic, Extension Associate, 4-H Youth Development*

# The Environment

## Pond Map Symbols

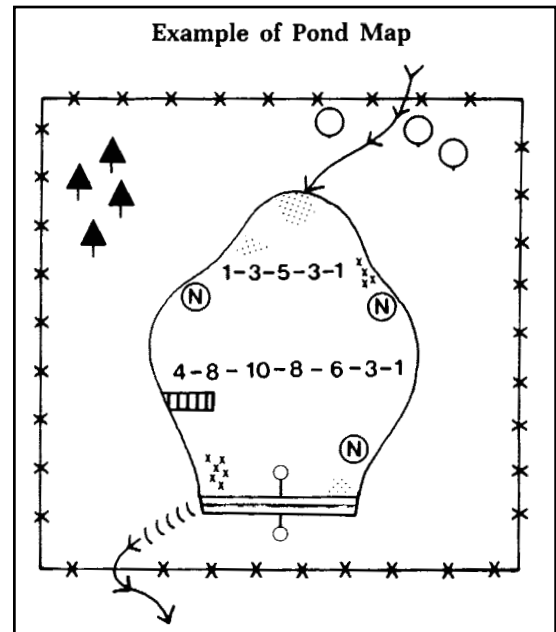
Write the letter of the description next to the appropriate map symbol. See the pond map for examples of how these symbols are used.

- |                              |              |   |
|------------------------------|--------------|---|
| A. Creek or stream           | <u>  F  </u> |    |
| B. Underwater mass           | <u>  O  </u> |    |
| C. Spillway                  | <u>  G  </u> |    |
| D. Spring                    | <u>  K  </u> |    |
| E. Trees (on bank)           | <u>  B  </u> |    |
| F. Fence                     | <u>  J  </u> |    |
| G. Pond shore line           | <u>  C  </u> |    |
| H. Pier or boat dock         | <u>  M  </u> |   |
| I. Water depth (in feet)     | <u>  N  </u> |  |
| J. Drain pipe                | <u>  E  </u> |  |
| K. Dam                       | <u>  D  </u> |  |
| L. Gully or water inlet      | <u>  I  </u> | 1-4-6-ETC.  |
| M. Fish nesting area         | <u>  H  </u> |  |
| N. Shrubs or brush (on bank) | <u>  L  </u> |  |
| O. Shoreline plants          | <u>  A  </u> |  |

## Matching—Key

In this activity you will:

- learn about the different topographic symbols that can be used to make a pond map.



### Additional Activity

Contact the Ohio Department of Natural Resources to obtain copies of topographical maps of areas in proximity to the location where your club meets. Use these maps to find privately-owned ponds and compare the symbols with the symbols above.

Developed by: Tina Milenovic, Extension Associate, 4-H Youth Development

# The Environment

## Ponds and Their Different Uses

You will need markers or crayons and drawing paper (construction paper or notebook paper).

If you had a pond, how would you use it? Would you use it for swimming, boating, or fishing? How about raising fish to attract wildlife? If you live on a farm, how about using the pond to water livestock or to irrigate field crops?

Using the paper and markers or crayons, draw a picture of a pond. See page 26 for examples of pond map symbols. Include your ideas of how you would use the pond. Compare your drawing with the drawings made by the other members of your club.

### Drawing

#### In this activity you will:

- learn the many uses for ponds.



*Developed by: Tina Milenovic, Extension Associate, 4-H Youth Development*



# The Environment

## Birds and Beaks

### Experiment

#### In this activity you will:

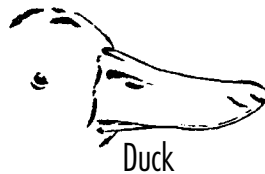
- learn about the types of bird beaks (sometimes known as bills).
- discover how the shape and size of the beak is related to the type of food the bird eats.

#### Activity I

For this activity, you will need a large, clear area (such as an auditorium floor). Around on the floor, spread "food" represented by various small objects such as BB pellets, marbles, miniature marshmallows, dried beans or peas, dry macaroni, popcorn, two-inch pieces of yarn, bottle caps, etc.

Each participant is given a different kind of "beak" represented by plastic spoons, chopsticks, clothespins, knitting needles, tweezers, ice cream sticks, etc. Using the "beak," each person is to pick up the food and place it in a paper cup which represents the bird's mouth. No sweeping of food into the cup is allowed. After three to five minutes, have the participants spread out the food, trade beaks with another person, and repeat. Repeat until each person has tried a different "beak."

Discuss the activity. Which bird beaks were easiest to use to gather food? Which were hardest? Which foods could be gathered easiest by each beak? What can you state about the relationship between a bird's beak and its food?



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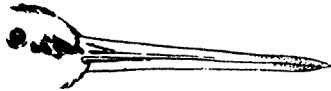
# The Environment

## Birds and Beaks

### Activity II

The shape and size of a bird's beak indicate how the bird obtains and eats its food. Draw a line from one column to the other to match each of the bird beaks below with the types of food they eat.

Long, slender bill (shorebirds, snipes)



Strong hooked beak (owls, hawks)



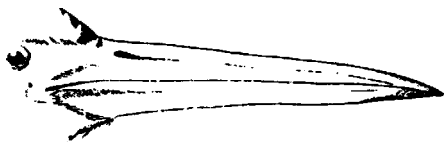
Large, spooned bill (ducks)



Straight and chisel like (woodpeckers)



Long, sharp-edged bills (herons, bitterns)



Thick, cone shaped (finches, sparrows)



## Matching

### In this activity you will:

- learn about the types of bird beaks (sometimes known as bills).
- discover how the shape and size of the beak is related to the type of food the bird eats.

Drilling to find insects

Aquatic plants, algae, and insects

Probing for grubs and worms in the mud

Fish

Flesh-eating

Seeds and insects

Developed by: Tina Milenovic, Extension Associate, 4-H Youth Development

# The Environment

## Birds and Beaks

**Matching—Key**

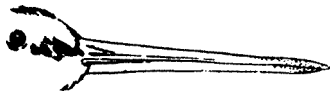
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- learn about the types of bird beaks (sometimes known as bills).
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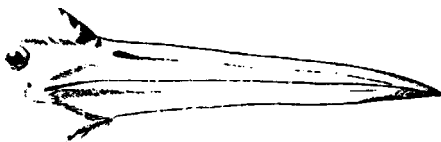
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Thick, cone shaped (finches, sparrows)



Drilling to find insects

Aquatic plants, algae, and insects

Probing for grubs and worms in the mud

Fish

Flesh-eating

Seeds and insects

Developed by: Tina Milenovic, Extension Associate, 4-H Youth Development

# The Environment

## Feeding our Fine-Feathered Friends

### Fill in the Blanks

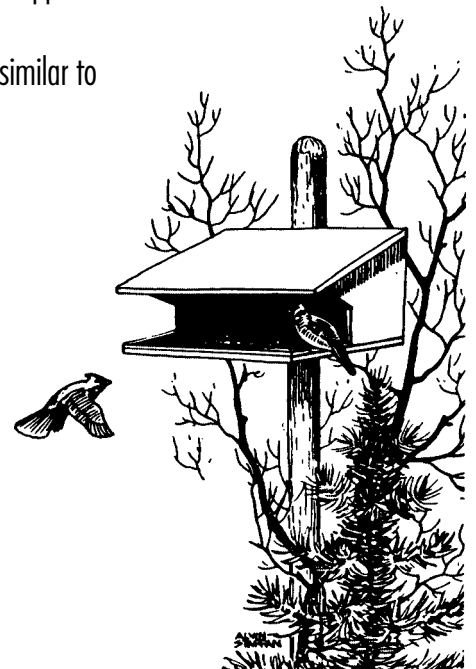
#### In this activity you will:

- learn about feeding the birds that visit your yard and home.
- test your bird feeding knowledge.

Fill in the blanks using the following one or two word phrases.

seed eaters    grit    suet    metal guards    fall    trees  
shrubs    insects    clean    do not    summer    sugar water

1. Bird feeding should be started in the early \_\_\_\_\_ and continued until the beginning of \_\_\_\_\_.
2. During the summer months, birds \_\_\_\_\_ need food from the bird feeder because of the amount of natural food that is available in the wild.
3. \_\_\_\_\_ is a great bird feeder food as it is made from beef and is a good source of protein and fat.
4. Feeders should be placed close to \_\_\_\_\_ or \_\_\_\_\_ so the birds can fly into them for protection and shelter.
5. \_\_\_\_\_ on trees keep cats and squirrels away from bird nests and feeding stations.
6. About 5 percent of a bird feed mixture should be \_\_\_\_\_ which is needed by the bird's digestive system.
7. Birds that usually eat \_\_\_\_\_ must be fed animal food such as suet or chopped meat.
8. Hummingbirds will eat from containers of \_\_\_\_\_ which is similar to flower nectar.
9. Cardinals, chickadees, and titmice are examples of birds that are \_\_\_\_\_.
10. Bird feeders should be kept very \_\_\_\_\_ to prevent the spread of diseases and to keep the birds from getting ill.



Developed by: Tina Milenovic, Extension Associate, 4-H Youth Development

# The Environment

## Feeding our Fine-Feathered Friends

### Fill in the Blanks—Key

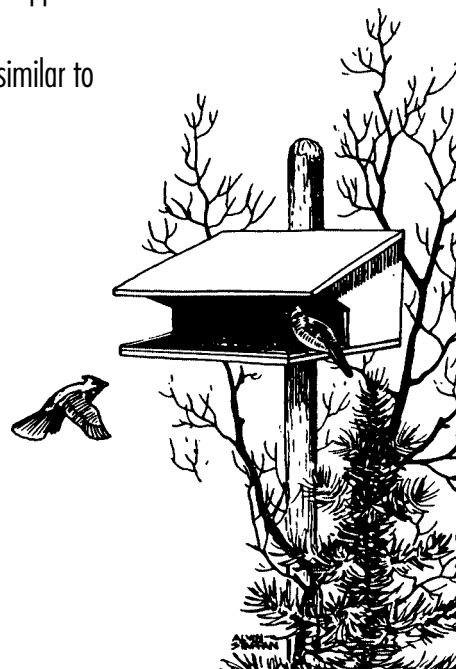
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- test your bird feeding knowledge.

Fill in the blanks using the following one or two word phrases.

seed eaters    grit    suet    metal guards    fall    trees  
shrubs    insects    clean    do not    summer    sugar water

1. Bird feeding should be started in the early fall and continued until the beginning of summer.
2. During the summer months, birds do not need food from the bird feeder because of the amount of natural food that is available in the wild.
3. Suet is a great bird feeder food as it is made from beef and is a good source of protein and fat.
4. Feeders should be placed close to trees or shrubs so the birds can fly into them for protection and shelter.
5. Metal guards on trees keep cats and squirrels away from bird nests and feeding stations.
6. About 5 percent of a bird feed mixture should be grit which is needed by the bird's digestive system.
7. Birds that usually eat insects must be fed animal food such as suet or chopped meat.
8. Hummingbirds will eat from containers of sugar water which is similar to flower nectar.
9. Cardinals, chickadees, and titmice are examples of birds that are seed eaters.
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# The Environment

## Make a Bird Feeder

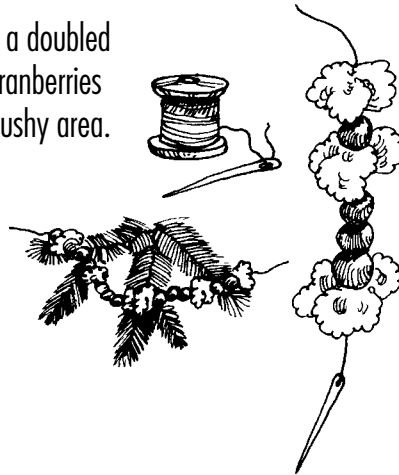
### Crafts

In this activity you will:

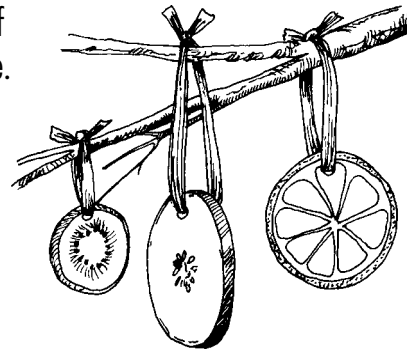
- make some simple bird feeders.

Make ornaments and garlands from different fruits and nuts to help feed the birds in your yard.

1. A tasty and healthy garland for birds can be made by using a doubled length of heavy cotton thread and a needle. String whole cranberries and popped corn.



2. Slice an apple, a kiwi fruit, and an orange crosswise, so each slice has a pretty pattern. Make the slices about 1/4-inch thick. Put a loop of raffia or cord through the edge of each slice and tie directly to a tree.



3. Gather pine cones that have fallen to the ground. Tie a piece of raffia or cord to one end of a pine cone. Using a spoon, spread peanut butter over the pine cone until almost entirely covered. Roll the covered pine cone in raisins or birdseed. (The raisins and birdseed will stick to the peanut butter on the pine cone.) Hang on a tree that is close to underbrush so the birds feel safe.



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# The Environment

## Birds and Their Habitats

Below is a list of Ohio birds. Place each listed bird in its appropriate habitat by writing the name in one of the boxes. Use a birding field guide to help determine the correct answers.

### Matching

**In this activity you will:**

- learn about which birds live in certain habitats.

Downy Woodpecker

Canada Goose

Great Horned Owl

Meadowlark

Eastern Bluebird

Song Sparrow

Rufous-Sided Towhee

Wood Thrush

Blue-Winged Teal

Great Blue Heron

American Kestrel

American Woodcock

Common Loon

Red-breasted Merganser

Indigo Bunting

Sora Rail

<i>Large Ponds and Lakes</i>	<i>Wetlands</i>
<i>Woods and Forests</i>	<i>Open Fields</i>

*Developed by: Tina Milenovic, Extension Associate, 4-H Youth Development*

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Meadowlark

Eastern Bluebird

Song Sparrow

Rufous-Sided Towhee

Wood Thrush

Blue-Winged Teal

Great Blue Heron

American Kestrel

American Woodcock

Common Loon

Red-breasted Merganser

Indigo Bunting

Sora Rail

<p style="text-align: center;"><i>Large Ponds and Lakes</i></p> <p><b>Common Loon</b> <b>Red-breasted Merganser</b></p>	<p style="text-align: center;"><i>Wetlands</i></p> <p><b>Canada Goose</b> <b>Great Blue Heron</b> <b>Sora Rail</b> <b>Blue-Winged Teal</b></p>
<p style="text-align: center;"><i>Woods and Forests</i></p> <p><b>Downy Woodpecker</b> <b>Great Horned Owl</b> <b>Rufous-Sided Towhee</b> <b>Indigo Bunting</b> <b>Wood Thrush</b></p>	<p style="text-align: center;"><i>Open Fields</i></p> <p><b>Eastern Bluebird</b> <b>Song Sparrow</b> <b>American Kestrel</b> <b>Meadowlark</b> <b>American Woodcock</b></p>

Developed by: Tina Milenovic, Extension Associate, 4-H Youth Development

# The Environment

## Fish Found in Ohio

Ohio has more than 250 different species of fish, many of which make favorable catches-of-the-day!

Find the names of fish that inhabit the waters of Ohio.

smallmouth bass  
channel catfish  
saugeye  
brown bullhead

largemouth bass  
walleye  
great lakes muskellunge  
white crappie

longear sunfish  
yellow perch  
sauger  
black crappie

bluegill  
northern pike  
carp  
rock bass

pumpkinseed  
grass pickerel  
redhorse sucker  
white bass

## Word Search

**In this activity you will:**

- learn the names of some Ohio species of fish.

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

*Developed by: Dennis Elliott, Extension Specialist, 4-H Youth Development*

# The Environment

## Fish Found in Ohio

Ohio has more than 250 different species of fish, many of which make favorable catches-of-the-day!

Find the names of fish that inhabit the waters of Ohio.

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largemouth bass

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bluegill

pumpkinseed

channel catfish

walleye

yellow perch

northern pike

grass pickerel

saugeye

great lakes muskellunge

sauger

carp

redhorse sucker

brown bullhead

white crappie

black crappie

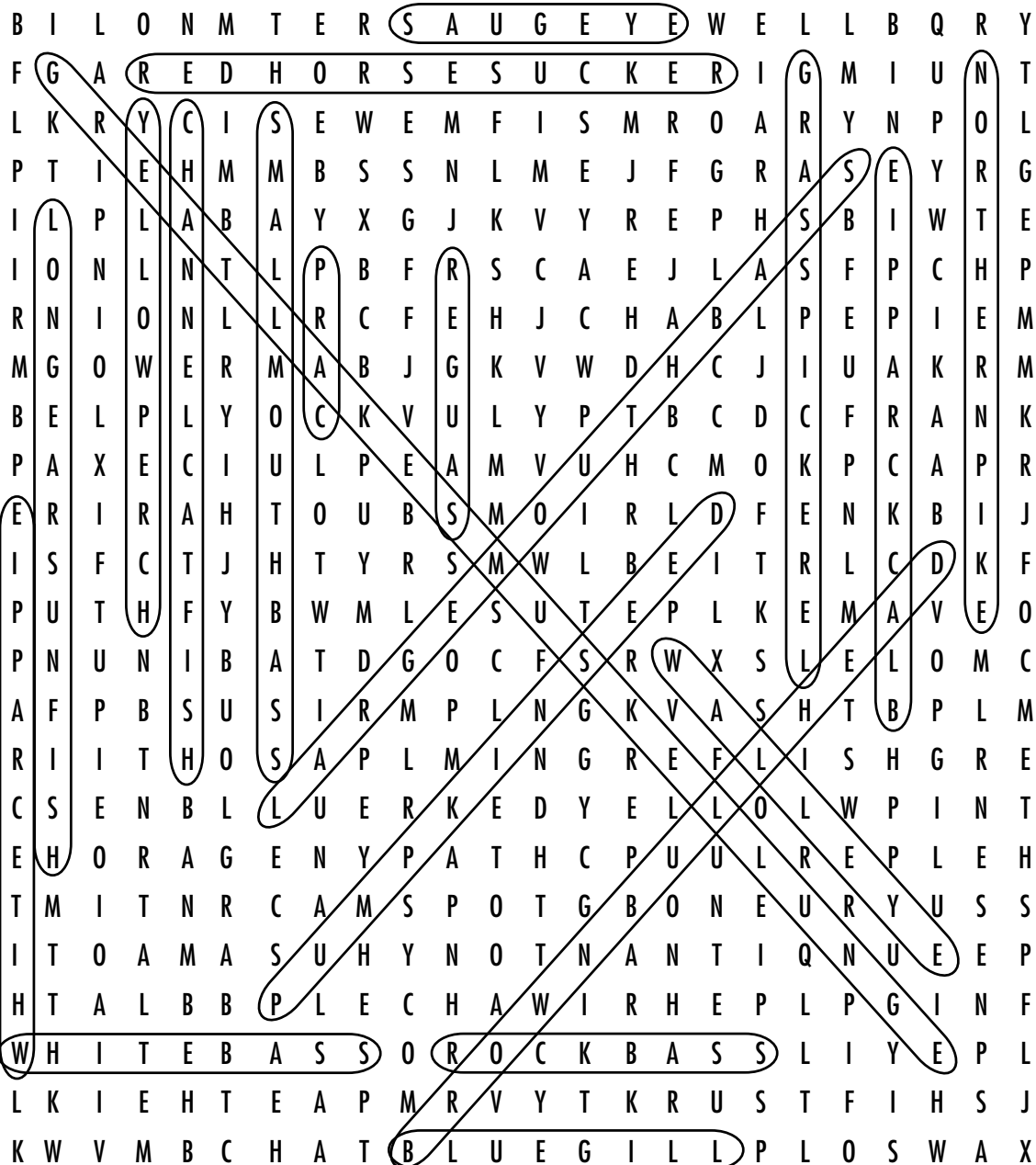
rock bass

white bass

### Word Search—Key

In this activity you will:

- learn the names of some Ohio species of fish.



Developed by: Dennis Elliott, Extension Specialist, 4-H Youth Development

# **The Environment**

## **Fishing in the Grocery Store**

For your next club meeting, ask the members to visit a grocery store and make a list of the kinds of fish that can be found in the seafood section. Encourage them to buy some of the fish and prepare and bring it to the next meeting.

At the next gathering, have a taste-testing party. Discuss the types of fish found at the grocery store. Ask which of the fish on their lists are fresh water (found in lakes, ponds, or streams) or sea-water (found in the oceans or gulfs). Also ask which of the fish can be found in Ohio.

<b>Listing</b>
<b>In this activity you will:</b>
<ul style="list-style-type: none"><li>• learn about the variety of fish that can be found at a grocery store.</li></ul>

### **Fish Found at the Grocery Store**

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_
4. \_\_\_\_\_
5. \_\_\_\_\_
6. \_\_\_\_\_
7. \_\_\_\_\_
8. \_\_\_\_\_
9. \_\_\_\_\_
10. \_\_\_\_\_

*Developed by: Dennis Elliott, Extension Specialist, 4-H Youth Development*



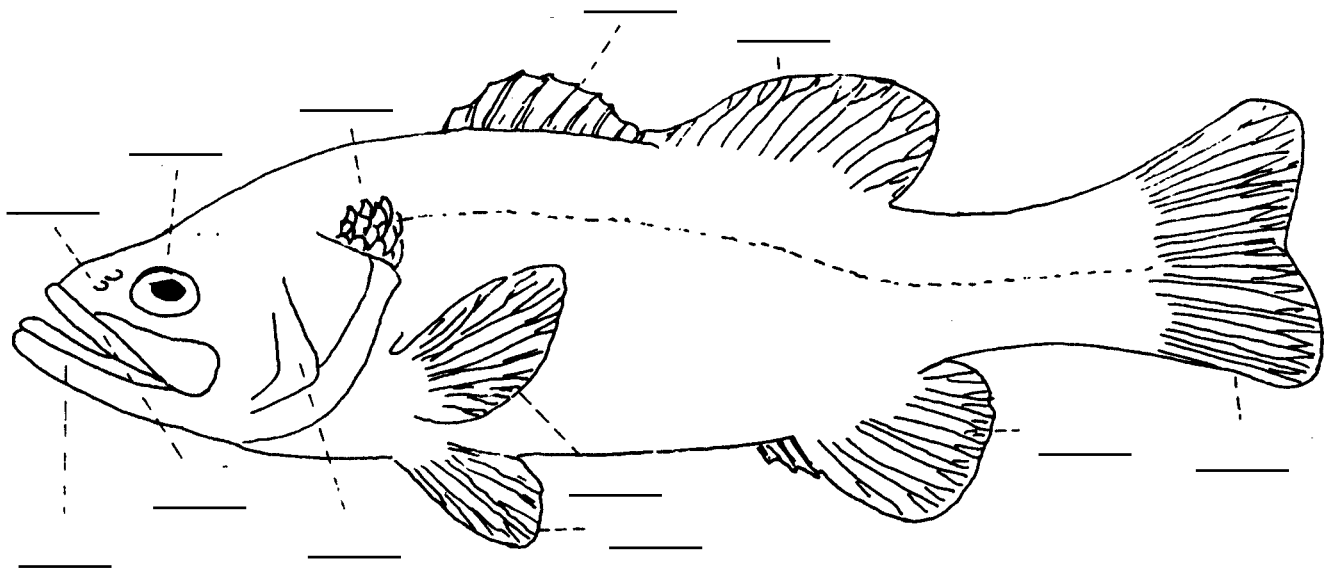
# The Environment

## Fish Part Identification

Match the parts in the picture with the names of the parts listed below. Write the corresponding letter on the line provided.

- |                 |                    |                     |               |
|-----------------|--------------------|---------------------|---------------|
| A. Anal Fin     | D. Caudal Fin      | G. Upper Jaw        | J. Lower Jaw  |
| B. Scales       | E. Gill Cover      | H. Nostrils         | K. Eye        |
| C. Pectoral Fin | F. Soft Dorsal Fin | I. Spiny Dorsal Fin | L. Pelvic Fin |

<b>Matching</b>
<b>In this activity you will:</b>
• learn about the parts of a fish.



### Casting Contest

Learn how to bait cast for fish. In an open field, place Hula-Hoops or old tires to use as targets. Members should bring their own fishing poles or borrow some for the event. (Check with a local public park or lake to borrow poles.) Remove all hooks from the lures. Tie plugs to the fishing lines and compete to see who can hit the target by casting their line.

*Developed by: Dennis Elliott, Extension Specialist, 4-H Youth Development*

# Fishing in Ohio

## Fish Part Identification

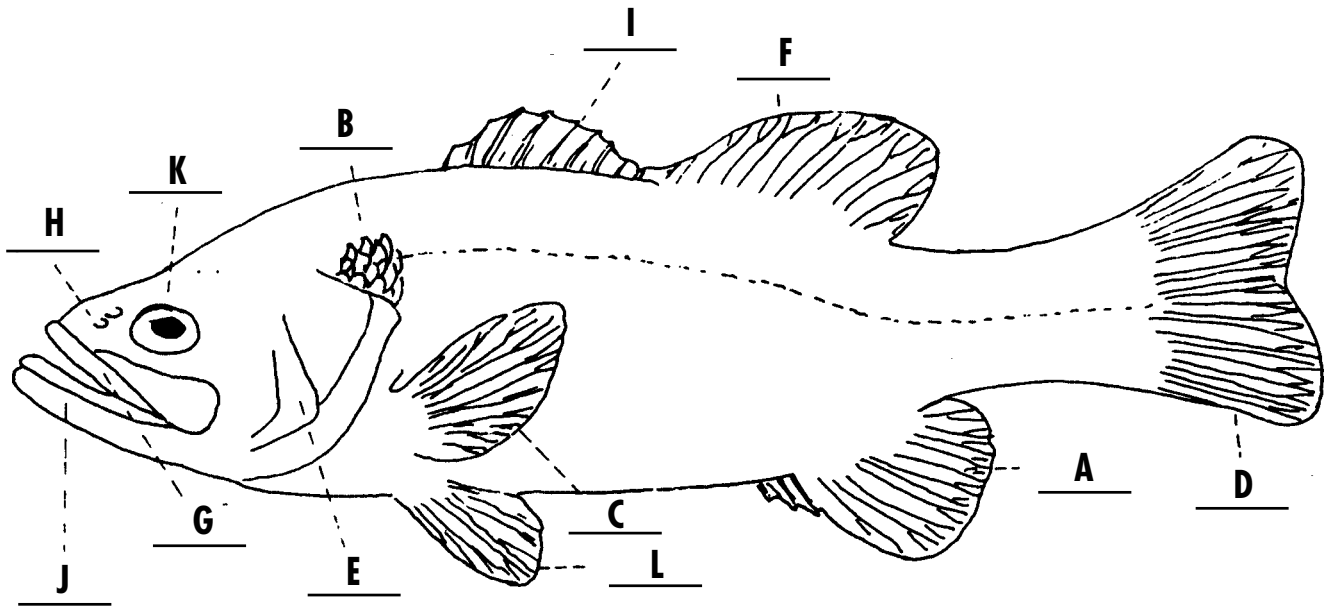
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|-----------------|--------------------|---------------------|---------------|
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| C. Pectoral Fin | F. Soft Dorsal Fin | I. Spiny Dorsal Fin | L. Pelvic Fin |

### Matching—Key

**In this activity you will:**

- learn about the parts of a fish.



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# ***Countdown Chapter 8***

# ***Engineering***



# **Countdown Chapter 8**

## **Engineering**

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# Computers

## Computer Madness

Find the words hidden in the word search. Words can be across, down, diagonal, backwards, grouped, or "around-the-corner."

### Word Search

**In this activity you will:**

- learn common words used while working with computers.

artificial intelligence	magnetic	chips	modem	component
monitor	computer	path	CPU	printer
database	processor	disk	programs	floppy
random access memory	graphics	software	keyboard	terminal

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

Source: 4-H 565, Learning About Computers

Developed by: Dee Jepsen, Extension Associate, Ag Eng/Health/Safety

# Computers

## Computer Madness

Find the words hidden in the word search. Words can be across, down, diagonal, backwards, grouped, or "around-the-corner."

artificial intelligence

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chips

modem

component

monitor

computer

path

CPU

printer

database

processor

disk

programs

floppy

random access memory

graphics

software

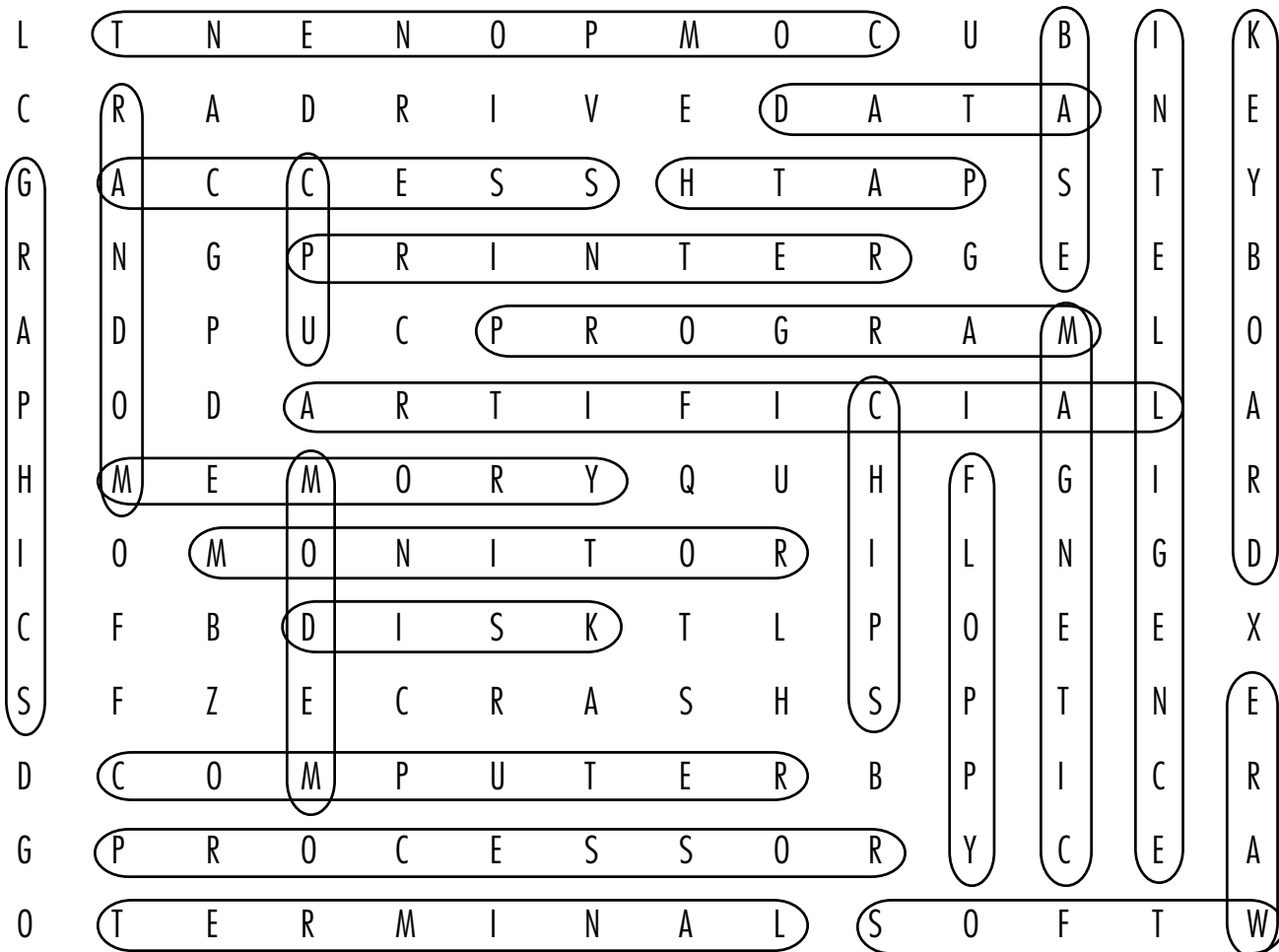
keyboard

terminal

### Word Search—Key

In this activity you will:

- learn common words used while working with computers.



Source: 4-H 565, Learning About Computers

Developed by: Dee Jepsen, Extension Associate, Ag Eng/Health/Safety

# Computers

## Keyboard Crazy

Match the keyboard in the left column with its function in the right column. Each key will match only one definition.

### Matching

#### In this activity you will:

- learn important keys used in word processing programs.

CAPS LOCK	Moves cursor up a whole screen.
DELETE (Backspace)	Lets you leave what you are doing.
END	Moves cursor down a whole screen.
ESC	Turns every character you type into a capital letter.
HOME	Moves cursor to the beginning of a word, line, or document.
INSERT	Moves cursor to the next line.
PAGE DOWN	Moves cursor to the end of a word, line, or document.
PAGE UP	Turns every character you type into a capital letter when it is held down.
RETURN (Enter)	Lets you type new characters in between other characters.
SHIFT	Allows you to remove the letter before the cursor.

*Source: 4-H 565, Learning About Computers*

*Developed by: Dee Jepsen, Extension Associate, Ag Eng/Health/Safety*

# Computers

## Keyboard Crazy

Match the keyboard in the left column with its function in the right column. Each key will match only one definition.

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Source: 4-H 565, Learning About Computers

Developed by: Dee Jepsen, Extension Associate, Ag Eng/Health/Safety

# All-Terrain Vehicles

## ATV Action

Fill in the blanks using the following words.

adult sized	comfort	heels	operators
safety	all-terrain vehicle	double	helmet
passengers	shock	ankles	force
highways	prevented	six-hundred	boots
goggles	low-pressure	recommendations	supervision
manufacturers	responsible	trails	collapse
riding pants	width	gloves	illegal
appropriate-sized			

chest protectors      guidelines  
hazards                off-road  
street                    protection

## Fill in the Blanks

### In this activity you will:

- learn recommendations for safely riding an all-terrain vehicle.
- learn common riding gear for personal safety.

1. ATVs are equipped with \_\_\_\_\_ - \_\_\_\_\_ tires.
2. Riding gear worn to protect the eyes. \_\_\_\_\_
3. An ATV is 50 inches or less in \_\_\_\_\_.
4. The inner liner of a helmet will slowly \_\_\_\_\_ during a hit.
5. In most states, it is \_\_\_\_\_ to ride on public roads.
6. Children under 16 should never ride \_\_\_\_\_ - \_\_\_\_\_ ATVs.
7. Wearing protective gear enhances \_\_\_\_\_.
8. ATV stands for \_\_\_\_\_ - \_\_\_\_\_.
9. The outer shell of the helmet reduces the \_\_\_\_\_ of impact.
10. Follow the age/size \_\_\_\_\_.
11. Gloves offer \_\_\_\_\_ from scratches and abrasion.
12. Follow the age/size recommendations adopted by the \_\_\_\_\_.
13. Many accidents could have been \_\_\_\_\_.
14. A passenger can interfere with the \_\_\_\_\_ control.
15. It is best to ride on \_\_\_\_\_.

*Developed by: Dee Jepsen, Extension Associate, Ag Eng/Health/Safety*

16. Stay off public \_\_\_\_\_ when riding ATVs.
17. Constantly watch for \_\_\_\_\_ when riding.
18. Worn to protect the feet, ankles, and lower legs. \_\_\_\_\_
19. The weight of the ATV is \_\_\_\_\_ - \_\_\_\_\_ pounds or less.
20. ATVs were designed for \_\_\_\_\_ - \_\_\_\_\_ use only.
21. Never ride \_\_\_\_\_ on an ATV.
22. Protective gear for the hands. \_\_\_\_\_
23. Never ride on the \_\_\_\_\_.
24. Worn to protect the head from a serious blow. \_\_\_\_\_
25. Well-dressed riders wear these over their shirt for added protection. \_\_\_\_\_  
\_\_\_\_\_
26. By following the safety \_\_\_\_\_ many accidents can be prevented.
27. Carrying \_\_\_\_\_ can cause the operator to lose control.
28. Over-the-calf ATV boots offer the best protection for the \_\_\_\_\_.
29. Worn to protect the legs from scratches and burns during riding. \_\_\_\_\_  
\_\_\_\_\_
30. ATV riders are \_\_\_\_\_ for their actions.
31. Always ride an \_\_\_\_\_ - \_\_\_\_\_ ATV.
32. Gloves are worn not only for protection, but also for \_\_\_\_\_.
33. Children under 16 should always have adult \_\_\_\_\_.
34. Low \_\_\_\_\_ help prevent the feet from slipping off the footrests.
35. The inner liner of the helmet is designed to absorb \_\_\_\_\_.

Source: 4-H 555, All Terrain Vehicle

Developed by: Dee Jepsen, Extension Associate, Ag Eng/Health/Safety

# All-Terrain Vehicles

## ATV Action

Fill in the blanks using the following words.

adult sized	comfort	heels	operators		
safety	all-terrain vehicle	double	helmet		
passengers	shock	ankles	force		
highways	prevented	six-hundred	boots		
goggles	low-pressure	recommendations	supervision	chest protectors	guidelines
manufacturers	responsible	trails	collapse	hazards	off-road
riding pants	width	gloves	illegal	street	protection
appropriate-sized					

## Fill in the Blanks—Key

### In this activity you will:

- learn recommendations for safely riding an all-terrain vehicle.
- learn common riding gear for personal safety.

1. ATVs are equipped with **low** - **pressure** tires.
2. Riding gear worn to protect the eyes. **goggles**
3. An ATV is 50 inches or less in **width**.
4. The inner liner of a helmet will slowly **collapse** during a hit.
5. In most states, it is **illegal** to ride on public roads.
6. Children under 16 should never ride **adult** - **sized** ATVs.
7. Wearing protective gear enhances **safety**.
8. ATV stands for **all** - **terrain** **vehicle**.
9. The outer shell of the helmet reduces the **force** of impact.
10. Follow the age/size **recommendations**.
11. Gloves offer **protection** from scratches and abrasion.
12. Follow the age/size recommendations adopted by the **manufacturers**.
13. Many accidents could have been **prevented**.
14. A passenger can interfere with the **operator's** control.
15. It is best to ride on **trails**.

Developed by: Dee Jepsen, Extension Associate, Ag Eng/Health/Safety

16. Stay off public highways when riding ATVs.
17. Constantly watch for hazards when riding.
18. Worn to protect the feet, ankles, and lower legs. boots
19. The weight of the ATV is six - hundred pounds or less.
20. ATVs were designed for off - road use only.
21. Never ride double on an ATV.
22. Protective gear for the hands. gloves
23. Never ride on the street.
24. Worn to protect the head from a serious blow. helmet
25. Well-dressed riders wear these over their shirt for added protection. chest protectors
26. By following the safety guidelines many accidents can be prevented.
27. Carrying passengers can cause the operator to lose control.
28. Over-the-calf ATV boots offer the best protection for the ankles.
29. Worn to protect the legs from scratches and burns during riding. riding pants
30. ATV riders are responsible for their actions.
31. Always ride an appropriate - sized ATV.
32. Gloves are worn not only for protection, but also for comfort.
33. Children under 16 should always have adult supervision.
34. Low heels help prevent the feet from slipping off the footrests.
35. The inner liner of the helmet is designed to absorb shock.

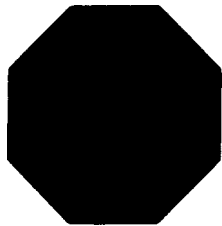
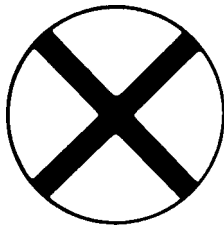
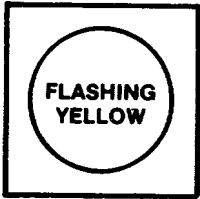
*Source: 4-H 555, All Terrain Vehicle*

*Developed by: Dee Jepsen, Extension Associate, Ag Eng/Health/Safety*

# Bicycles

## Rules of the Road

Match the sign or signal with the definition in the center column. Each word is used only once.



bike crossing

caution

caution sign

left turn signal

railroad crossing

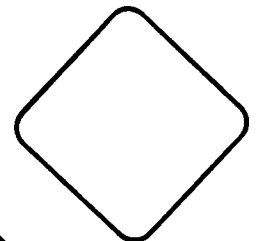
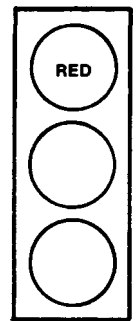
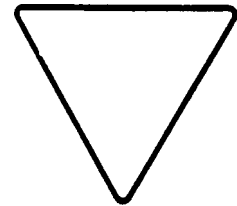
right turn signal

slow

stop light

stop sign

yield



## Matching

**In this activity you will:**

- learn to recognize road signs found on the streets of your neighborhood.
- learn important hand signals that should be used anytime you ride on the road.

Source: 4-H 522, *You and Your Bicycle*, and 4-H 523, *Caring For Your Bicycle*

Developed by: Dee Jepsen, Extension Associate, Ag Eng/Health/Safety

# Bicycles

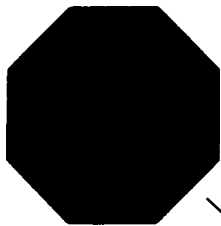
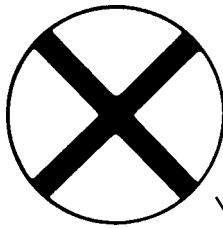
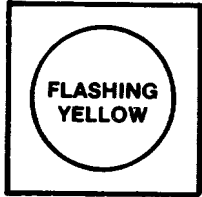
## Rules of the Road

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### Matching—Key

**In this activity you will:**

- learn to recognize road signs found on the streets of your neighborhood.
- learn important hand signals that should be used anytime you ride on the road.



bike crossing

caution

caution sign

left turn signal

railroad crossing

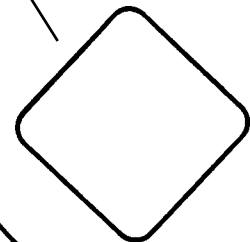
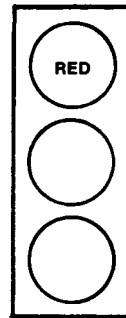
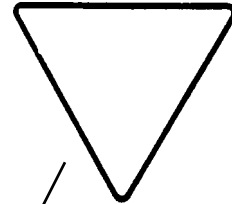
right turn signal

slow

stop light

stop sign

yield



Source: 4-H 522, *You and Your Bicycle*, and 4-H 523, *Caring For Your Bicycle*

Developed by: Dee Jepsen, Extension Associate, Ag Eng/Health/Safety

# Bicycles

## Maintaining Your Wheels

Read the story and insert the correct word in the blank. Use words from the list below only once.

air dry                  bearings                  grease                  kerosene  
maintenance          replaced                  studied                  washed

### Fill in the Blanks

#### In this activity you will:

- learn proper care for your bicycle to keep it in good operating condition.
- learn the importance of taking good care of your bicycle because breakdowns cause accidents.

Joe was riding his bicycle one sunny afternoon, when he noticed it was becoming hard to operate. He had just received the bike for his birthday a few months ago and was puzzled by the problem. Joe decided to ask his father for help. His dad told him that an important part of owning a bike is \_\_\_\_\_.

After looking at the bike, Joe decided the problem was with the \_\_\_\_\_.

His father told him that they should be cleaned and lubricated. Taking his father's advice, Joe began to work. First he \_\_\_\_\_ each piece as he removed it from the bike. Next, Joe placed each piece on clean paper in the order he removed it. Then he \_\_\_\_\_ all of the parts with \_\_\_\_\_ and a stiff brush. Joe allowed the pieces to \_\_\_\_\_ for about 30 minutes. Next he \_\_\_\_\_ the worn parts and repacked the ball bearings in fresh \_\_\_\_\_. Finally Joe finished the job by putting every piece back in the correct order. After cleaning up Joe hopped on his bike. It handled like new!

Source: Ref. 4-H 525, Your Bicycle Community

Developed by: Dee Jepsen, Extension Associate, Ag Eng/Health/Safety

# Bicycles

## Maintaining Your Wheels

Read the story and insert the correct word in the blank. Use words from the list below only once.

air dry            bearings            grease            kerosene  
maintenance    replaced            studied            washed

### Fill in the Blanks—Key

#### In this activity you will:

- learn proper care for your bicycle to keep it in good operating condition.
- learn the importance of taking good care of your bicycle because breakdowns cause accidents.

Joe was riding his bicycle one sunny afternoon, when he noticed it was becoming hard to operate. He had just received the bike for his birthday a few months ago and was puzzled by the problem. Joe decided to ask his father for help. His dad told him that an important part of owning a bike is maintenance. After looking at the bike, Joe decided the problem was with the

bearings. His father told him that they should be cleaned and lubricated. Taking his father's advice, Joe began to work.

First he studied each piece as he removed it from the bike. Next, Joe placed each piece on clean paper in the order he

removed it. Then he washed all of the parts with kerosene and a stiff brush. Joe allowed the pieces to

air dry for about 30 minutes. Next he replaced the worn parts and repacked the ball bearings in fresh

grease. Finally Joe finished the job by putting every piece back in the correct order. After cleaning up Joe hopped on his

bike. It handled like new!

*Source: Ref. 4-H 525, Your Bicycle Community*

*Developed by: Dee Jepsen, Extension Associate, Ag Eng/Health/Safety*

# Bicycles

## The Serious Cyclist

Read each statement and determine if it is true or false. Circle the letter T for true or F for false.

- T F 1. If you ride when it is dark, you must have a taillight or red reflector and a headlight visible for 500 feet.
- T F 2. You may always ride in either direction on a one-way street.
- T F 3. A person riding a bike must obey the same traffic laws as a person driving a car.
- T F 4. For a right turn extend your right arm, bent at the elbow with your hand pointing up.
- T F 5. Slow bikers should ride in the opposite direction as traffic is moving.
- T F 6. Pedestrians always have the right-of-way at crosswalks.
- T F 7. All bicycles must have a bell or horn.
- T F 8. A round yellow highway sign means stop.
- T F 9. A flashing red signal light means be careful.
- T F 10. A red sign with eight sides always means yield.
- T F 11. It is safe for two people to ride on a bicycle.
- T F 12. Bicycle drivers are required by law to give the proper signal before turning.
- T F 13. Bicycles are not allowed on expressways.
- T F 14. When riding with others you should travel two side-by-side.
- T F 15. A stop sign means stop, yield right-of-way, and wait until it is safe to go.
- T F 16. When you turn a corner on your bicycle, you should signal with your foot.
- T F 17. Emergency vehicles never have the right-of-way at intersections.
- T F 18. Bicycles are allowed on sidewalks.
- T F 19. Carrying packages on your bicycle with you is not safe.
- T F 20. Before you go on a long trip, it is a good idea to inspect your bike to be certain it is working properly.

### True or False

#### In this activity you will:

- learn key concepts for riding bicycles on public roads.
- learn responsibility for your actions while operating a bicycle.
- understand personal safety is every bicycle rider's job.

Source: 4-H 522, *You and Your Bicycle*; 4-H 523, *Caring For Your Bicycle*; 4-H 524, *Mastering Bicycle Skills*; 4-H 525, *Your Bicycle Community*  
Developed by: Dee Jepsen, Extension Associate, Ag Eng/Health/Safety

# Bicycles

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- T  F 20. Before you go on a long trip, it is a good idea to inspect your bike to be certain it is working properly.

### True or False—Key

#### In this activity you will:

- learn key concepts for riding bicycles on public roads.
- learn responsibility for your actions while operating a bicycle.
- understand personal safety is every bicycle rider's job.

Source: 4-H 522, *You and Your Bicycle*; 4-H 523, *Caring For Your Bicycle*; 4-H 524, *Mastering Bicycle Skills*; 4-H 525, *Your Bicycle Community*

Developed by: Dee Jepsen, Extension Associate, Ag Eng/Health/Safety

# Bicycles

## Putting It All Together

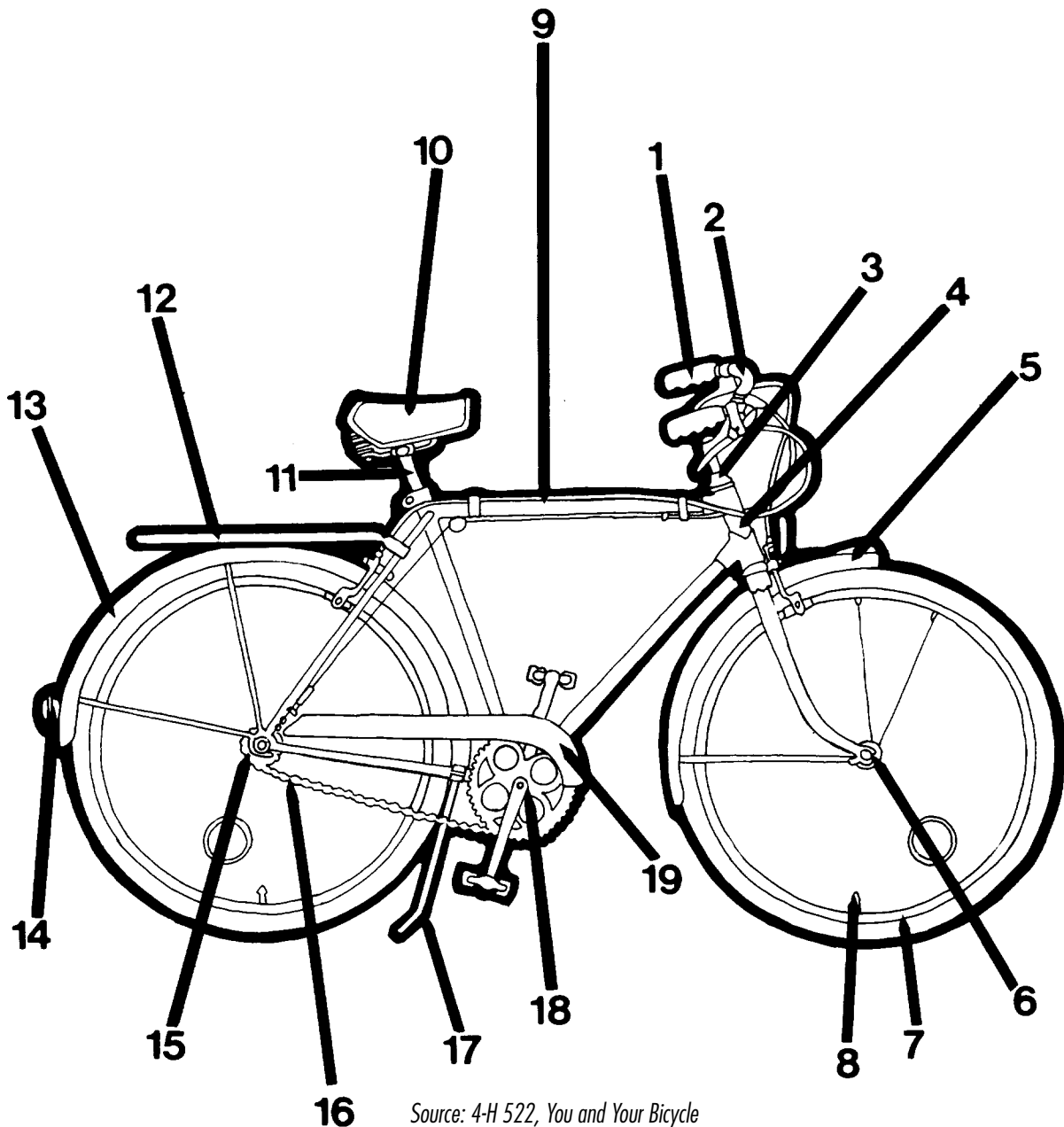
Identify each of the numbered bicycle parts.

- |                     |                  |   |                          |
|---------------------|------------------|---|--------------------------|
| ___ handlebar grips | ___ chain guard  | ___ reflector                             | ___ chain                |
| ___ kickstand       | ___ tire rim     | ___ saddle                                | ___ crank bearings       |
| ___ rear fender     | ___ saddle post  | ___ handlebars                            | ___ front wheel bearings |
| ___ handlebar stem  | ___ front fender | ___ tire valve                            | ___ baggage carrier rack |
| ___ fore bearings   | ___ frame        | ___ coaster brake and rear wheel bearings |                          |

### Identification

**In this activity you will:**

- learn to recognize the various parts of a bicycle.



Source: 4-H 522, *You and Your Bicycle*  
Developed by: Dee Jepsen, Extension Associate, Ag Eng/Health/Safety

# Bicycles

## Putting It All Together

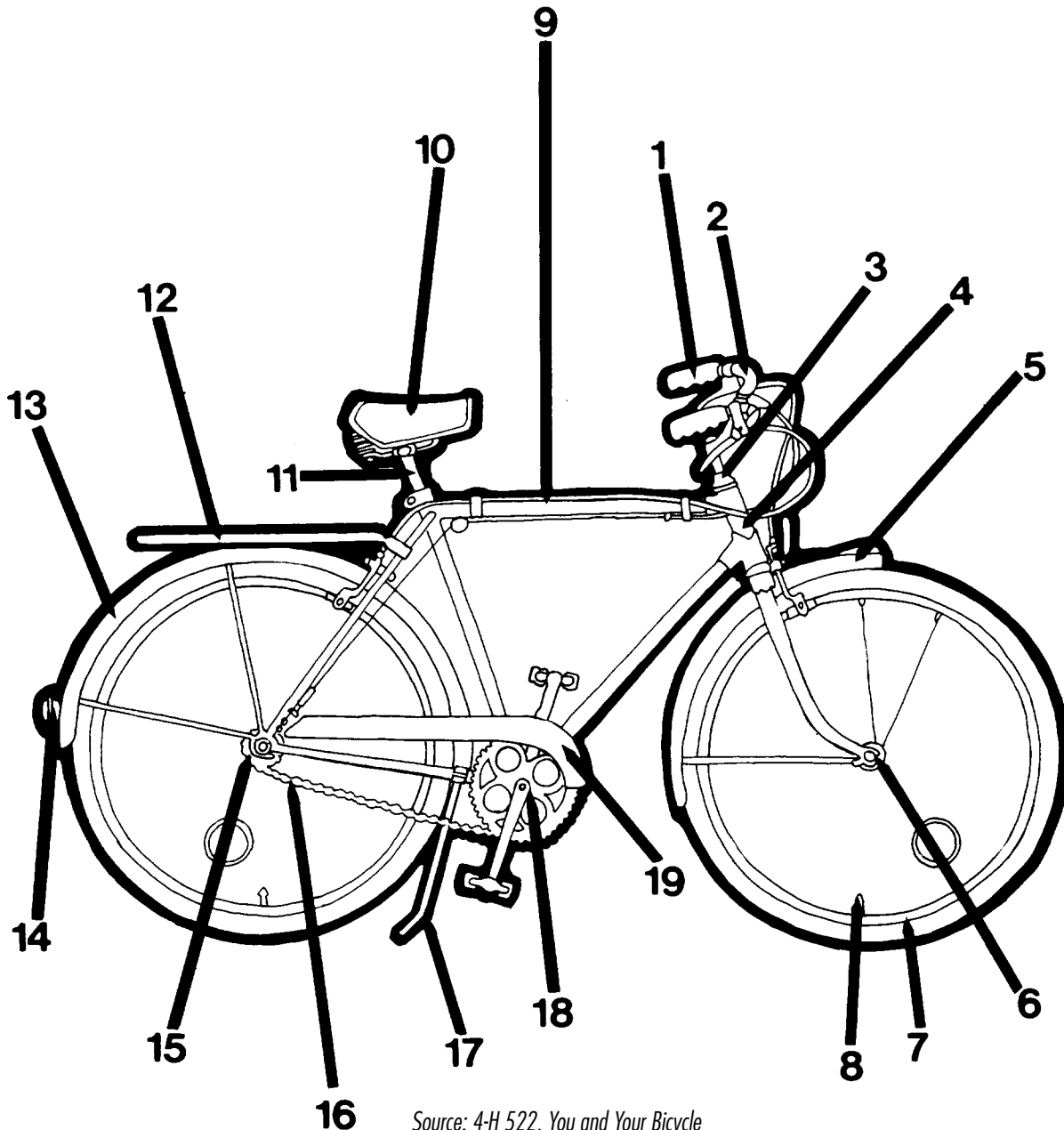
Identify each of the numbered bicycle parts.

- |                          |                       |   |                                |
|--------------------------|-----------------------|---|--------------------------------|
| <u>1</u> handlebar grips | <u>19</u> chain guard | <u>14</u> reflector                             | <u>16</u> chain                |
| <u>17</u> kickstand      | <u>7</u> tire rim     | <u>10</u> saddle                                | <u>18</u> crank bearings       |
| <u>13</u> rear fender    | <u>1</u> saddle post  | <u>2</u> handlebars                             | <u>6</u> front wheel bearings  |
| <u>3</u> handlebar stem  | <u>5</u> front fender | <u>8</u> tire valve                             | <u>12</u> baggage carrier rack |
| <u>4</u> fore bearings   | <u>9</u> frame        | <u>15</u> coaster brake and rear wheel bearings |                                |

### Identification—Key

#### In this activity you will:

- learn to recognize the various parts of a bicycle.



Source: 4-H 522, *You and Your Bicycle*

Developed by: Dee Jepsen, Extension Associate, Ag Eng/Health/Safety

# First Aid

## Quick Response

Fill in the blanks using the following words.

abrasion	bruise	dressing	emergency	frostbite
help	hypothermia	thermal	infection	ipeccac
nosebleed	poison	prevention	splinter	tweezers
sprain	sterile	stress	third	tick
hospital	ice	oil		

## Fill in the Blanks

### In this activity you will:

- learn terms used to identify common symptoms and injuries.
- learn basic first aid treatments for quick reaction to injuries.

1. Use \_\_\_\_\_ to remove a tick from the scalp.
2. A serious degree of burn is \_\_\_\_\_.
3. A type of wound caused by rubbing or scraping is an \_\_\_\_\_.
4. Leaning forward is one way to treat a \_\_\_\_\_.
5. Safety or \_\_\_\_\_ is the key to stopping injuries.
6. Too much sun exposure can cause heat \_\_\_\_\_.
7. Something clean and without germs is said to be \_\_\_\_\_.
8. A small piece of wood beneath the skin surface is a \_\_\_\_\_.
9. Stumbling, slow speech, jerky movements, and blue skin are signs of \_\_\_\_\_.
10. A \_\_\_\_\_ is an injury to the soft tissue around a joint.
11. Use a sterile \_\_\_\_\_ to protect a wound from further injury or infection.
12. \_\_\_\_\_ burns are caused by moist or dry heat.
13. Anything you eat, drink or breathe that can cause illness or death is a \_\_\_\_\_.
14. When someone is poisoned, syrup of \_\_\_\_\_ may be used to cause vomiting.
15. Always call for \_\_\_\_\_ in an emergency.
16. A person choking on a piece of food is an example of an \_\_\_\_\_.
17. A way to treat teeth injuries, bruises, and insect stings is to put \_\_\_\_\_ on the injured area.
18. A \_\_\_\_\_ is an injury where the skin is blue or purple, painful, and swollen.
19. An insect that attaches itself to the skin surface is a \_\_\_\_\_.
20. Signs of a wound \_\_\_\_\_ are redness, warmth, swelling, and pain.
21. In an emergency, a person should go to a \_\_\_\_\_.
22. \_\_\_\_\_ is used to remove a foreign body from the ear.
23. An injury caused by exposure to too much cold is called \_\_\_\_\_.

Source: 4-H 352, *Safety in Everyday Living*  
Developed by: Dee Jepsen, Extension Associate, Ag Eng/Health/Safety

# First Aid

## Quick Response

Fill in the blanks using the following words.

abrasion	bruise	dressing	emergency	frostbite
help	hypothermia	thermal	infection	ipecac
nosebleed	poison	prevention	splinter	tweezers
sprain	sterile	stress	third	tick
hospital	ice	oil		

### Fill in the Blanks—Key

#### In this activity you will:

- learn terms used to identify common symptoms and injuries.
- learn basic first aid treatments for quick reaction to injuries.

1. Use **tweezers** to remove a tick from the scalp.
2. A serious degree of burn is **third**.
3. A type of wound caused by rubbing or scraping is an **abrasion**.
4. Leaning forward is one way to treat a **nosebleed**.
5. Safety or **prevention** is the key to stopping injuries.
6. Too much sun exposure can cause heat **stress**.
7. Something clean and without germs is said to be **sterile**.
8. A small piece of wood beneath the skin surface is a **splinter**.
9. Stumbling, slow speech, jerky movements, and blue skin are signs of **hypothermia**.
10. A **sprain** is an injury to the soft tissue around a joint.
11. Use a sterile **dressing** to protect a wound from further injury or infection.
12. **Thermal** burns are caused by moist or dry heat.
13. Anything you eat, drink or breathe that can cause illness or death is a **poison**.
14. When someone is poisoned, syrup of **ipecac** may be used to cause vomiting.
15. Always call for **help** in an emergency.
16. A person choking on a piece of food is an example of an **emergency**.
17. A way to treat teeth injuries, bruises, and insect stings is to put **ice** on the injured area.
18. A **bruise** is an injury where the skin is blue or purple, painful, and swollen.
19. An insect that attaches itself to the skin surface is a **tick**.
20. Signs of a wound **infection** are redness, warmth, swelling, and pain.
21. In an emergency, a person should go to a **hospital**.
22. **Oil** is used to remove a foreign body from the ear.
23. An injury caused by exposure to too much cold is called **frostbite**.

Source: 4-H 352, *Safety in Everyday Living*

Developed by: Dee Jepsen, Extension Associate, Ag Eng/Health/Safety

# Rope

## Tying It All Together

Find the words hidden in the word search. Words can be across, down, diagonal, or even backwards.

### Word Search

**In this activity you will:**

- learn common words used in rope projects.

bowline	manila	breaking strength	nylon	granny knot
hackamore	rope	halter	sheepshank	hitch
slip knot	kink	splice	knot	tackle
lariat	twist	loop	wire rope	hemp

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

Source: 4-H 540, Rope

Developed by: Dee Jepsen, Extension Associate, Ag Eng/Health/Safety

# Rope

## Tying It All Together

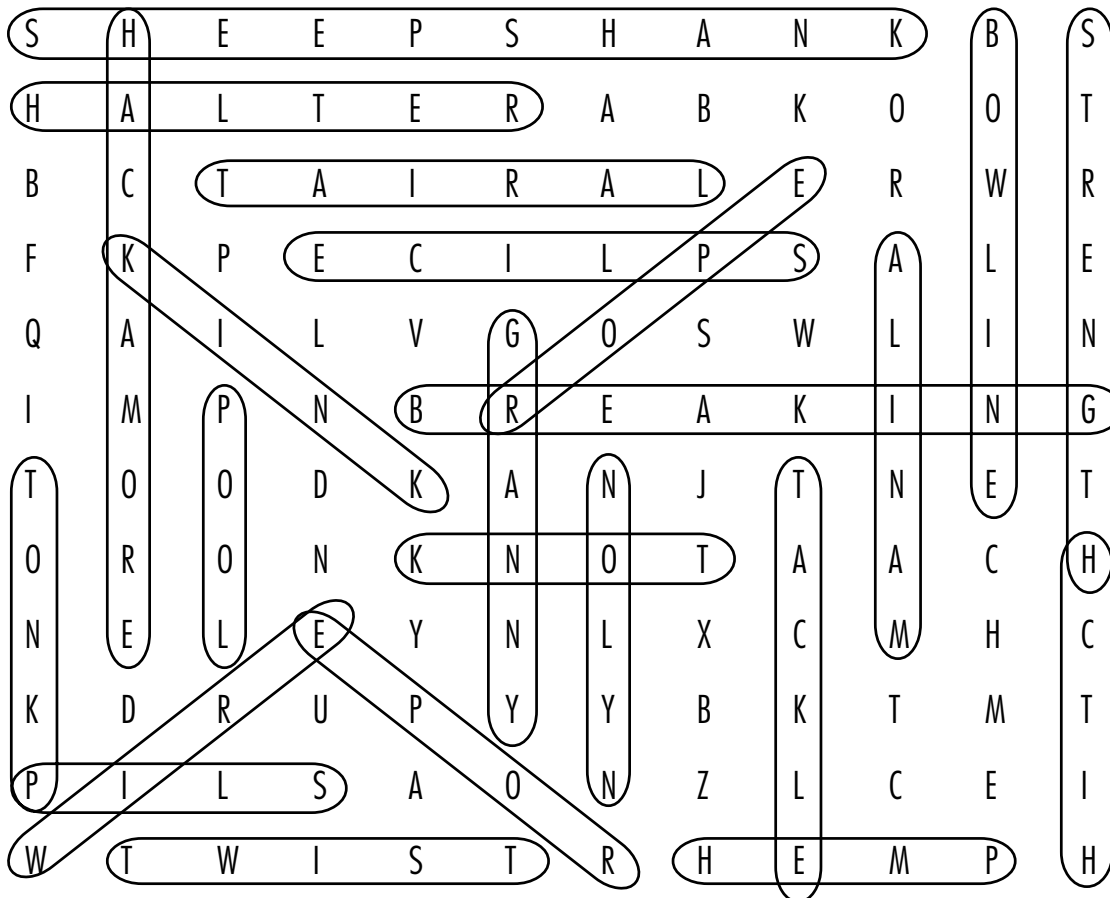
Find the words hidden in the word search. Words can be across, down, diagonal, or even backwards.

### Word Search—Key

In this activity you will:

- learn common words used in rope projects.

bowline	manila	breaking strength	nylon	granny knot
hackamore	rope	halter	sheepshank	hitch
slip knot	kink	splice	knot	tackle
lariat	twist	loop	wire rope	hemp



Source: 4-H 540, Rope

Developed by: Dee Jepsen, Extension Associate, Ag Eng/Health/Safety

# Lawn Care

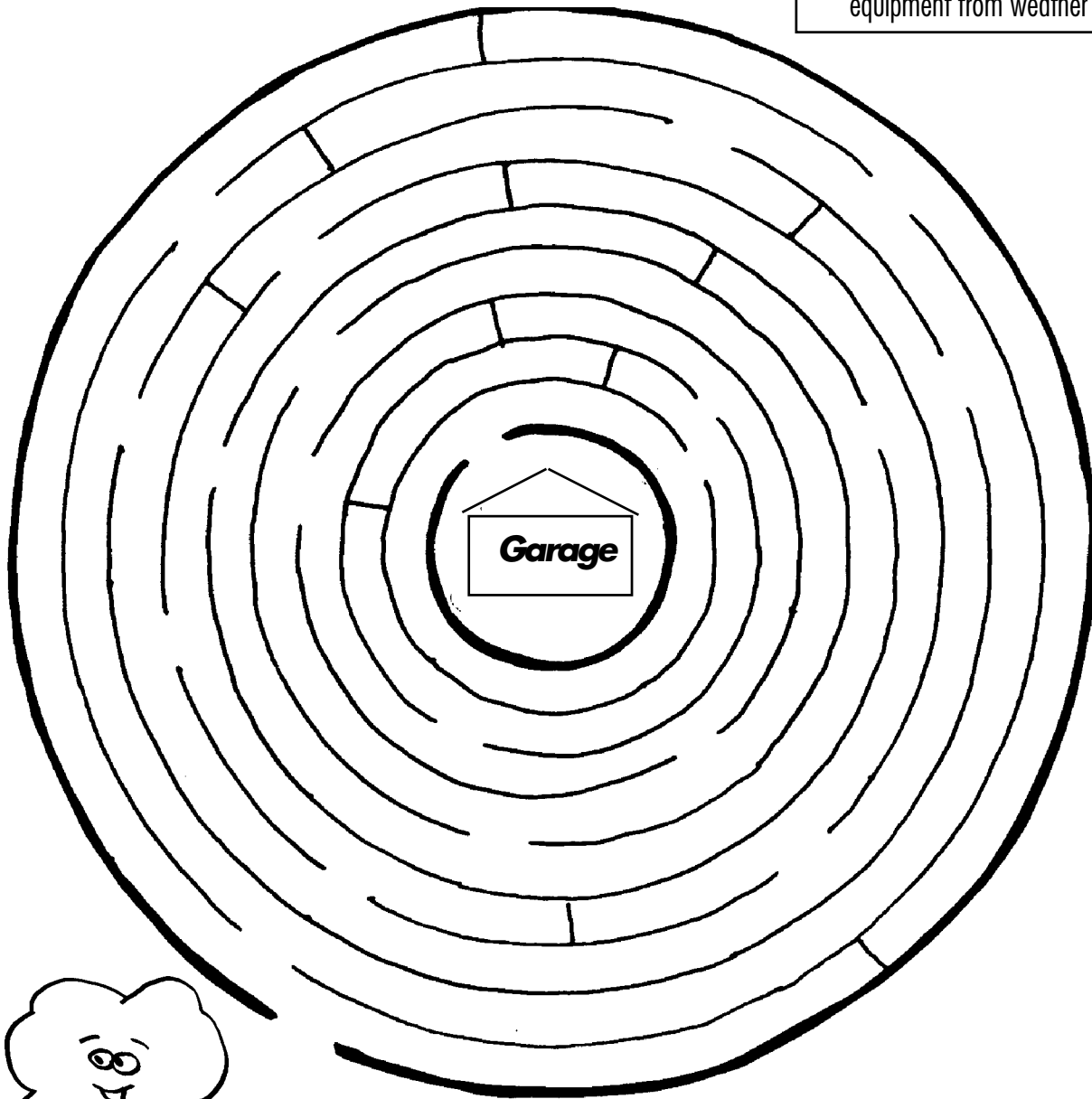
## Lawn Mower Lock-Up

Help Chris Clover put the lawnmower in a safe spot so you can play safely in the yard.

### Puzzle

#### In this activity you will:

- learn where to store a lawn mower away from children.
- learn that keeping lawn mowers and other tools indoors helps protect equipment from weather damage.



**Start Here**

*Developed by: Dee Jepsen, Extension Associate, Ag Eng/Health/Safety*

# Lawn Care

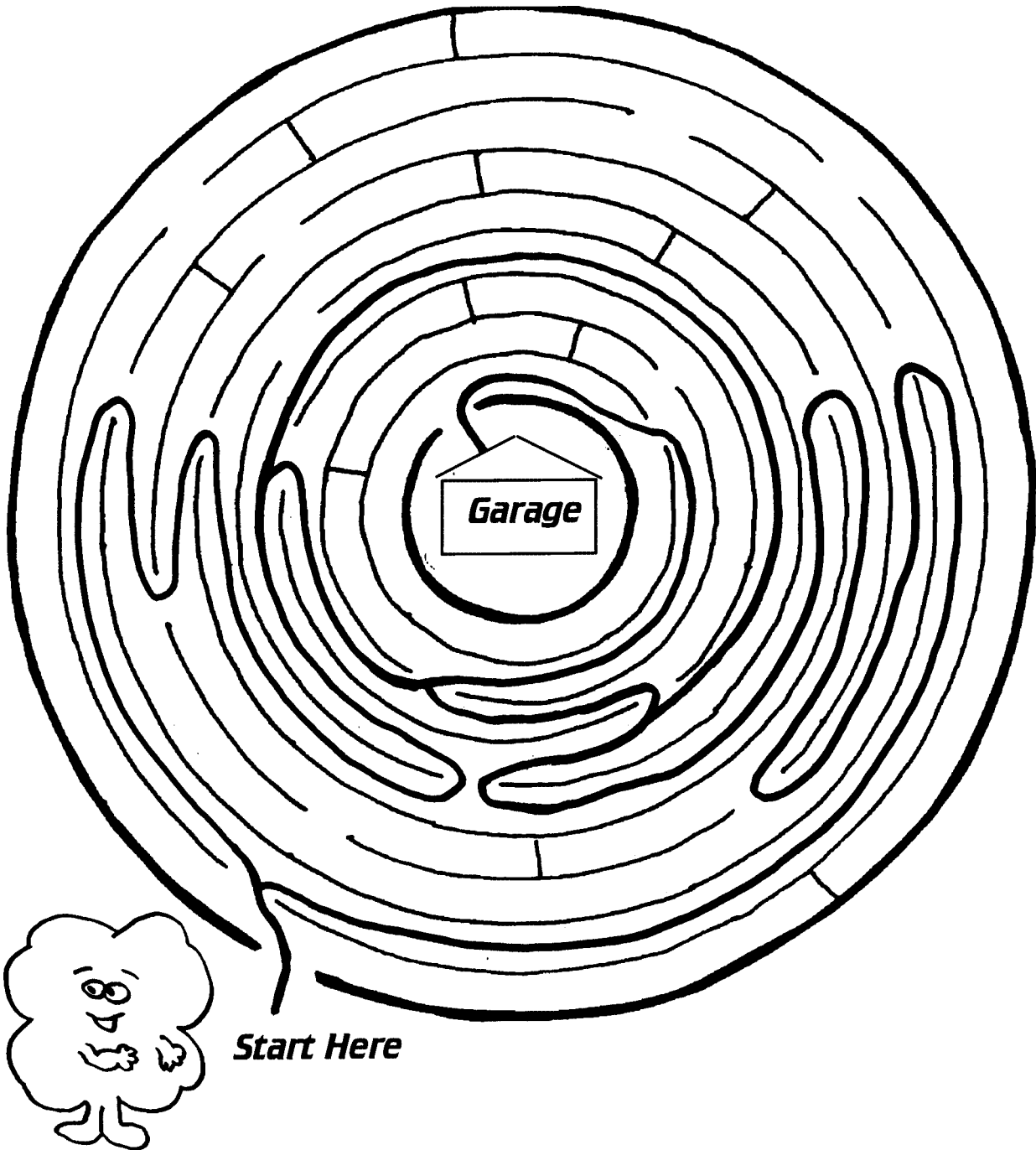
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- learn that keeping lawn mowers and other tools indoors helps protect equipment from weather damage.



Developed by: Dee Jepsen, Extension Associate, Ag Eng/Health/Safety

# Lawn Care

## Mower Message

Decode the important secret message about lawnmowers below! Write the letter for each symbol using the decoder at the bottom of the page.

### Matching

**In this activity you will:**

- learn a common danger to youth.

$\Omega$   $\approx$   $\zeta$   $\sqrt{\quad}$   $\int$   $\leq$   $\zeta$   $\partial$   $\dagger$   $\pi$   
— — — — — — — — — —

$\approx$   $\dagger$   $\partial$       ¶  $\approx$   $\sqrt{\quad}$   $\pounds$   $\partial$   $\dagger$   $\leq$   $\zeta$   $\pi$ .  
— — — — — — — — — —



### Decoder

$\approx$	¶	$\partial$	$\pounds$	$\Omega$	$\int$
A	D	E	G	L	M
$\sqrt{\quad}$	$\leq$	$\dagger$	$\pi$	$\zeta$	$\zeta$
N	O	R	S	U	W

Developed by: Dee Jepsen, Extension Associate, Ag Eng/Health/Safety

# Lawn Care

## Mower Message

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$\Omega$   $\approx$   $\zeta$   $\sqrt{\quad}$   $\int$   $\leq$   $\zeta$   $\partial$   $\dagger$   $\pi$   
l a w n m o w e r s

$\approx$   $\dagger$   $\partial$   $\parallel$   $\approx$   $\sqrt{\quad}$   $\pounds$   $\partial$   $\dagger$   $\leq$   $\phi$   $\pi$ .  
a r e d a n g e r o u s.



### Decoder

$\approx$	$\parallel$	$\partial$	$\pounds$	$\Omega$	$\int$
A	D	E	G	L	M
$\sqrt{\quad}$	$\leq$	$\dagger$	$\pi$	$\phi$	$\zeta$
N	O	R	S	U	W

# Woodworking

## Measuring Up

Use the words below to complete each statement. Each word is used only once. The circled letters spell an important word for your woodworking projects. Unscramble the letters to reveal the important word.


bench grinder      chisel      clamps      coping saw  
 hardwoods      miter box      rip saw      safety goggles  
 shrinks      softwoods      trunk      veneer

### Word Scramble

**In this activity you will:**

- learn common tools used in woodworking projects.
- differences in types of wood.

1. o\_\_\_\_\_ have needle-like or scale-like leaves. Some examples are pine or cedar trees.
2. Wear \_\_\_\_\_ o\_\_\_\_\_ when using electric saws.
3. The \_\_\_\_\_ o\_\_\_\_\_ is divided into many parts. This is where most of the wood comes from we use.
4. \_\_\_\_\_ o\_\_\_\_\_ have broad, flat leaves. Some examples are oak, maple, and cottonwood trees.
5. A \_\_\_\_\_ o\_\_\_\_\_ is used to cut wood at 45 and 90 degree angles.
6. Wood \_\_\_\_\_ o\_\_\_\_\_ when water within it evaporates into the air.
7. \_\_\_\_\_ o\_\_\_\_\_ teeth are shaped like chisels. They cut like a group of chisels in a row.
8. \_\_\_\_\_ o\_\_\_\_\_ are used to hold wood pieces together while you work.
9. A \_\_\_\_\_ o\_\_\_\_\_ is used for cutting curves in wood.
10. A tool that is used for removing unwanted strips of wood is called a \_\_\_\_\_ o\_\_\_\_\_.
11. \_\_\_\_\_ o\_\_\_\_\_ is used for sharpening woodworking tools. They come in many shapes and sizes.
12. Plywood is made by gluing together three or more thin layers of wood called \_\_\_\_\_ o\_\_\_\_\_.



The important word is:

\_\_\_\_\_

Source: 4-H 560, Working with Wood and Tools; 4-H 561, Wonderful World of Wood; 4-H 562, Building Bigger Things

Developed by: Dee Jepsen, Extension Associate, Ag Eng/Health/Safety

# Woodworking

## Measuring Up

Use the words below to complete each statement. Each word is used only once. The circled letters spell an important word for your woodworking projects. Unscramble the letters to reveal the important word.

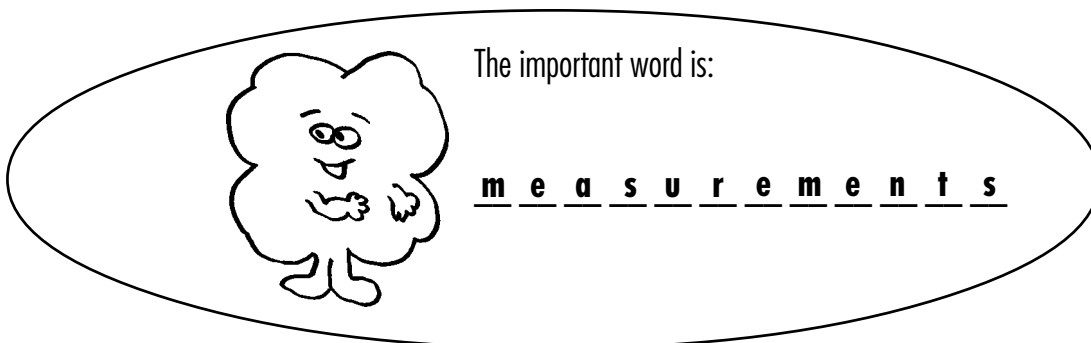
bench grinder      chisel      clamps      coping saw  
hardwoods      miter box      rip saw      safety goggles  
shrinks      softwoods      trunk      veneer

### Word Scramble—Key

#### In this activity you will:

- learn common tools used in woodworking projects.
- differences in types of wood.

1. S o f t w o o d s have needle-like or scale-like leaves. Some examples are pine or cedar trees.
2. Wear s a f e t y g o g g l e s when using electric saws.
3. The t r u n k is divided into many parts. This is where most of the wood comes from we use.
4. H a r d w o o d s have broad, flat leaves. Some examples are oak, maple, and cottonwood trees.
5. A m i t e r b o x is used to cut wood at 45 and 90 degree angles.
6. Wood s h r i n k s when water within it evaporates into the air.
7. R i p s a w teeth are shaped like chisels. They cut like a group of chisels in a row.
8. c l a m p s are used to hold wood pieces together while you work.
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Source: 4-H 560, *Working with Wood and Tools*; 4-H 561, *Wonderful World of Wood*; 4-H 562, *Building Bigger Things*

Developed by: Dee Jepsen, Extension Associate, Ag Eng/Health/Safety

# Woodworking

## Tools of the Trade

Label the tool using the parts listed beside it.

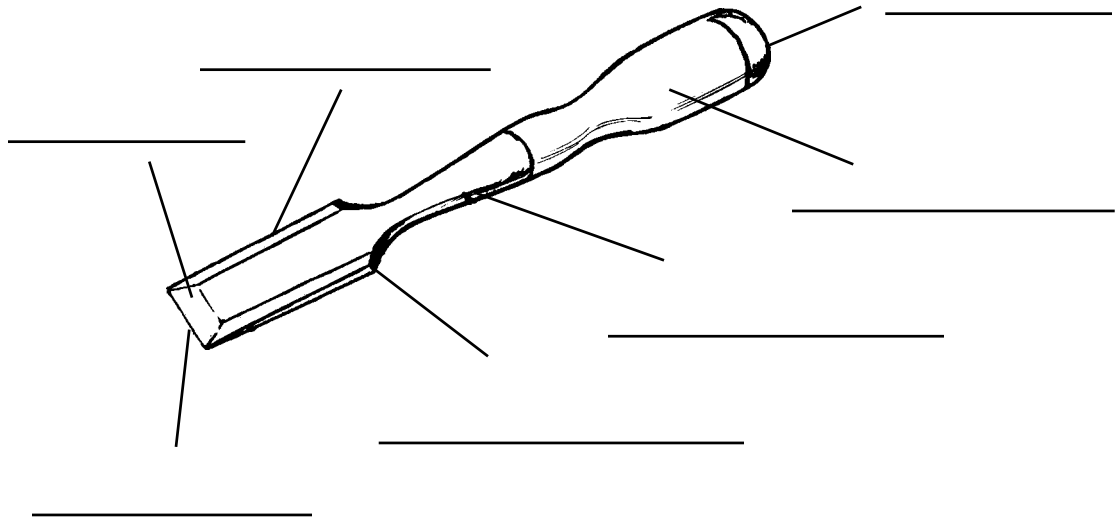
### Identification

**In this activity you will:**

- learn two important tools for wood working projects.
- recognize the various parts of each tool.

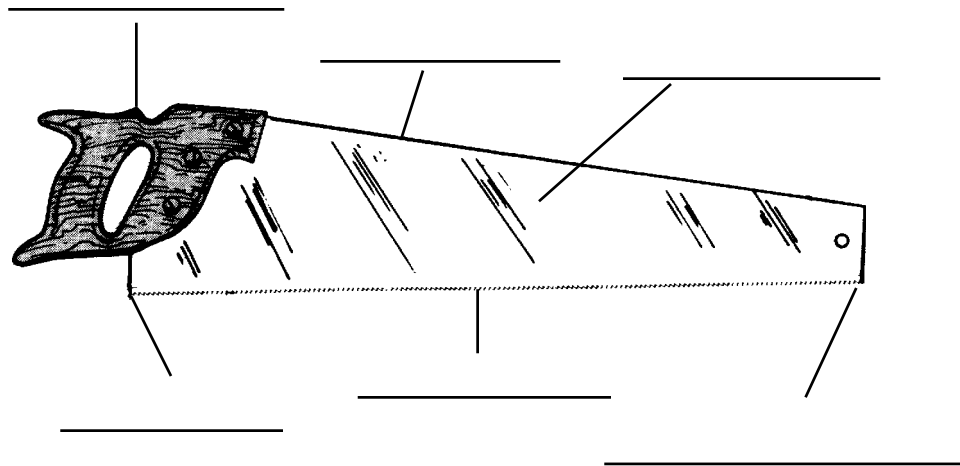
### Wood Chisel

bevel  
bevel edge blade  
cutting edge  
handle  
head  
ferrule  
shoulder



### Hand Saw

back  
blade  
handle  
heel  
teeth  
toe



Source: 4-H 561, *Wonderful World of Wood*; 4-H 562, *Building Bigger Things*  
Developed by: Dee Jepsen, Extension Associate, Ag Eng/Health/Safety

# Woodworking

## Tools of the Trade

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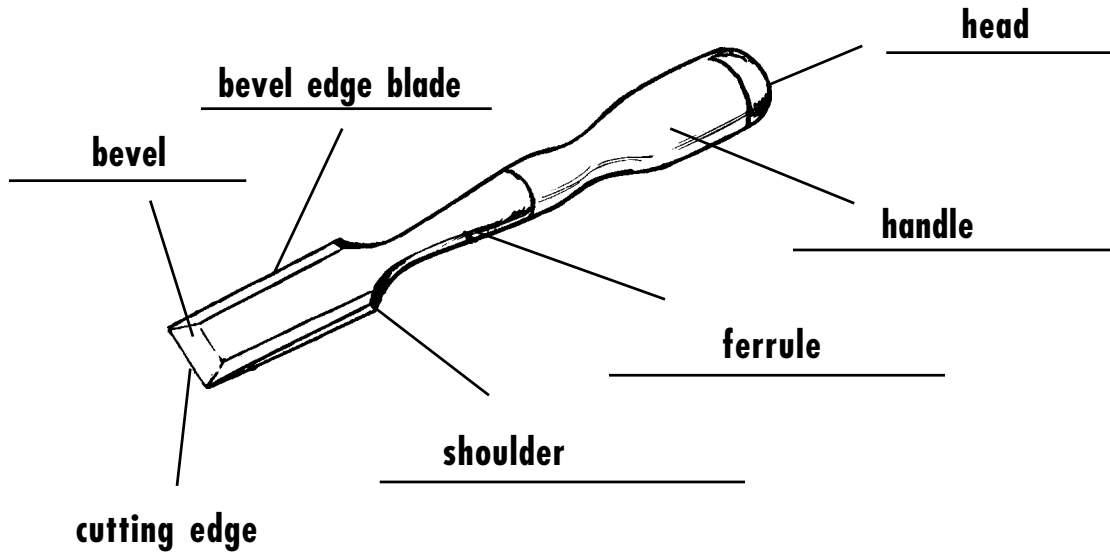
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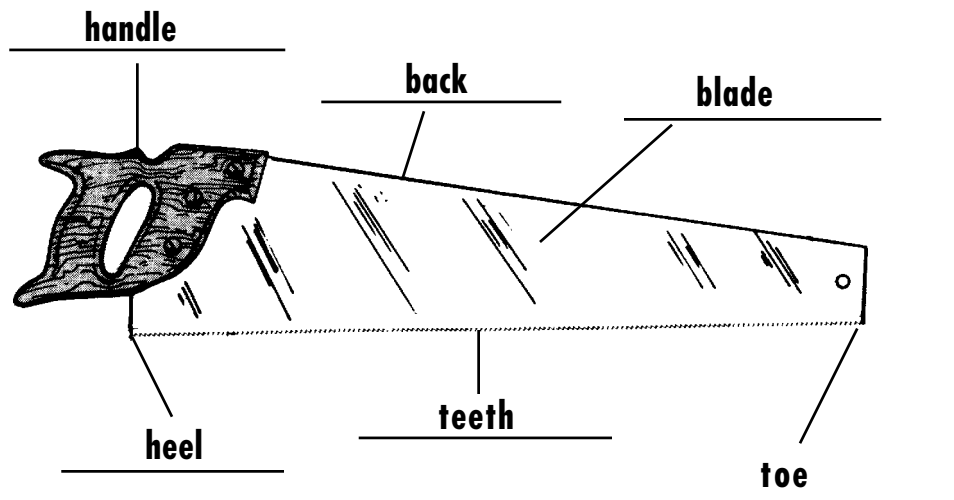
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head  
ferrule  
shoulder



### Hand Saw

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heel  
teeth  
toe



Source: 4-H 561, *Wonderful World of Wood*; 4-H 562, *Building Bigger Things*

Developed by: Dee Jepsen, Extension Associate, Ag Eng/Health/Safety

# Electricity

## Plugging It Together

Complete the crossword puzzle using the words listed below.

time switch      element      general purpose circuits      size  
 remove      twelve      contact switch      plug  
 grounding      small appliance circuits

**Crossword**

**In this activity you will:**

- learn important concepts for electrical connections.

### Across

1. The most common type of electrical connection is the \_\_\_\_\_.

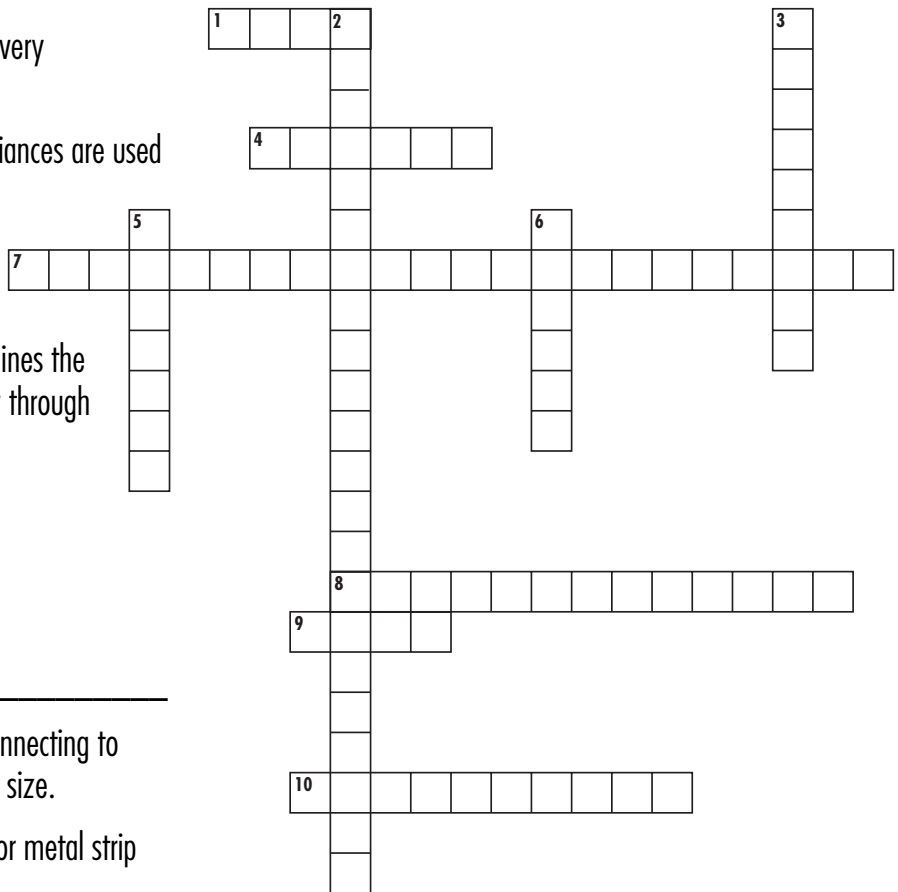
4. An electrical outlet should be placed on every \_\_\_\_\_ feet of wall space.

7. These supply outlets where portable appliances are used most often.

8. This type of switch works like a doorbell push button.

9. The \_\_\_\_\_ of the wire determines the amount of electrical current that can flow through the wire.

10. This switch works like an alarm clock.



### Down

2. These service lights all over the house. \_\_\_\_\_

3. \_\_\_\_\_ means permanently connecting to moist earth with a conductor of sufficient size.

5. Fuses contain a short, fine piece of wire or metal strip inside called the \_\_\_\_\_.

6. \_\_\_\_\_ the fuse before working on a circuit.

Source: 4-H 534, Working With Electricity  
 Developed by: Dee Jepsen, Extension Associate, Ag Eng/Health/Safety

# Electricity

## Plugging It Together

Complete the crossword puzzle using the words listed below.

time switch      element      general purpose circuits      size  
 remove      twelve      contact switch      plug  
 grounding      small appliance circuits

### Crossword—Key

**In this activity you will:**

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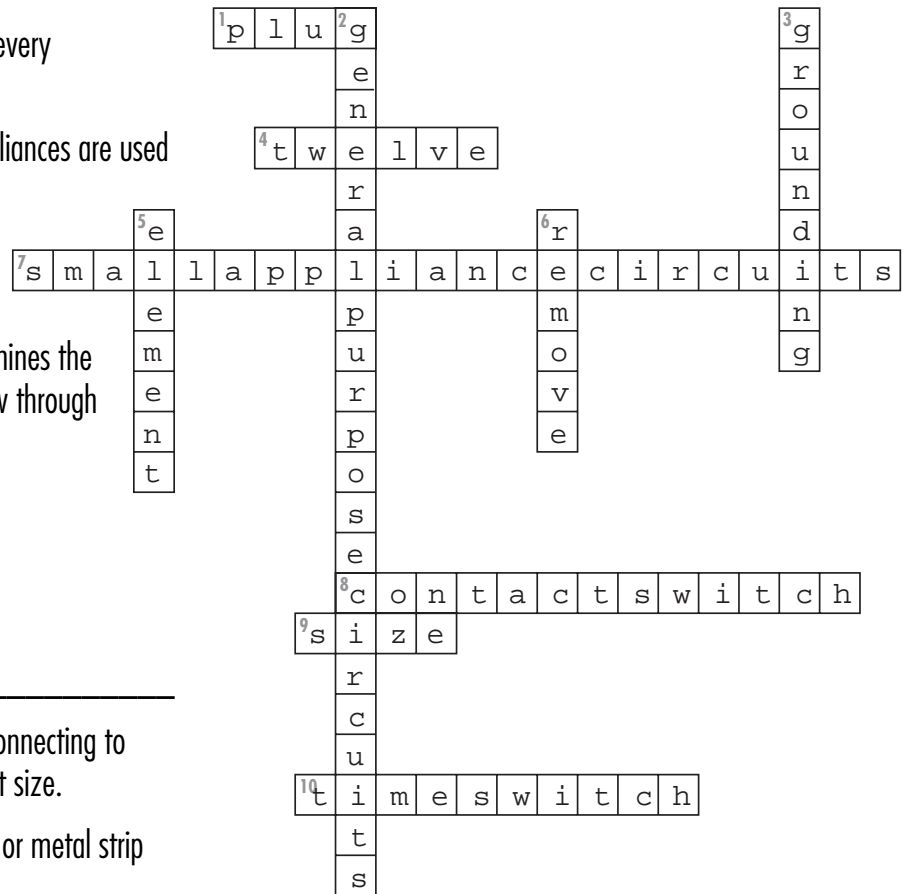
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6. \_\_\_\_\_ the fuse before working on a circuit.

Source: 4-H 534, Working With Electricity

Developed by: Dee Jepsen, Extension Associate, Ag Eng/Health/Safety

# Tractors

## Tractor Tips

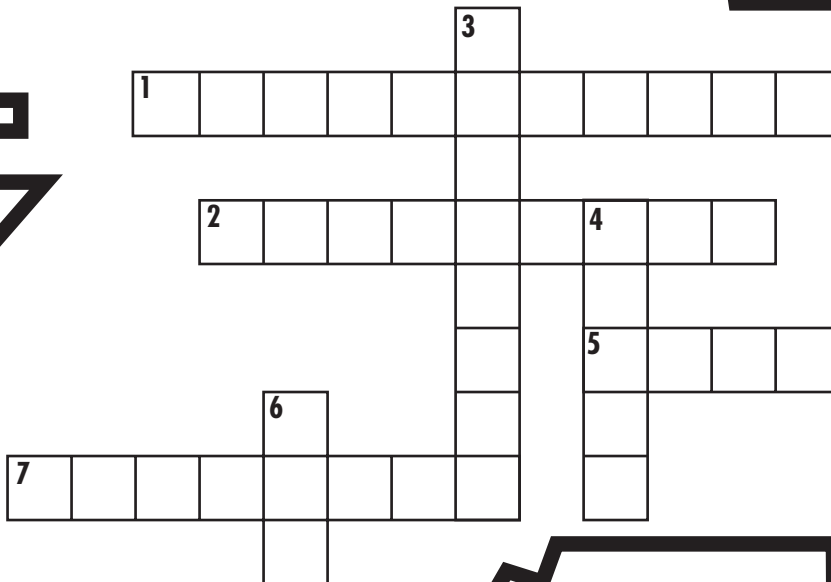
Complete the crossword puzzle.

### Crossword

**In this activity you will:**

- learn the cause of most agricultural accidents.

1. Most accidents occur in the \_\_\_\_\_ industry.
- 2, 3. \_\_\_\_\_ and \_\_\_\_\_ are the primary type of tractor-related accidents.
4. No \_\_\_\_\_ riders!
5. Tractors are not \_\_\_\_\_. They have an important job to do on the farm.
6. Stay away from a \_\_\_\_\_ shaft at all times.
7. What is the cause of most agriculture injuries?



Source: 4-H 550, Safe Operation of Agricultural Equipment

Developed by: Dee Jepsen, Extension Associate, Ag Eng/Health/Safety

# Tractors

## Tractor Tips

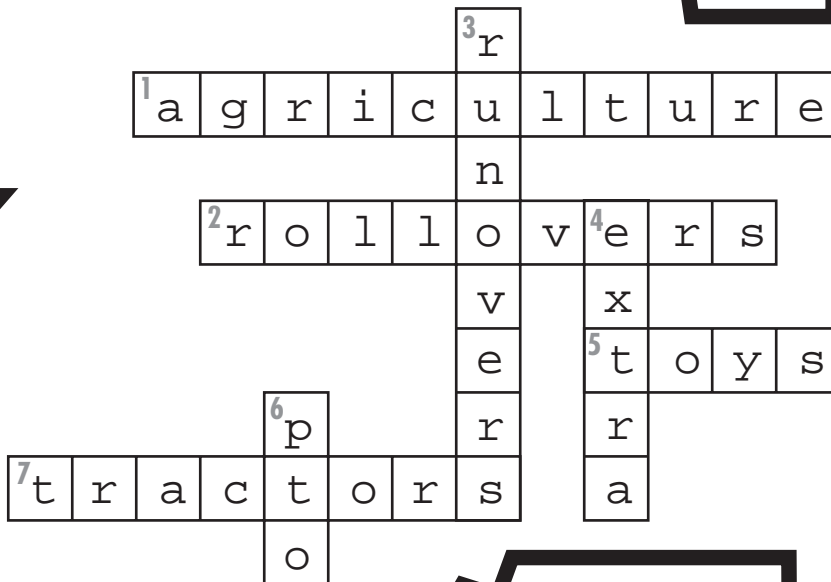
Complete the crossword puzzle.

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Source: 4-H 550, Safe Operation of Agricultural Equipment

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## ***Countdown Chapter 7***

# ***Human Development***



# ***Countdown Chapter 7***

## ***Family Relations and Human Development***

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# Human Development

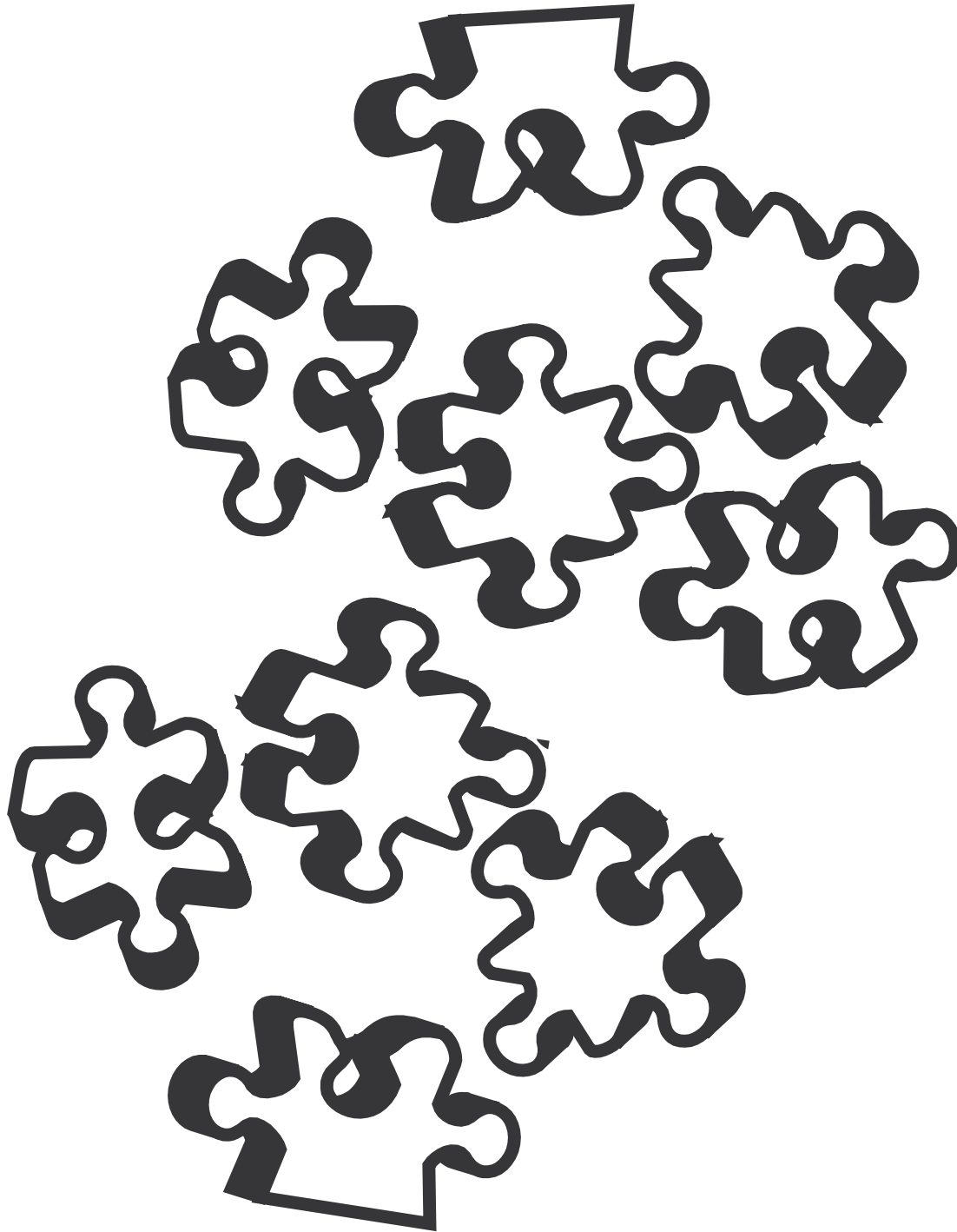
## Who Are You?

List at least one characteristic that describes you and the people in your life in each of the nine puzzle pieces. Then share your completed puzzle with a partner.

### Listing

#### In this activity you will:

- learn about who you are and the people in your life.
- develop self-understanding skills.



*Developed by: Scott Scheer and Kathryn Cox, Extension 4-H Specialist, Youth Development*

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# Human Development

## Meeting My Needs

Using the column headings in the chart below, list some of the ways human needs are fulfilled or met. Add pictures of other ways you meet these needs. Look in magazines, catalogs, or newspapers for small pictures. Share what you listed and pictured with a partner.

<b>Listing</b>
<b><i>In this activity you will:</i></b>
<ul style="list-style-type: none"> <li>• learn about your physical, social, and emotional needs.</li> <li>• develop social interaction and communication skills.</li> </ul>

<b>Meeting My Needs</b>				
<i>Hunger, Thirst</i>	<i>Safety</i>	<i>Love and Belonging</i>	<i>Recognition, Respect of Others and Self Respect</i>	<i>Doing My Best</i>

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# Human Development

## Needs and Wants

Circle the **N** if it is something you think you **need**; the **W** if it is primarily something you **want**; the **H** if it is something you already **have**.














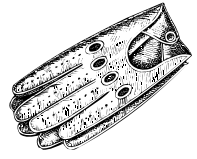
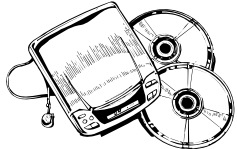
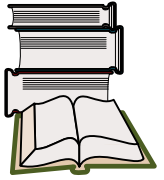
Circle the number that best shows how you would react to the item. That is, 1, you'd stop to look at it, 2, you'd look at and buy it or, 3, you'd ask your parents to buy it for you.

If the item is one that does not interest you and you wouldn't even look at it, don't mark anything. Discuss your answers with a partner.

### Decision-Making

**In this activity you will:**

- learn about differences between your wants and needs.
- develop decision making and analyzing information skills.
- think about things you need, want, or have.

<p>N    W    H</p>  <p>1    2    3</p>	<p>N    W    H</p>  <p>1    2    3</p>	<p>N    W    H</p>  <p>1    2    3</p>	<p>N    W    H</p>  <p>1    2    3</p>
<p>N    W    H</p>  <p>1    2    3</p>	<p>N    W    H</p>  <p>1    2    3</p>	<p>N    W    H</p>  <p>1    2    3</p>	<p>N    W    H</p>  <p>1    2    3</p>
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<p>N    W    H</p>  <p>1    2    3</p>	<p>N    W    H</p>  <p>1    2    3</p>	<p>N    W    H</p>  <p>1    2    3</p>	<p>N    W    H</p>  <p>1    2    3</p>

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# Human Development

## "Who Are You?" Interview

Do this activity with a partner. Have your friend act like a television reporter and interview you. To set an atmosphere of reality, he or she may want to begin by saying, "This is \_\_\_\_\_ reporting for 4-H news in \_\_\_\_\_, Ohio. Today, we are here to interview \_\_\_\_\_, a local member of our community." After your partner is finished, conduct an interview with him or her.

### Interviewing

#### In this activity you will:

- learn how to interview others.
- develop social interaction and communication skills.

### Suggested Interview Questions

1. How old are you?
2. If you could be any age, what age would you like to be?
3. Did you go on vacation this year?
4. If you could go anywhere in the world next year, where would you go?
5. Do you have a pet? What kind?
6. What kind of work do you want to do when you are older?
7. Do you think you will go to college?
8. Do you like to be teased by other people?
9. Do you ever tease other people?
10. Would you want to be president of the United States? Why or why not?
11. Would you like to live in a city, in a small town, or on a farm? Why?
12. If you had \$100 cash, what would you do with it?
13. Do you ever get mail? From whom do you get mail?
14. What's a good 4-H member? Are you a good 4-H member?
15. If you could live anywhere in the world, where would you live? Why?
16. When you are sitting with a group of your friends, do you usually talk or listen?
17. Can you usually get your friends to do what you want?
18. What could we do to get more of your friends into 4-H?
19. Will you be a cigarette smoker? Why or why not?
20. What size is your family? Do you wish you had a larger or smaller family, or is your family just the right size?
21. Do you feel that you do your best work all of the time?
22. Who should do the work on a 4-H project? What is the purpose of 4-H projects?
23. Is it harder to win or to lose? Why?
24. Do you like to compete in contests?
25. How many years do you plan to be in 4-H? Why?
26. What is leadership?
27. Have you ever been a leader? What did you do?

### Discussion

Discuss the following questions with your partner.

1. How were you honest about your answers?
2. In what way were the questions about values harder to answer?
3. How do you think answering value questions will help you later?
4. How can we show that people's opinions are important?

*Developed by: Scott Scheer and Kathryn Cox, Extension 4-H Specialist, Youth Development*

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# Human Development

## “Who Are You?” Advertisement

Each person has many parts. There is a physical part—the color of one’s hair, whether an individual is short or tall. There is a psychological part, which includes how one feels—such as happy or sad, and, how a person thinks, what someone likes to do. There is also a social part—the roles and relationships one has with other people, such as son, daughter, friend, or fellow 4-H member.

Make an advertisement about yourself in the space below. Look through magazines, newspapers, etc., to find words or pictures that describe or advertise you. Glue the words or pictures in the space.

### Listing

#### In this activity you will:

- learn about the many aspects of yourself—physical, psychological, and social.
- develop self-understanding skills.

Discuss the following questions with a partner.

1. What things are most important about yourself that you had to include?
2. What things did you want to leave out?
3. How did you show your feelings?
4. What did this tell you about yourself?

*Developed by: Scott Scheer and Kathryn Cox, Extension 4-H Specialist, Youth Development*

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# Human Development

## The Whisper Game

1. Using the space below, prepare a written message of about 10 to 15 words.
2. Gather together the group who will be playing the “whisper game.” It could be your family or a group of friends from school or your club.
3. The first person should whisper the message to the next person so no one else can see or hear the first message.
4. Each person repeats the message to the person next to him or her.
5. The last person should repeat the message aloud.

### Experiment

#### In this activity you will:

- learn how real world communication is often inaccurate and difficult.
- develop communication skills.

Answer these questions with the person next to you.

1. How did the message change?
2. What caused the message to change?
3. Are there times when messages get changed in daily life?
4. Is there anything you can do to keep messages from getting changed?

*Developed by: Scott Scheer and Kathryn Cox, Extension 4-H Specialist, Youth Development*

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# Human Development

## My Most Important People

### Drawing/Values

#### In this activity you will:

- learn about the significant people in your life and why they are important.
- develop self-understanding skills.

Draw a sketch of at least three important people in your life. List one reason why each is important to you.

Name: \_\_\_\_\_

Why Important: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Name: \_\_\_\_\_

Why Important: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Name: \_\_\_\_\_

Why Important: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Discuss your answers to the following questions with one or two other members of your group.

1. Have the people on your list always been important to you?
2. Which people were important to you at other times in your life?
3. Why have your important people changed?
4. In whose life are you an important person?
5. Why are you important to that person?

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# Human Development

## Making Decisions

Place an "X" in the space that shows the way you make decisions.

### Decision-Making

#### In this activity you will:

- learn about the process of making decisions.
- develop decision-making skills.
- consider how you make decisions.

	I think it through carefully.	I give it some thought.	I don't stop to think.
1. Spending money on a bike.			
2. Making friends.			
3. Choosing hobbies.			
4. Buying clothes.			
5. Getting along with my friends.			
6. Joining clubs, teams, or activities.			
7. What to eat for lunch.			

How do you make decisions? Discuss your answers with the person sitting next to you.

1. Most of the time are you a thoughtful decision maker?
2. What other decisions do you make each day?
3. What decisions does your partner make each day?
4. Which are important to your partner?
5. Which are unimportant?
6. Which decisions are important to you?
7. Which are unimportant to you?

*Developed by: Scott Scheer and Kathryn Cox, Extension 4-H Specialist, Youth Development*

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# **Human Development**

## **Cooperating**

Make a group of four people. If you have more than four people playing, you may need more than one group.

Each group is to make a machine, with each member becoming a moving part. Have the parts use sounds, move about, and work at different heights. Examples of machines are a lawn mower, vacuum cleaner, or record player. If you have more than one group, have those not in the group performing guess what the machine does.

Discuss with a partner the part you played in the machine.

1. Describe how the machine would work if your part were missing.
  
  
  
  
  
  
  
  
  
  
2. Describe how you felt being a part of a group that made a machine.
  
  
  
  
  
  
  
  
  
  
3. How is it similar to a machine when a group does a job together?

### **Role-Playing**

#### **In this activity you will:**

- learn how to work and interact with others.
- develop social interaction and collaboration skills.

*Developed by: Scott Scheer and Kathryn Cox, Extension 4-H Specialist, Youth Development*

# Human Development

## What Do You Like?

Do this activity with a partner.

Talk about things you enjoy doing. When you have finished that subject, spend five minutes talking about people you like. Write your ideas on paper first and then talk about what you have written. Ask your partner to share his or her likes and favorite people.

Discuss the following questions with your partner.

1. What things do you enjoy doing that your partner also enjoyed?
2. How did some of the things you enjoyed relate to the people you like?
3. What things do you have in common with your partner, and/or the people you like?

### Discussion

#### In this activity you will:

- learn about things and people you like and things and people a partner likes.
- develop communication and self-understanding skills.

*Developed by: Scott Scheer and Kathryn Cox, Extension 4-H Specialist, Youth Development*

# Human Development

## Physical Fitness Fun

Being physically fit makes everything else in life more enjoyable and better. When you are physically healthy, you think more clearly, feel more energetic, and are happier about yourself.

The best way to stay or get physically fit is to get the heart pumping faster than it does when you are sitting down.

Try some fun activities to increase your heart rate. (Check your pulse before starting by placing two fingers on the right side of the neck below the chin, then check after.)

1. Do jumping jacks.
2. Squat down then jump into the air.
3. Hold arms out extended perpendicularly from body. Try holding them for a minute. Is it easier to do when you are thinking about something other than what you are doing?
4. Pretend to climb a ladder in place. Don't forget to use both arms and legs.
5. Run in place.

### Physical Activity

#### In this activity you will:

- learn about the importance of physical fitness.
- learn physical activity skills.

*Developed by: Scott Scheer and Kathryn Cox, Extension 4-H Specialist, Youth Development*

# Human Development

## Roles and Relationships

The real you! Who are you? It is both *who* you are and *what* you are.

You find clues to *who* and *what* in the things you do and in the people around you.

The things you do are called *roles*. The way you get along with people and how you happen to know them are called *relationships*.

Let's look at some examples of roles and relationships for Tina and Caleb:

The things they *do* are clues to some of their *roles*:

Caleb swims. He is a swimmer.

Tina dances. She is a dancer.

Another clue to their *roles* comes from *who* they are:

Caleb is a boy. He is a son.

Tina is a girl. She is a sister.

Another clue comes from the people Caleb and Tina know:

Tina has an aunt. Tina is a niece.

Caleb has a teacher. Caleb is a student.

When you see these clues to who you are and what you do, you can put them together with the people you know. This makes it easy to see the roles and the relationships with others.

Let's look at more example of roles and relationships for Caleb and Tina. Match each role with a relationship.

<b>Matching</b>
<b>In this activity you will:</b>
<ul style="list-style-type: none"> <li>• learn about roles and relationships in your life.</li> <li>• develop self-understanding and analyzing skills.</li> <li>• identify various roles and relationships.</li> </ul>

### **Roles and Relationships**

<b>Tina is a(n)</b>	<b>She has a relationship with</b>
dancer	grandparent
American	teacher
granddaughter	brother or sister
student	dance members
sister	parent
daughter	other U.S. citizens
niece	team members
ball player	aunt or uncle

### **Roles and Relationships**

<b>Caleb is a(n)</b>	<b>He has a relationship with</b>
singer in a choir	niece or nephew
uncle	4-H members
son	employer
4-H'er	pet
employee	grandparent
student	choir members
pet owner	parent
grandson	school

*Developed by: Scott Scheer and Kathryn Cox, Extension 4-H Specialist, Youth Development*

# Human Development

## Roles and Relationships

The real you! Who are you? It is both *who* you are and *what* you are.

You find clues to *who* and *what* in the things you do and in the people around you.

The things you do are called *roles*. The way you get along with people and how you happen to know them are called *relationships*.

Let's look at some examples of roles and relationships for Tina and Caleb:

The things they *do* are clues to some of their *roles*:

Caleb swims. He is a swimmer.

Tina dances. She is a dancer.

Another clue to their *roles* comes from *who* they are:

Caleb is a boy. He is a son.

Tina is a girl. She is a sister.

Another clue comes from the people Caleb and Tina know:

Tina has an aunt. Tina is a niece.

Caleb has a teacher. Caleb is a student.

When you see these clues to who you are and what you do, you can put them together with the people you know. This makes it easy to see the roles and the relationships with others.

Let's look at more example of roles and relationships for Caleb and Tina. Match each role with a relationship.

### Matching—Key

#### In this activity you will:

- learn about roles and relationships in your life.
- develop self-understanding and analyzing skills.
- identify various roles and relationships.

### Roles and Relationships

**Tina is a(n)**

**She has a relationship with**

dancer	grandparent
American	teacher
granddaughter	brother or sister
student	dance members
sister	parent
daughter	other U.S. citizens
niece	team members
ball player	aunt or uncle

### Roles and Relationships

**Caleb is a(n)**

**He has a relationship with**

singer in a choir	niece or nephew
uncle	4-H members
son	employer
4-H'er	pet
employee	grandparent
student	choir members
pet owner	parent
grandson	school

Developed by: Scott Scheer and Kathryn Cox, Extension 4-H Specialist, Youth Development

# Human Development

## Living With Others

The journey through life is not made alone. It is made with other people. One of the most important things we learn as we move through life is how to see the other side. Getting along with others occurs when we stop and think of the other person's point of view.

There are three keys in getting to know someone else: courtesy, awareness, and thoughtfulness. These keys can become habits that will help you be happier and help those you are with be glad you are there!

Courtesy is not just manners, but consideration for others. Saying "thank you" is a courtesy which often means: "I like you, you're a nice person."

List other ways we can communicate courtesy.

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Awareness is looking, listening, seeing, and feeling the world around you and showing others you care about the things you see, hear, and feel. For example: speaking to the new boy who is shy or visiting the lady next door who is lonely.

List other ways you can show you are aware and care about other people.

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### Listing

#### In this activity you will:

- learn how to communicate and be aware of others.
- develop communication and awareness skills.

Thoughtfulness is remembering to think before speaking or acting. It is also thinking about ways to show others you care about them. For example: not interrupting someone else when they are talking or being quiet when someone is on the telephone.

List things you do to show you are thoughtful of others.

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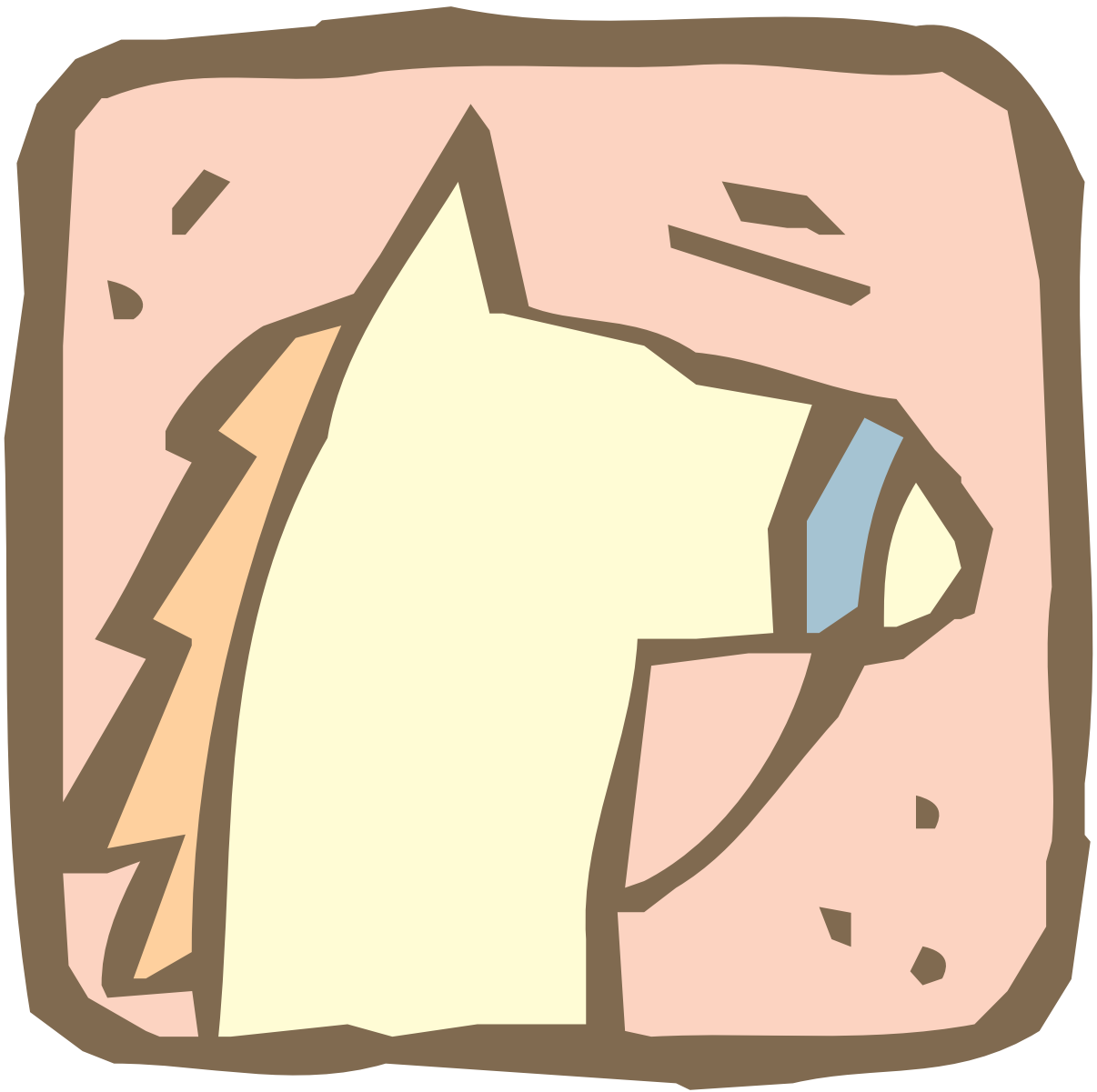
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*Developed by: Scott Scheer and Kathryn Cox, Extension 4-H Specialist, Youth Development*

# ***Countdown Chapter 6***

# ***Equine Science***



# ***Countdown Chapter 6***

## ***Equine Science***

### ***Contents***

Horse Breeds .....	1
Horse Parts (Beginner) .....	3
Horse Parts (Advanced) .....	5
Horse Feet and Leg Structure .....	7
How to Read a Feed Tag.....	9

# Equine Science

## Horse Breeds

### Fill in the Blanks

#### In this activity you will:

- become familiar with horse breeds.

Read the descriptions and fill in the blanks with the breed names.

1. This breed originated in Kentucky and comes in many colors. It is known for its great style and animation, under saddle and in fine harness. \_\_\_\_\_
2. The ancestors of this breed originated in Fergana, Central Asia. Colors are most often variable over the loin and hips with dark spots. Eyes are typically encircled by white, their skin is mottled, and hooves have vertical stripes.  
\_\_\_\_\_
3. This breed originated in Arabia. Typical colors include bay, gray, and chestnut, and their skin is always dark. They are known for their refined heads, great endurance, and gay way of going. \_\_\_\_\_
4. Originating in Belgium, this breed is predominantly sorrels and chestnuts, often with flaxen mane and tail. They do not have feathers. \_\_\_\_\_
5. This breed originated in the United States. Their body is usually a shade of yellow, with dark brown, black, red, or flaxen points. Red, grulla, or those with white points must have a dorsal stripe. \_\_\_\_\_
6. Originating in Austria, this breed are usually sorrel with flaxen manes and tails. They are between 50 and 59 inches tall.  
\_\_\_\_\_
7. This breed originated in the United States, New England area. They usually come in bay, brown, black, or chestnut but do not often have extensive white markings. They are known to be easy keepers and have docile temperaments.  
\_\_\_\_\_
8. Originating in the United States, this spotted horse is a combination of white and any other color. There are usually two distinct color patterns, but animals with Appaloosa characteristics or breeding are not allowed in the registry.  
\_\_\_\_\_
9. This breed originated in the United States and is known to be well muscled and powerfully built. Chestnut, sorrel, bay, and dun are the most common colors. Others can be registered though excessive white is a disqualification.  
\_\_\_\_\_
10. Originating in Tennessee, these horses come in all colors. White markings on the face and legs are common. They have a unique way of moving called a running walk. \_\_\_\_\_
11. This breed originated in England and is often used in racing or jumping. They come in many colors, though roans and grays are less common. White markings are common. They are known for their fineness of conformation and long straight, well-muscled legs. \_\_\_\_\_
12. This pony originated in Wales and can be any color except piebald or skewbald. Often used as a children's mount, this pony is very versatile and can be shown under saddle on the flat or jumping, or can be shown in harness.  
\_\_\_\_\_

Reference: 4-H 172, *Basic Horse Science*, pp. 6–9; and *Horse Learning Laboratory Kit*. The *Horse Learning Laboratory Kit* contains breed photos, trait descriptions, and breed name labels which are helpful but not necessary for this exercise.

Prepared by: Cheryl Porr, State Equine Extension Associate, Animal Sciences; Andrea Auker, OSU Animal Sciences Student

# Equine Science

## Horse Breeds

### Fill in the Blanks—Key

#### In this activity you will:

- become familiar with horse breeds.

Read the descriptions and fill in the blanks with the breed names.

1. This breed originated in Kentucky and comes in many colors. It is known for its great style and animation, under saddle and in fine harness. **American Saddlebred**
2. The ancestors of this breed originated in Fergana, Central Asia. Colors are most often variable over the loin and hips with dark spots. Eyes are typically encircled by white, their skin is mottled, and hooves have vertical stripes. **Appaloosa**
3. This breed originated in Arabia. Typical colors include bay, gray, and chestnut, and their skin is always dark. They are known for their refined heads, great endurance, and gay way of going. **Arabian**
4. Originating in Belgium, this breed is predominantly sorrels and chestnuts, often with flaxen mane and tail. They do not have feathers. **Belgian**
5. This breed originated in the United States. Their body is usually a shade of yellow, with dark brown, black, red, or flaxen points. Red, grulla, or those with white points must have a dorsal stripe. **Buckskin**
6. Originating in Austria, this breed are usually sorrel with flaxen manes and tails. They are between 50 and 59 inches tall. **Haflinger**
7. This breed originated in the United States, New England area. They usually come in bay, brown, black, or chestnut but do not often have extensive white markings. They are known to be easy keepers and have docile temperaments. **Morgan**
8. Originating in the United States, this spotted horse is a combination of white and any other color. There are usually two distinct color patterns, but animals with Appaloosa characteristics or breeding are not allowed in the registry. **Paint Horse**
9. This breed originated in the United States and is known to be well muscled and powerfully built. Chestnut, sorrel, bay, and dun are the most common colors. Others can be registered though excessive white is a disqualification. **Quarter Horse**
10. Originating in Tennessee, these horses come in all colors. White markings on the face and legs are common. They have a unique way of moving called a running walk. **Tennessee Walking Horse**
11. This breed originated in England and is often used in racing or jumping. They come in many colors, though roans and grays are less common. White markings are common. They are known for their fineness of conformation and long straight, well-muscled legs. **Thoroughbred**
12. This pony originated in Wales and can be any color except piebald or skewbald. Often used as a children's mount, this pony is very versatile and can be shown under saddle on the flat or jumping, or can be shown in harness. **Welsh Pony**

Reference: 4-H 172, *Basic Horse Science*, pp. 6–9; and *Horse Learning Laboratory Kit*. The *Horse Learning Laboratory Kit* contains breed photos, trait descriptions, and breed name labels which are helpful but not necessary for this exercise.

Prepared by: Cheryl Porr, State Equine Extension Associate, Animal Sciences; Andrea Auker, OSU Animal Sciences Student

# Equine Science

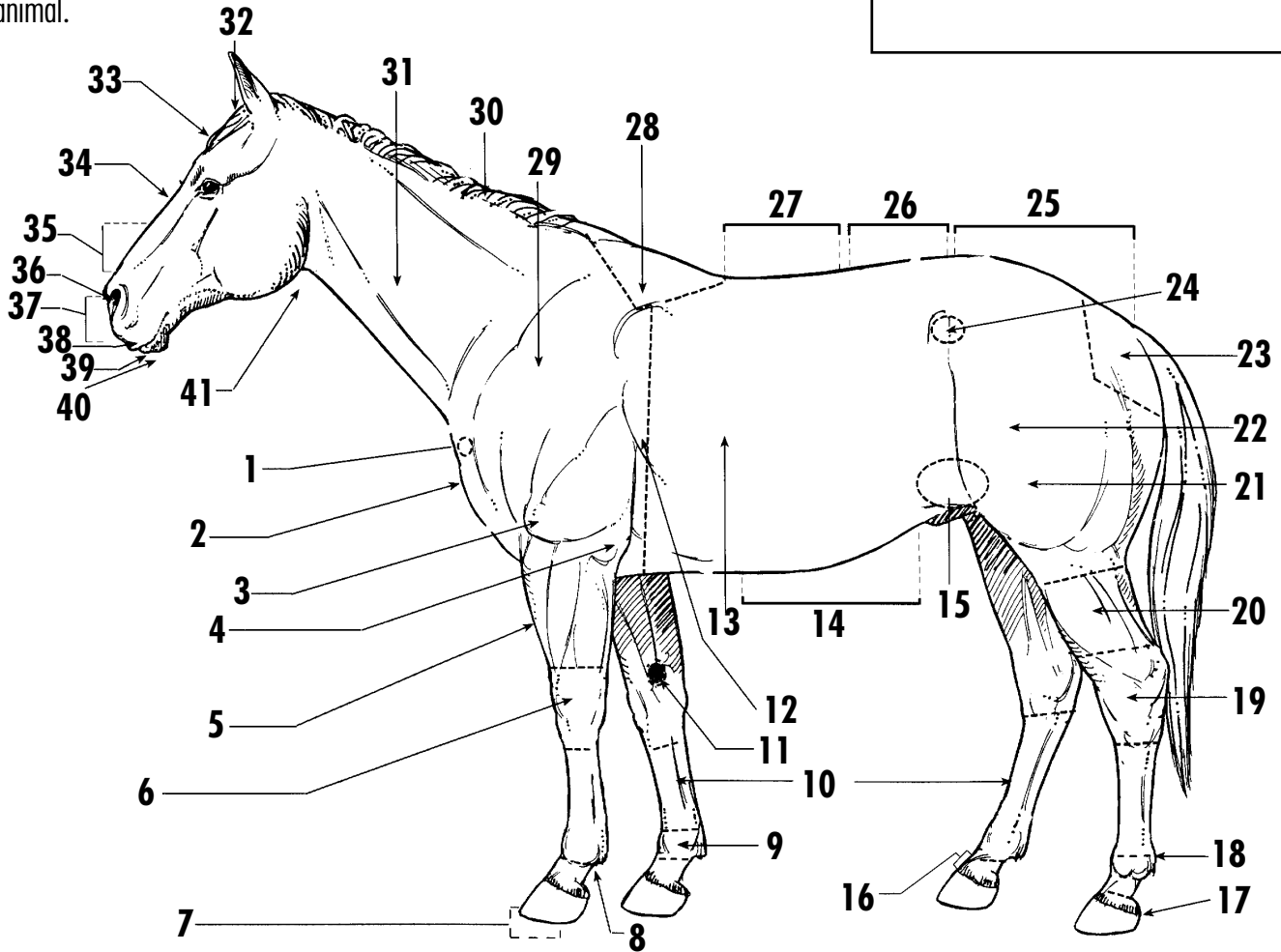
## Horse Parts

Beginner level: Write in the number that corresponds to the correct part of the animal.

### Identification

In this activity you will:

- learn the parts of a horse.



- |       |                   |       |               |       |             |       |           |
|-------|-------------------|-------|---------------|-------|-------------|-------|-----------|
| _____ | Point of Shoulder | _____ | Point of Hip  | _____ | Knee        | _____ | Muzzle    |
| _____ | Forearm           | _____ | Fetlock Joint | _____ | Loin        | _____ | Coronet   |
| _____ | Chestnut          | _____ | Heartgirth    | _____ | Ergot       | _____ | Forehead  |
| _____ | Gaskin            | _____ | Arm           | _____ | Abdomen     | _____ | Flank     |
| _____ | Hip               | _____ | Hoof          | _____ | Neck        | _____ | Crest     |
| _____ | Elbow             | _____ | Face          | _____ | Bridge/Nose | _____ | Nostril   |
| _____ | Chin              | _____ | Withers       | _____ | Ankle       | _____ | Shoulder  |
| _____ | Chest             | _____ | Poll          | _____ | Throatlatch | _____ | Croup     |
| _____ | Stifle            | _____ | Hock          | _____ | Lower Lip   | _____ | Upper Lip |
| _____ | Back              | _____ | Cannon        | _____ | Barrel Area | _____ | Buttock   |
|       |                   |       |               |       |             | _____ | Pastern   |

Reference: 4-H 175, Light Horse Selection

Prepared by: Cheryl Porr, State Equine Extension Associate, Animal Sciences; Andrea Auker, OSU Animal Sciences Student

# Equine Science

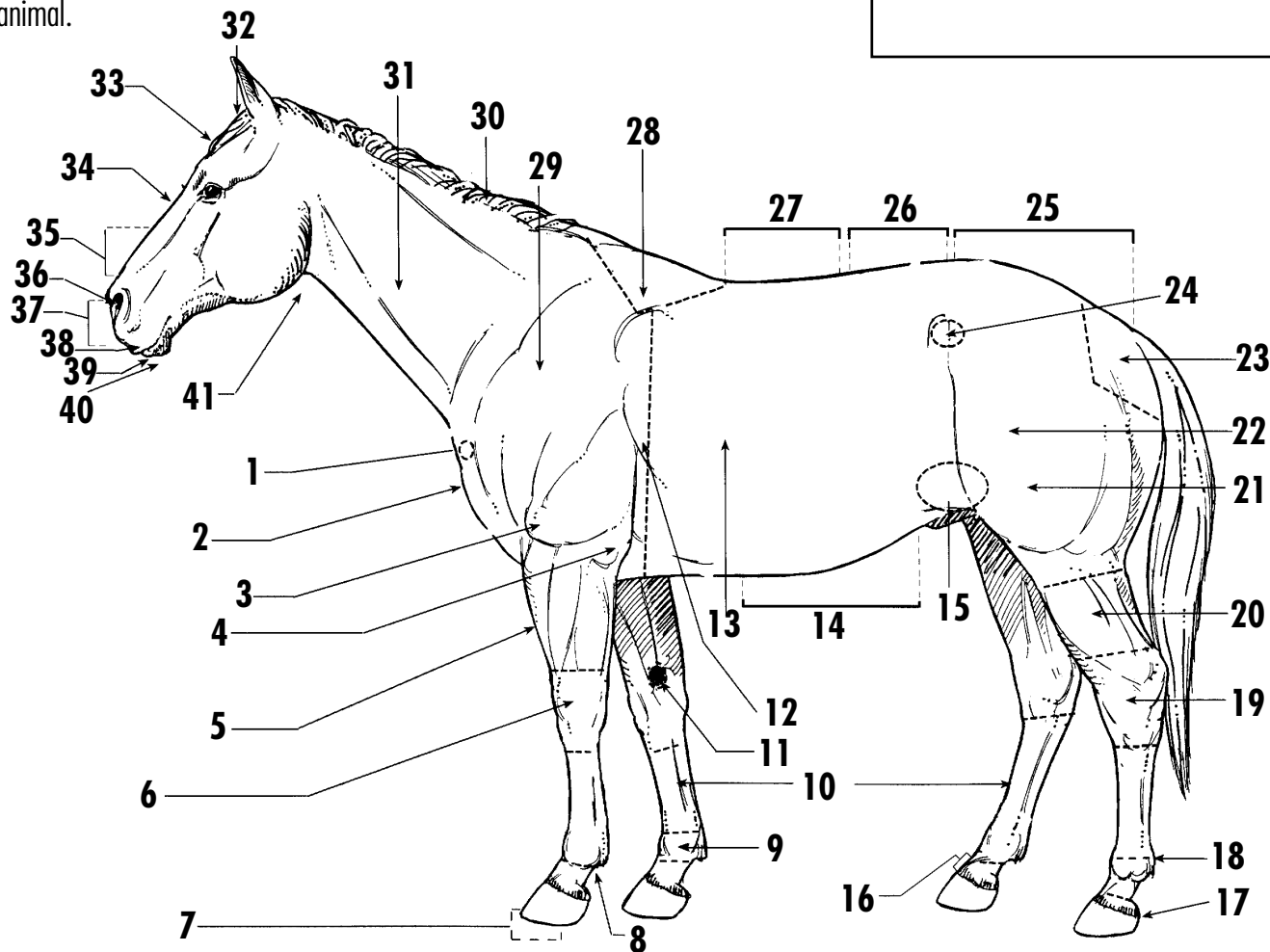
## Horse Parts

Beginner level: Write in the number that corresponds to the correct part of the animal.

### Identification—Key

In this activity you will:

- learn the parts of a horse.



<u>1</u>	Point of Shoulder	<u>24</u>	Point of Hip	<u>6</u>	Knee	<u>37</u>	Muzzle
<u>5</u>	Forearm	<u>18</u>	Fetlock Joint	<u>26</u>	Loin	<u>17</u>	Coronet
<u>11</u>	Chestnut	<u>12</u>	Heartgirth	<u>8</u>	Ergot	<u>33</u>	Forehead
<u>20</u>	Gaskin	<u>3</u>	Arm	<u>14</u>	Abdomen	<u>15</u>	Flank
<u>22</u>	Hip	<u>7</u>	Hoof	<u>31</u>	Neck	<u>30</u>	Crest
<u>4</u>	Elbow	<u>34</u>	Face	<u>35</u>	Bridge/Nose	<u>36</u>	Nostril
<u>40</u>	Chin	<u>28</u>	Withers	<u>9</u>	Ankle	<u>29</u>	Shoulder
<u>2</u>	Chest	<u>32</u>	Poll	<u>41</u>	Throatlatch	<u>25</u>	Croup
<u>21</u>	Stifle	<u>19</u>	Hock	<u>39</u>	Lower Lip	<u>38</u>	Upper Lip
<u>27</u>	Back	<u>10</u>	Cannon	<u>13</u>	Barrel Area	<u>23</u>	Buttock
						<u>16</u>	Pastern

Reference: 4-H 175, Light Horse Selection

Prepared by: Cheryl Porr, State Equine Extension Associate, Animal Sciences; Andrea Auker, OSU Animal Sciences Student

# Equine Science

## Horse Parts

Advanced level: Write in the name that corresponds to the correct part of the animal.

### Identification

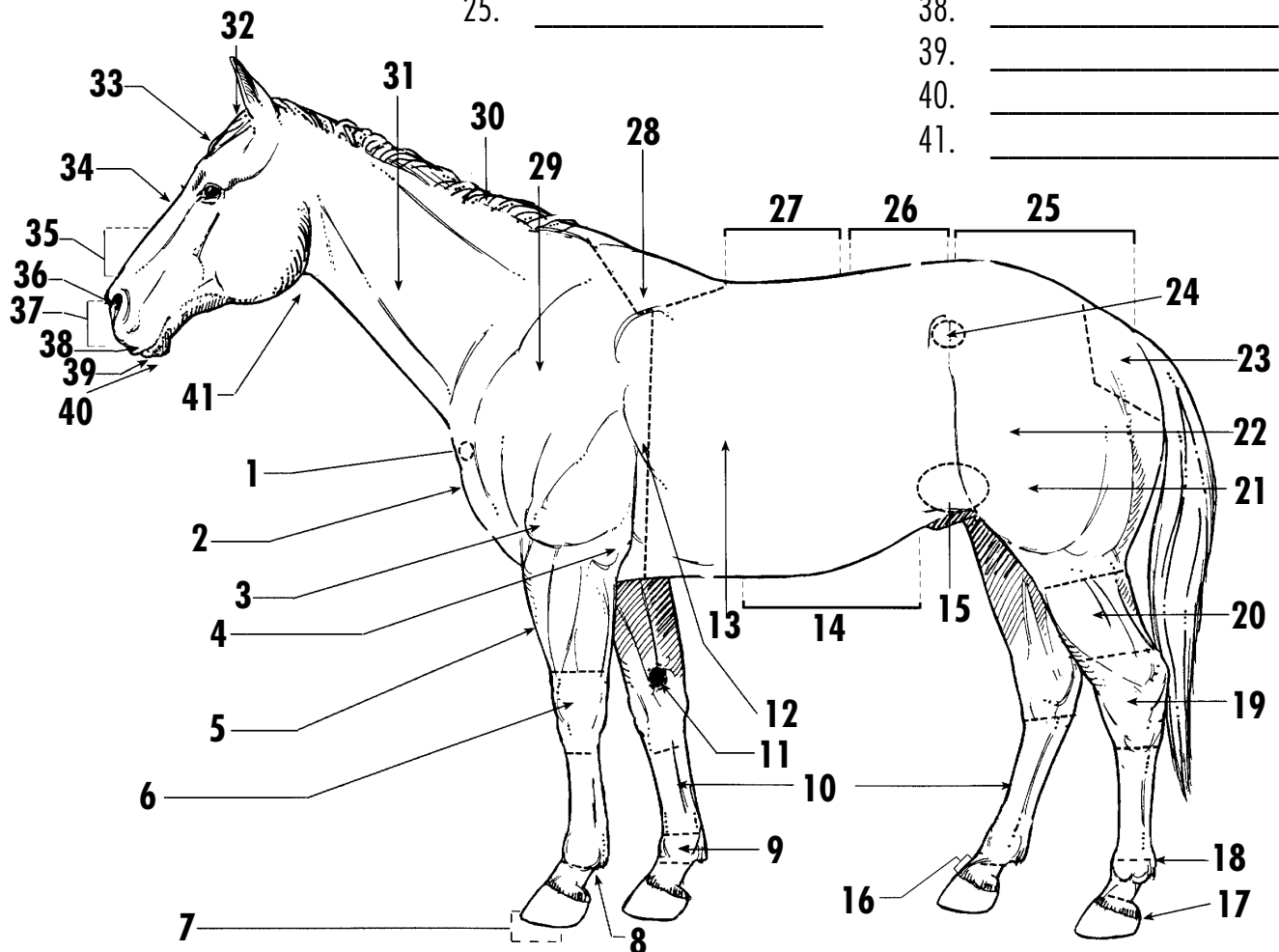
In this activity you will:

- learn the parts of a horse.

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_
4. \_\_\_\_\_
5. \_\_\_\_\_
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37. \_\_\_\_\_
38. \_\_\_\_\_
39. \_\_\_\_\_
40. \_\_\_\_\_
41. \_\_\_\_\_



Reference: 4-H 175, Light Horse Selection

Prepared by: Cheryl Porr, State Equine Extension Associate, Animal Sciences; Andrea Auker, OSU Animal Sciences Student

# Equine Science

## Horse Parts

Advanced level: Write in the name that corresponds to the correct part of the animal.

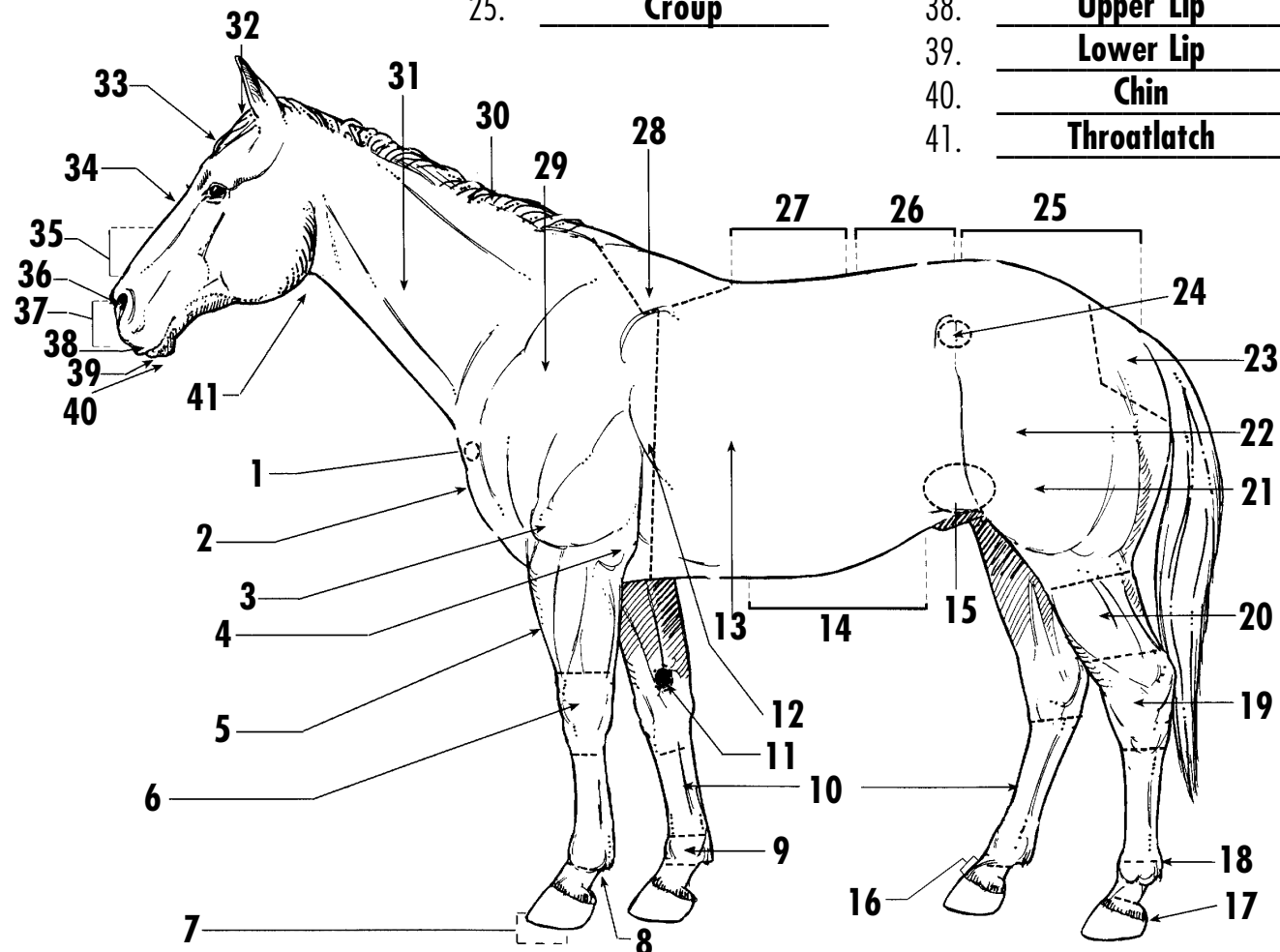
1. Point of Shoulder
2. Chest
3. Arm
4. Elbow
5. Forearm
6. Knee
7. Hoof
8. Ergot
9. Ankle
10. Cannon
11. Chestnut
12. Heartgirth

13. Barrel Area
14. Abdomen
15. Flank
16. Pastern
17. Coronet
18. Fetlock Joint
19. Hock
20. Gaskin
21. Stifle
22. Hip
23. Buttock
24. Point of Hip
25. Croup

## Identification—Key

In this activity you will:

- learn the parts of a horse.



Reference: 4-H 175, Light Horse Selection

Prepared by: Cheryl Porr, State Equine Extension Associate, Animal Sciences; Andrea Auker, OSU Animal Sciences Student

# Equine Science

## Horse Feet and Leg Structure

On the blanks, write the letter of the term that corresponds to the diagram below.

Side view of the rear legs:

- A. Ideal
- B. Sickie Hocked
- C. Camped Out

Front view of the front legs:

- D. Ideal
- E. Knock Knees
- F. Pigeon Toed
- G. Splay Footed

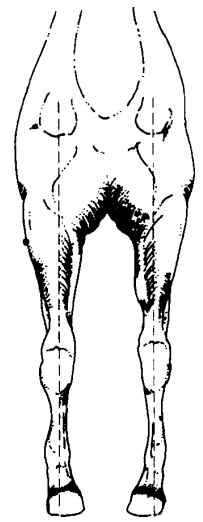
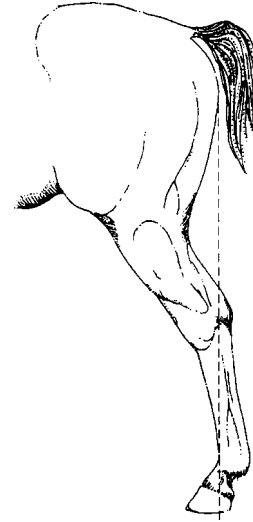
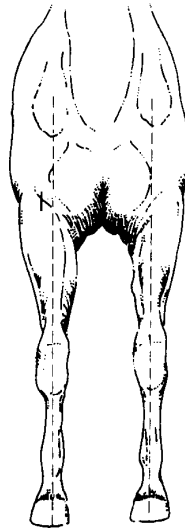
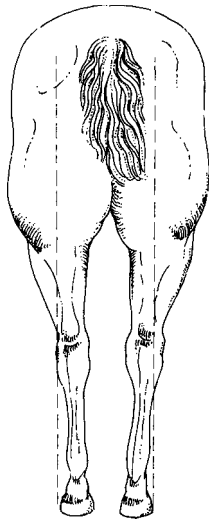
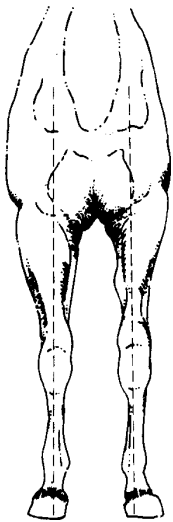
Rear view of the rear legs:

- H. Base narrow
- I. Cow Hocked
- J. Bow/Bandy Legs

### Identification

**In this activity you will:**

- identify the various feet and leg structure diagrams.



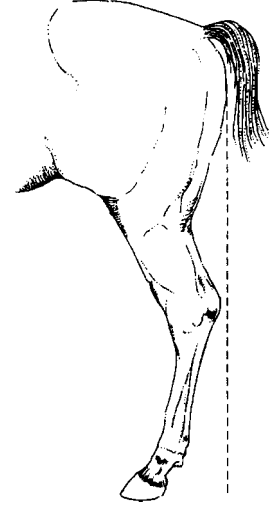
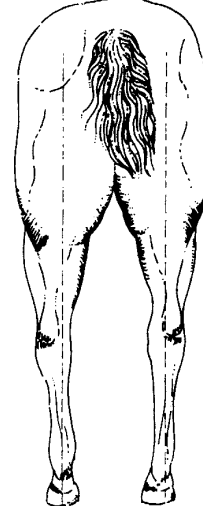
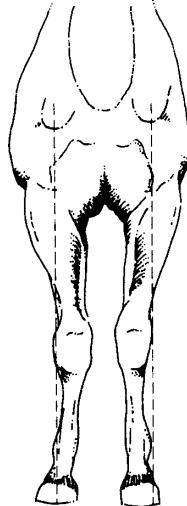
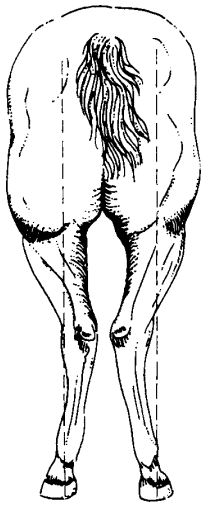
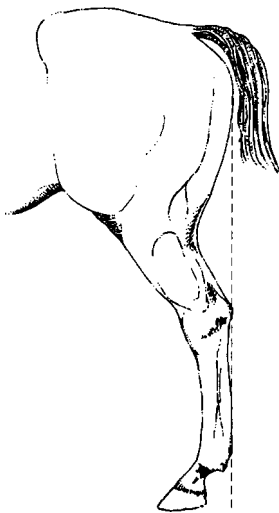
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Reference: 4-H 175, *Light Horse Selection*; and *Horse Learning Laboratory Kit*. The *Horse Learning Laboratory Kit* contains breed photos, trait descriptions, and breed name labels which are helpful but not necessary for this exercise.

Prepared by: Cheryl Porr, State Equine Extension Associate, Animal Sciences; Andrea Auker, OSU Animal Sciences Student

# Equine Science

## Horse Feet and Leg Structure

On the blanks, write the letter of the term that corresponds to the diagram below.

Side view of the rear legs:

- A. Ideal
- B. Sickie Hocked
- C. Camped Out

Front view of the front legs:

- D. Ideal
- E. Knock Knees
- F. Pigeon Toed
- G. Splay Footed

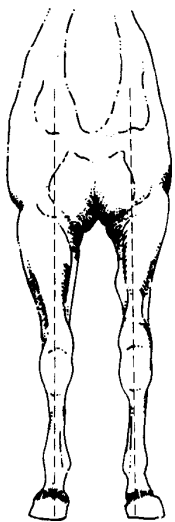
Rear view of the rear legs:

- H. Base narrow
- I. Cow Hocked
- J. Bow/Bandy Legs

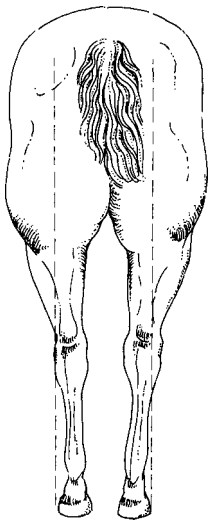
### Identification—Key

**In this activity you will:**

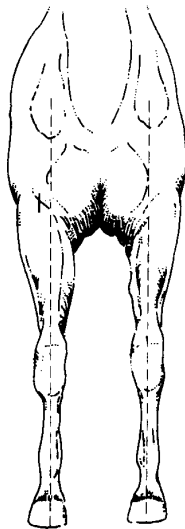
- identify the various feet and leg structure diagrams.



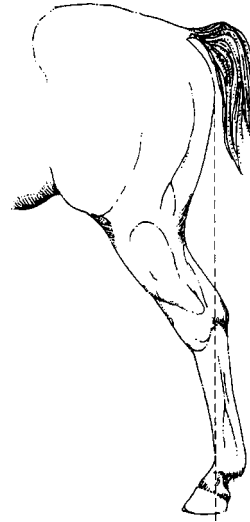
G



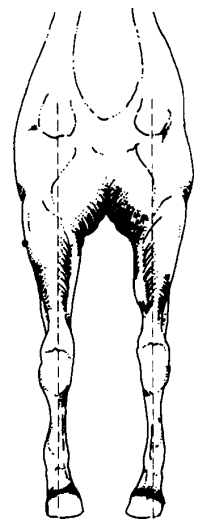
H



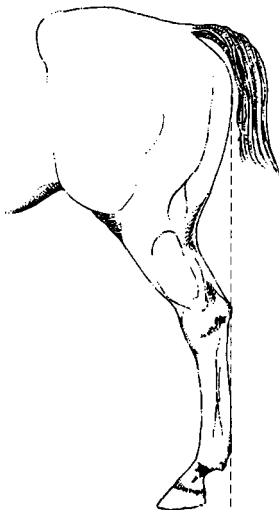
D



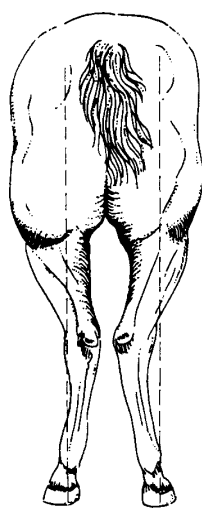
C



F



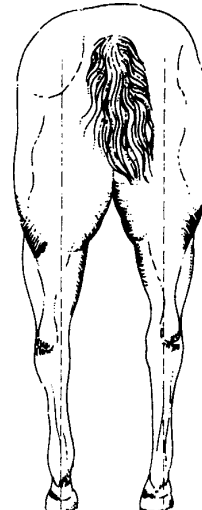
A



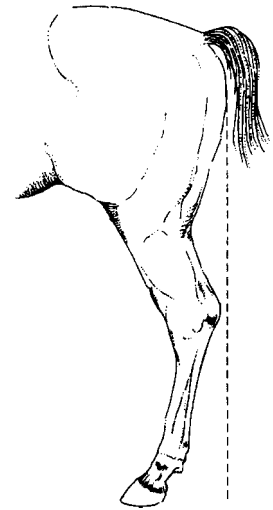
I



E



J



B

Reference: 4-H 175, *Light Horse Selection*; and *Horse Learning Laboratory Kit*. The *Horse Learning Laboratory Kit* contains breed photos, trait descriptions, and breed name labels which are helpful but not necessary for this exercise.

Prepared by: Cheryl Porr, State Equine Extension Associate, Animal Sciences; Andrea Auker, OSU Animal Sciences Student

# Equine Science

## How to Read a Feed Tag

Use the feed tag below to answer the questions.

### Decision-Making

In this activity you will:

- learn how to read a feed tag.

FEED TAG:  
50 lb. (22.7 Kg)  
Net Wt.

GENERIC NUTRITION  
PERFORMER-10 SWEET HORSE FEED

Description/Use: A texturized horse feed, formulated to be fed to horses over 2 years old when their forage (hay or pasture) is over 50% alfalfa or clover.

GUARANTEED ANALYSIS

CRUDE PROTEIN, MINIMUM		10.00%
CRUDE FAT, MINIMUM		4.50%
CRUDE FIBER, MAXIMUM		7.00%
CALCIUM (CA), MINIMUM	0.20%	MAX. 0.60%
PHOSPHORUS (P), MINIMUM		0.60%
MAGNESIUM (MG), MINIMUM		0.20%
MANGANESE (MN), MINIMUM		60 ppm
IRON (FE), MINIMUM		200 ppm
COPPER (CU), MINIMUM		50 ppm
ZINC (ZN), MINIMUM		120 ppm
SELENIUM (SE), MINIMUM		.5 ppm
VITAMIN A, MINIMUM		5,000 IU/lb.
VITAMIN D, MINIMUM		500 IU/lb.
VITAMIN E, MINIMUM		70 IU/lb.
THIAMINE (B-1), MINIMUM		7 MG/lb.

INGREDIENTS

CRIMPED OATS, HEAT PROCESSED FLAKED CORN, CRACKED CORN, WHEAT MIDDINGS, MAIZE DISTILLERS DRIED GRAINS, DRIED WHEY, CANE MOLASSES, VEGETABLE OIL, L-LYSINE, DL-METHIONINE, CALCIUM PHOSPHATE, CALCIUM CARBONATE, SALT, MAGNESIUM OXIDE, MANGANOUS OXIDE, MANGANESE SULFATE, FERROUS SULFATE, COPPER SULFATE, ZINC OXIDE, POLYSACCHARIDE COMPLEXES OF IRON, COPPER, ZINC, AND MANGANESE, COBALT SULFATE, ETHYLENEDIAMINE DIHYDRIOIDE, SODIUM SELENITE, VITAMIN A SUPPLEMENT, VITAMIN D-3 SUPPLEMENT, VITAMIN E SUPPLEMENT, THIAMINE MONONITRATE, RIBOFLAVIN SUPPLEMENT, NIACIN SUPPLEMENT, BIOTIN, D-CALCIUM PANTOTHENATE, CHOLINE CHLORIDE, VITAMIN B-12 SUPPLEMENT, FOLIC ACID, ASCORBIC ACID.

See Back of Bag for Feeding Directions  
SKILLATHON FEED  
SOMEWHERE, OH 99999

1. What is the main ingredient (or group of ingredients) in this feed?
2. What is the 4th main ingredient (or group of ingredients) in this feed?
3. What is the minimum % of Crude Protein in this feed?
4. What is the minimum % of Crude Fat in this feed?
5. Does this feed contain salt?

# Equine Science

## How to Read a Feed Tag

Use the feed tag below to answer the questions.

### Decision-Making—Key

In this activity you will:

- learn how to read a feed tag.

FEED TAG:  
50 lb. (22.7 Kg)  
Net Wt.

GENERIC NUTRITION  
PERFORMER-10 SWEET HORSE FEED

Description/Use: A texturized horse feed, formulated to be fed to horses over 2 years old when their forage (hay or pasture) is over 50% alfalfa or clover.

#### GUARANTEED ANALYSIS

CRUDE PROTEIN, MINIMUM		10.00%
CRUDE FAT, MINIMUM		4.50%
CRUDE FIBER, MAXIMUM		7.00%
CALCIUM (CA), MINIMUM	0.20%	MAX. 0.60%
PHOSPHORUS (P), MINIMUM		0.60%
MAGNESIUM (MG), MINIMUM		0.20%
MANGANESE (MN), MINIMUM		60 ppm
IRON (FE), MINIMUM		200 ppm
COPPER (CU), MINIMUM		50 ppm
ZINC (ZN), MINIMUM		120 ppm
SELENIUM (SE), MINIMUM		.5 ppm
VITAMIN A, MINIMUM		5,000 IU/lb.
VITAMIN D, MINIMUM		500 IU/lb.
VITAMIN E, MINIMUM		70 IU/lb.
THIAMINE (B-1), MINIMUM		7 MG/lb.

#### INGREDIENTS

CRIMPED OATS, HEAT PROCESSED FLAKED CORN, CRACKED CORN, WHEAT MIDLINGS, MAIZE DISTILLERS DRIED GRAINS, DRIED WHEY, CANE MOLASSES, VEGETABLE OIL, L-LYSINE, DL-METHIONINE, CALCIUM PHOSPHATE, CALCIUM CARBONATE, SALT, MAGNESIUM OXIDE, MANGANOUS OXIDE, MANGANESE SULFATE, FERROUS SULFATE, COPPER SULFATE, ZINC OXIDE, POLYSACCHARIDE COMPLEXES OF IRON, COPPER, ZINC, AND MANGANESE, COBALT SULFATE, ETHYLENEDIAMINE DIHYDRIODIDE, SODIUM SELENITE, VITAMIN A SUPPLEMENT, VITAMIN D-3 SUPPLEMENT, VITAMIN E SUPPLEMENT, THIAMINE MONONITRATE, RIBOFLAVIN SUPPLEMENT, NIACIN SUPPLEMENT, BIOTIN, D-CALCIUM PANTOTHENATE, CHOLINE CHLORIDE, VITAMIN B-12 SUPPLEMENT, FOLIC ACID, ASCORBIC ACID.

See Back of Bag for Feeding Directions  
SKILLATHON FEED  
SOMEWHERE, OH 99999

- What is the main ingredient (or group of ingredients) in this feed?

**Crimped Oats**

- What is the 4th main ingredient (or group of ingredients) in this feed?

**Wheat Middlings**

- What is the minimum % of Crude Protein in this feed?

**10%**

- What is the minimum % of Crude Fat in this feed?

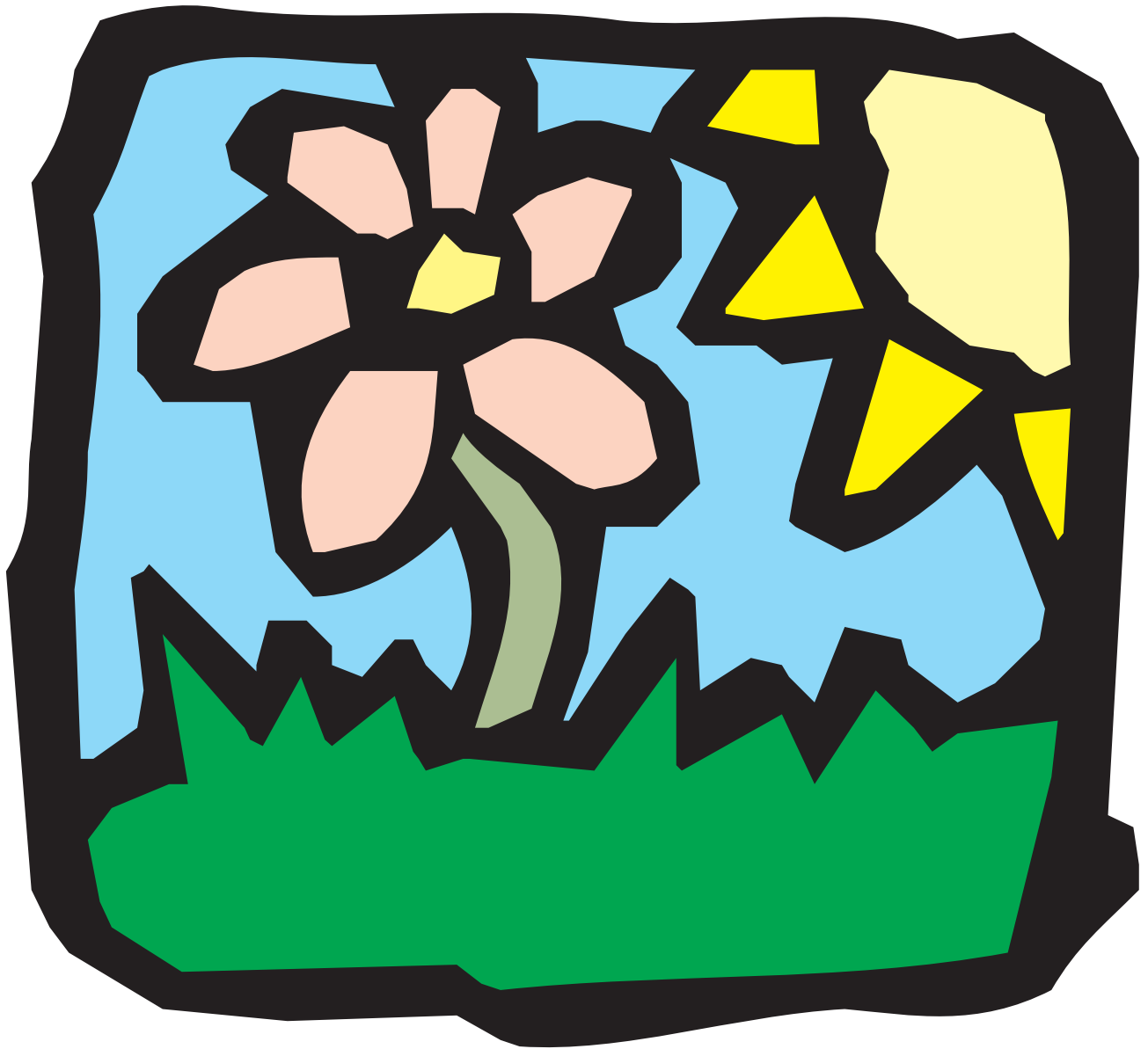
**45%**

- Does this feed contain salt?

**Yes**

# ***Countdown Chapter 5***

## ***Field and Garden***



# **Chapter 5: Field and Garden**

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# Field and Garden

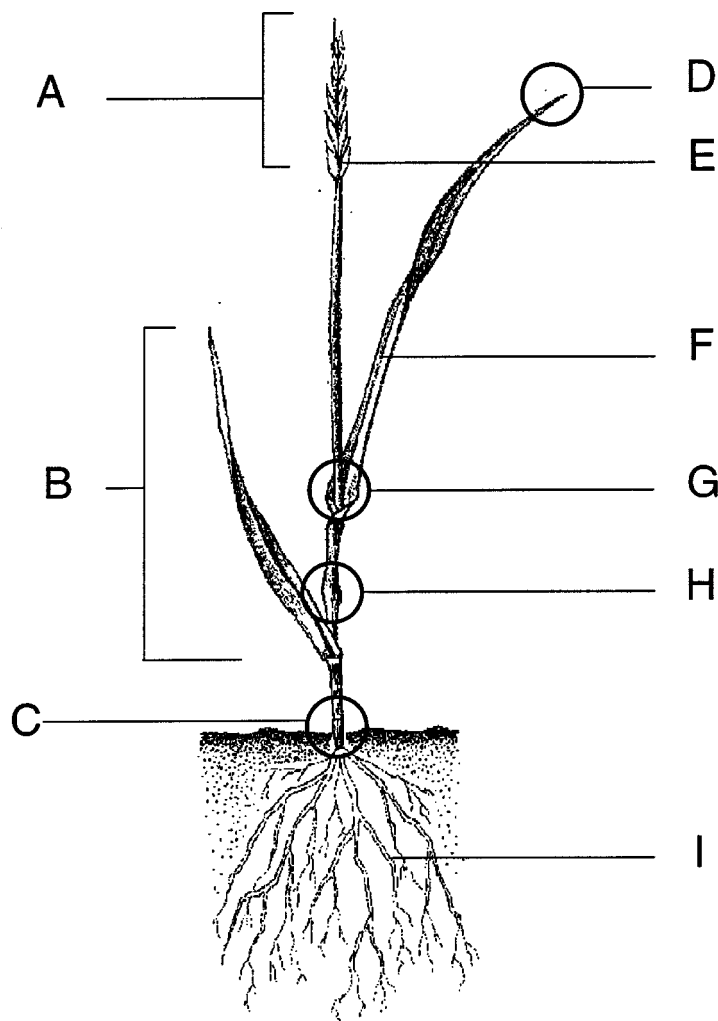
## Parts of a Grass Plant

### Identification

In this activity you will:

- learn the parts of the grass plant.

Identify the parts of the plant. Write the letter in front of the word.



- |                 |                   |                 |
|-----------------|-------------------|-----------------|
| 1. ___ roots    | 4. ___ leaf blade | 7. ___ node     |
| 2. ___ ligule   | 5. ___ seed       | 8. ___ crown    |
| 3. ___ seedhead | 6. ___ midrib     | 9. ___ leaf tip |

Developed by: Angie Eckert, M.S.

# Field and Garden

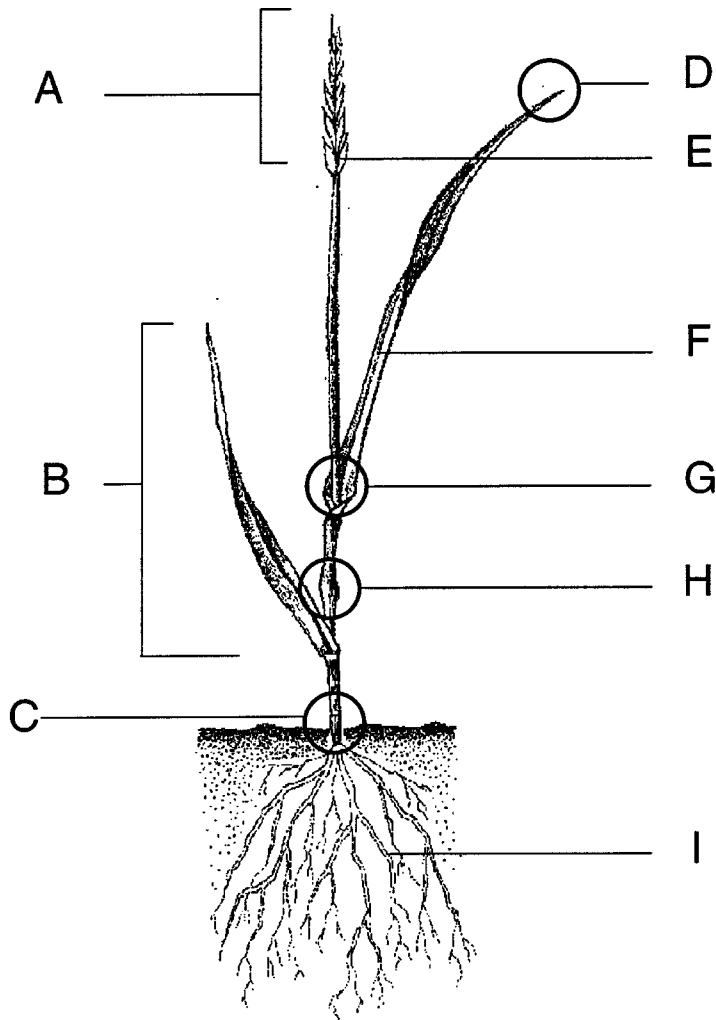
## Parts of a Grass Plant

### Identification—Key

In this activity you will:

- learn the parts of the grass plant.

Identify the parts of the plant. Write the letter in front of the word.



1. I roots
2. G ligule
3. A seedhead
4. B leaf blade
5. E seed
6. F midrib
7. H node
8. C crown
9. D leaf tip

Developed by: Angie Eckert, M.S.

# Field and Garden Soil Shakes

In this activity, each person or group will need:

- soil from outside
- a pint or quart-sized jar with a lid (clean plastic peanut butter jars work best)
- water
- alum (optional: can be found in the spice section of most grocery stores)

Soils are made of three kinds of particles: sand, silt, and clay. Good garden soil is made up of a balanced mixture of these three particles: sand, silt, and clay. Make a soil shake to observe the particles in your soil.

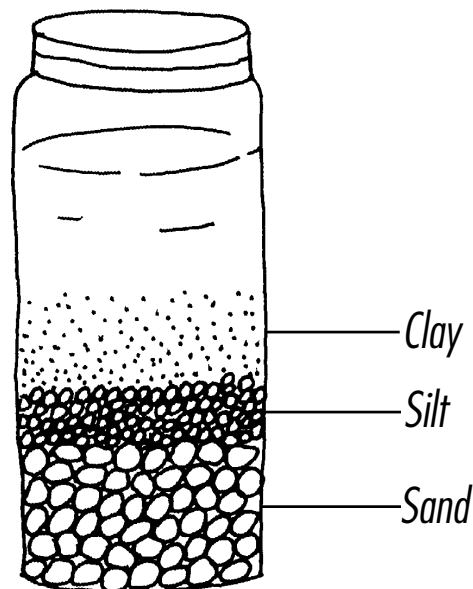
1. Collect soil from outside and fill a jar two-thirds full with the soil.
2. Fill the jar almost to the top with water. Leave one to two inches of air space at the top. *Optional: Add one tablespoon of alum. Alum speeds the soil settling process.*
3. Put the lid on tightly.
4. Shake the jar for three to five minutes until all the clumps of soil are mixed well with the water. *You may need a spoon to break apart some of the clumps.*
5. Set the jar down and wait for three minutes.

What does the soil inside the jar look like?

## Observation

### In this activity you will:

- learn that soil is made of different sized particles.



<i>After Three Minutes</i>	<i>After Ten Minutes</i>	<i>After One Hour</i>

Do you think your soil would be a good soil for growing plants? Why or why not?

Compare your "soil shake" to another person's or another group's shake. How are they similar? How are they different?

# Field and Garden Soil Shakes

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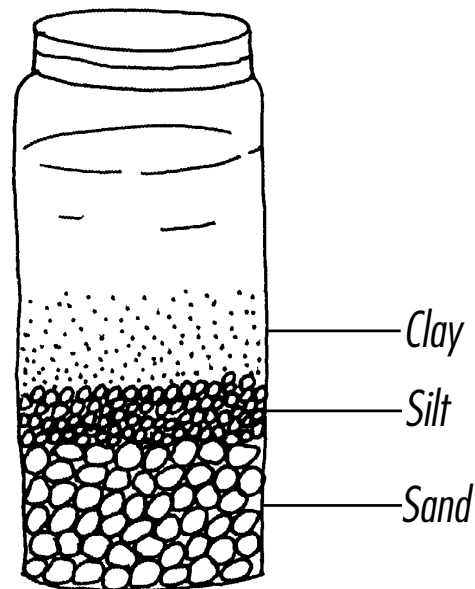
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What does the soil inside the jar look like?

## Observation—Key

**In this activity you will:**

- learn that soil is made of different sized particles.



<i>After Three Minutes</i>	<i>After Ten Minutes</i>	<i>After One Hour</i>
<p><b>Some experimenters may observe more than three layers. Encourage them to name these layers with a combination of the soil terms such as: coarse sand and fine sand.</b></p>		

Do you think your soil would be a good soil for growing plants? Why or why not?

**Answers will vary. If the soil has a balanced mixture of all three particles, it is likely to be a soil that is good for growing garden plants.**

Compare your "soil shake" to another person's or another group's shake. How are they similar? How are they different?

**Answers will vary.**

*Developed by: Angie Eckert, M.S.*

# Field and Garden

## Tree-erific Movement

### Observation

#### In this activity you will:

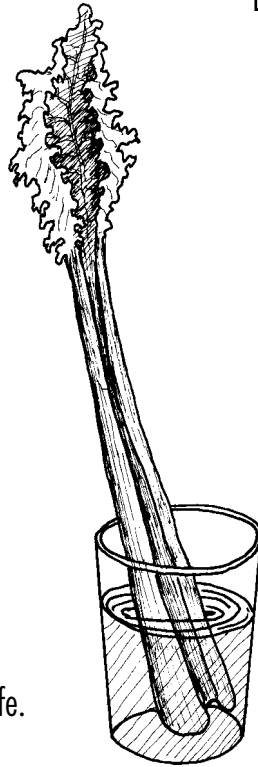
- learn about water movement in trees.

In this activity you will do two experiments. Follow the instructions and answer the questions in the space provided.

### Experiment 1

Each group will need:

- glass jar or cup
- measuring cup
- warm water
- food coloring
- celery stalk with leaves
- knife



1. Fill the jar or cup with 1 cup warm water.
2. Add 10 to 15 drops of food coloring to the water.
3. Cut the bottom of your celery stalk carefully with the knife.
4. Place the bottom part of the celery stem in the water.
5. What do you think will happen to the celery stem and leaves? \_\_\_\_\_

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6. Wait 20 minutes. (You may want to begin Experiment 2 of this activity.)

7. What happened to the celery stalk? \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

8. What is happening to the water? \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Developed by: Angie Eckert, M.S.

## **Experiment 2**

Each group will need:

- well-watered plant or tree
- small plastic bag
- twist tie
- paper towel

1. Select a plant outside (preferably one that is in the sun).
2. Cover at least three leaves on the end of the stem or twig of the plant with the plastic bag.
3. Fasten the twist tie around the plastic bag being careful not to damage the plant.
4. What do you think will happen inside the plastic bag? \_\_\_\_\_  
\_\_\_\_\_
5. Wait twenty minutes.
6. Remove the plastic bag and the twist tie.
7. Wipe the inside of the plastic bag with a paper towel.
8. What do you see on the towel? \_\_\_\_\_  
\_\_\_\_\_
9. What does this tell you about the plant? \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

# Field and Garden

## Tree-erific Movement

### Observation—Key

#### In this activity you will:

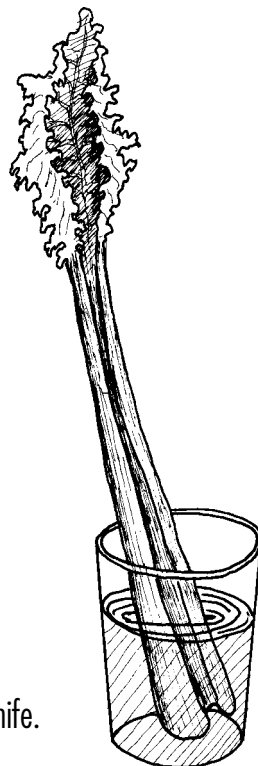
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2. Add 10 to 15 drops of food coloring to the water.
3. Cut the bottom of your celery stalk carefully with the knife.
4. Place the bottom part of the celery stem in the water.
5. What do you think will happen to the celery stem and leaves?

**Answers will vary.**

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---

---

6. Wait 20 minutes. (You may want to begin Experiment 2 of this activity.)
7. What happened to the celery stalk? **The stems and leaves will start to show the color of the dye.**

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8. What is happening to the water? **Water is drawn from the glass, up the stem, to the leaves. This shows that trees take up water from the soil with their roots.**

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Developed by: Angie Eckert, M.S.

## Experiment 2

Each group will need:

- well-watered plant or tree
- small plastic bag
- twist tie
- paper towel

1. Select a plant outside (preferably one that is in the sun).
2. Cover at least three leaves on the end of the stem or twig of the plant with the plastic bag.
3. Fasten the twist tie around the plastic bag being careful not to damage the plant.
4. What do you think will happen inside the plastic bag? **Answers will vary.**

5. Wait twenty minutes.

6. Remove the plastic bag and the twist tie.

7. Wipe the inside of the plastic bag with a paper towel.

8. What do you see on the towel? **water**

9. What does this tell you about the plant? **This shows that plants lose water through their leaves. This process is called transpiration.**

# Field and Garden Careers in Horticulture

## Matching

**In this activity you will:**

- learn about careers in horticulture.

Match the career with the description and fill in the blank.

- |                        |                   |                              |                           |
|------------------------|-------------------|------------------------------|---------------------------|
| A. Landscape designer  |                   |                              |                           |
| B. Nursery employee    | E. Orchardist     | H. Extension agent           | K. Garden center employee |
| C. Golf course manager | F. Interiorscaper | I. Horticultural salesperson | L. Professor or teacher   |
| D. Groundskeeper       | G. Florist        | J. Greenhouse employee       | M. Arborist               |

- \_\_\_ 1. Grows plants (mostly trees and shrubs) used for landscaping, producing fruit, or replanting forests.
- \_\_\_ 2. Maintains indoor plant displays in places such as malls, office buildings, and hotels.
- \_\_\_ 3. Designs attractive outdoor arrangements of plants, lawns, and recreational spaces.
- \_\_\_ 4. Cares for and prunes large shrubs and trees. Job involves tree climbing.
- \_\_\_ 5. Cares for, grows, transports, and sells plants and gardening supplies. May also place orders and assist customers.
- \_\_\_ 6. Creates and sells arrangements of cut flowers and plants, works with customers, orders supplies, and prices arrangements.
- \_\_\_ 7. Shares horticultural information with the public.
- \_\_\_ 8. Plants and maintains turf and plants on the golf course.
- \_\_\_ 9. Maintains turf and/or plants in areas such as shopping malls, apartment complexes, cemeteries, airports, schools, parks, private estates, or businesses.
- \_\_\_ 10. Manages fruit trees.
- \_\_\_ 11. Teaches horticulture at a high school, technical school, college, or university.
- \_\_\_ 12. Sells supplies needed for growing and caring for plants.
- \_\_\_ 13. Grows and maintains plants and operates equipment in greenhouses.

### Questions

1. Which jobs involve designing and creating? \_\_\_\_\_
2. Which jobs might involve working outdoors year-round? \_\_\_\_\_
3. Which jobs are primarily indoor jobs? \_\_\_\_\_  
\_\_\_\_\_
4. Assuming you had enough knowledge of the subject, which of these jobs could you start as your own business? \_\_\_\_\_  
\_\_\_\_\_
5. List five businesses in your area that employ horticulturists. \_\_\_\_\_

*Developed by: Angie Eckert, M.S.*

# Field and Garden

## Careers in Horticulture

### Matching—Key

In this activity you will:

- learn about careers in horticulture.

Match the career with the description and fill in the blank.

- |                        |                   |                              |                           |
|------------------------|-------------------|------------------------------|---------------------------|
| A. Landscape designer  |                   |                              |                           |
| B. Nursery employee    | E. Orchardist     | H. Extension agent           | K. Garden center employee |
| C. Golf course manager | F. Interiorscaper | I. Horticultural salesperson | L. Professor or teacher   |
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- B** 1. Grows plants (mostly trees and shrubs) used for landscaping, producing fruit, or replanting forests.
- F** 2. Maintains indoor plant displays in places such as malls, office buildings, and hotels.
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- L** 11. Teaches horticulture at a high school, technical school, college, or university.
- I** 12. Sells supplies needed for growing and caring for plants.
- J** 13. Grows and maintains plants and operates equipment in greenhouses.

### Questions

1. Which jobs involve designing and creating? **landscape designer, florist**
2. Which jobs might involve working outdoors year-round? **landscape maintenance, turf maintenance**
3. Which jobs are primarily indoor jobs? **interiorscaper, florist, Extension agent, professor or teacher, horticultural supply salesperson, horticultural manager, greenhouse employee**
4. Assuming you had enough knowledge of the subject, which of these jobs could you start as your own business? **greenhouse employee, groundskeeper, nursery employee, vegetable grower, orchardist**
5. List five businesses in your area that employ horticulturists. **Answers will vary.**

Developed by: Angie Eckert, M.S.

# Field and Garden

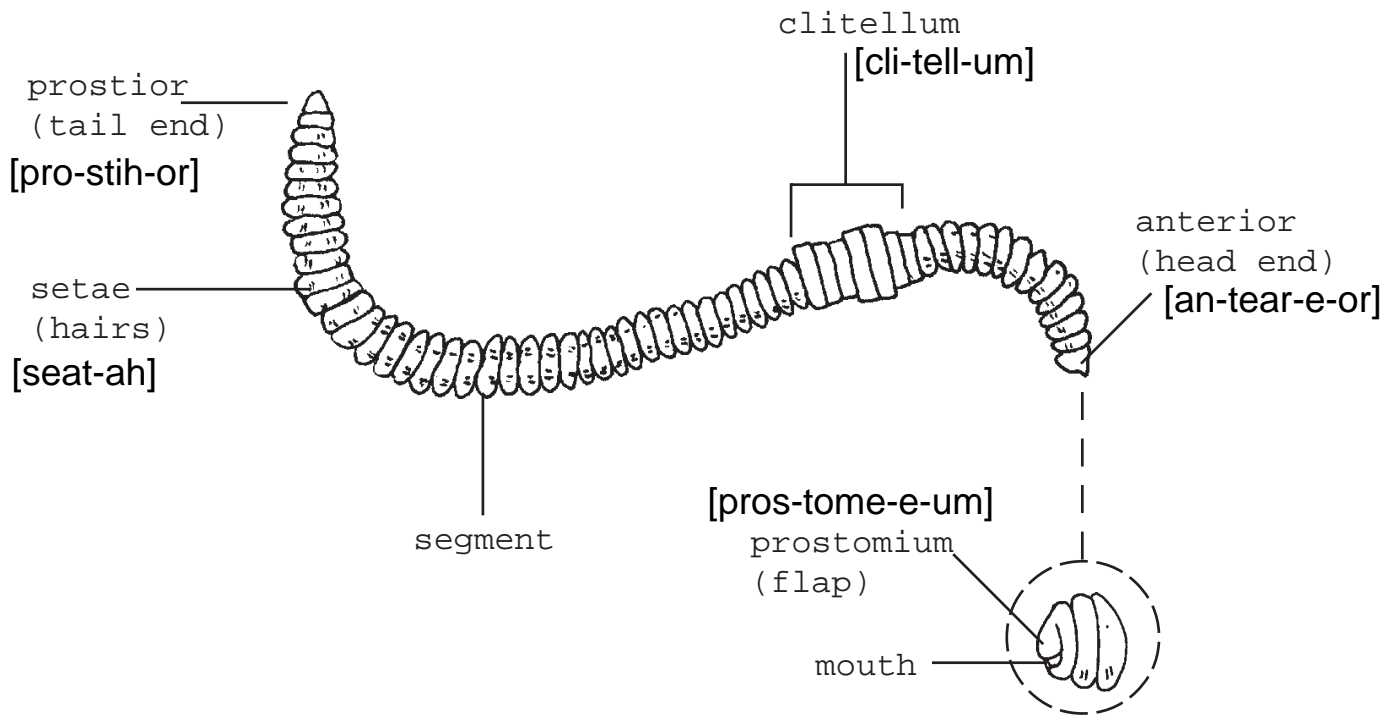
## Parts of a Worm

Refer to the drawing to answer the following questions. Pronunciations of worm body parts are in brackets.

### Identification

**In this activity you will:**

- learn about the parts of a worm.



1. What are the rings with grooves that make up a worm's body called? \_\_\_\_\_
2. What are the bristles on each segment of a worm that help it move called? \_\_\_\_\_
3. What is the end of a worm called? \_\_\_\_\_
4. What is the head end of a worm called? \_\_\_\_\_
5. What is the flap on a worm's head above the mouth called? \_\_\_\_\_
6. What is the swollen band that a worm uses to make a cocoon called? \_\_\_\_\_
7. Do you want worms in your garden? Why or why not? \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Developed by: Angie Eckert, M.S.

# Field and Garden

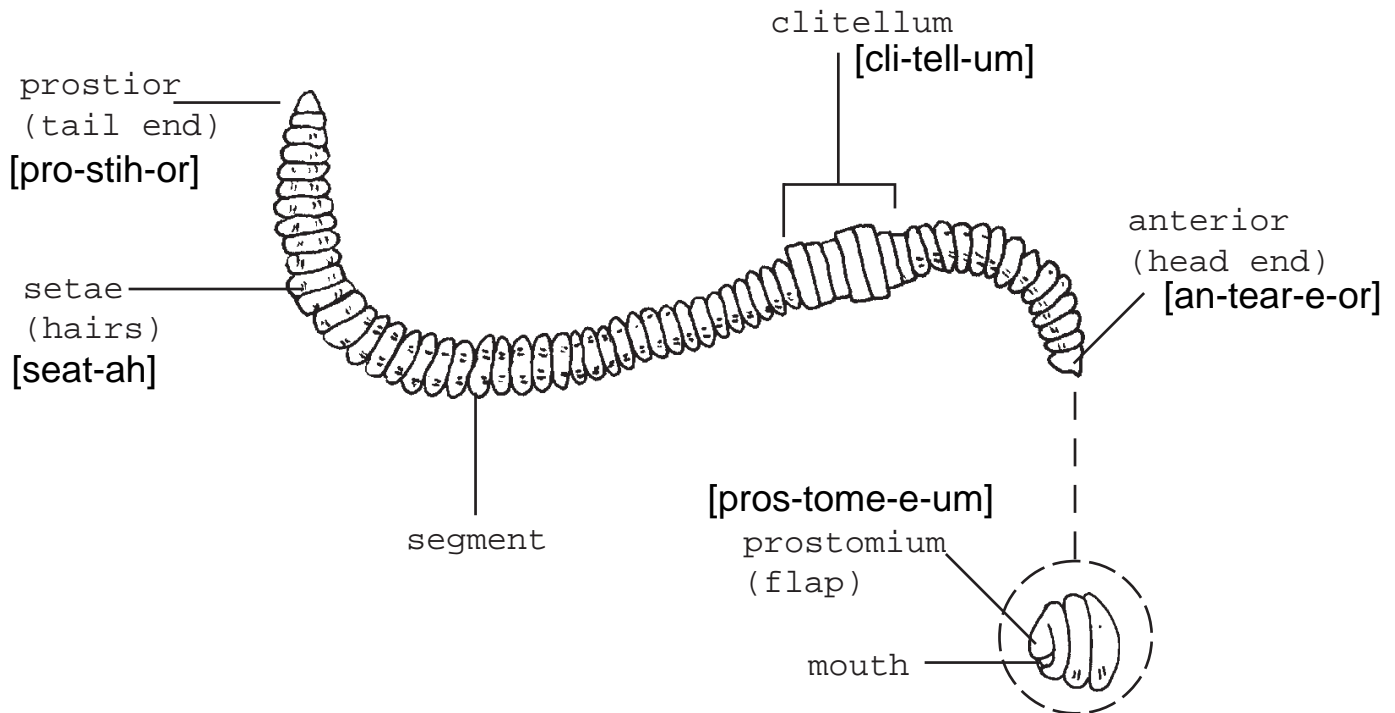
## Parts of a Worm

Refer to the drawing to answer the following questions. Pronunciations of worm body parts are in brackets.

### Identification—Key

In this activity you will:

- learn about the parts of a worm.



1. What are the rings with grooves that make up a worm's body called? segment
2. What are the bristles on each segment of a worm that help it move called? setae
3. What is the end of a worm called? prostior
4. What is the head end of a worm called? anterior
5. What is the flap on a worm's head above the mouth called? prostomium
6. What is the swollen band that a worm uses to make a cocoon called? clitellum
7. Do you want worms in your garden? Why or why not? Yes. Worms tunnel underground, making room for air, water, and roots. Worms excrete waste in the soil, which acts as a fertilizer.

Developed by: Angie Eckert, M.S.

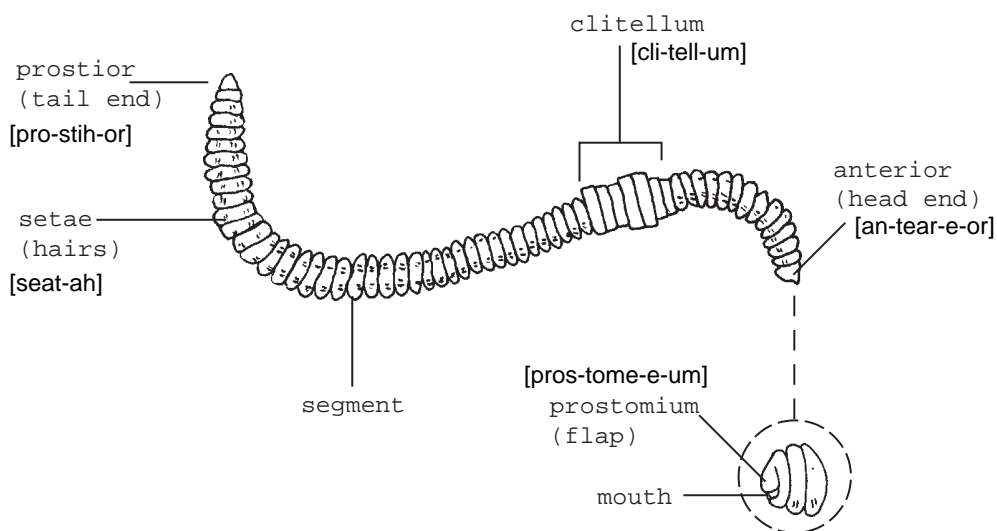
# Field and Garden

## Investigating Worms

Did you know worms are good for the soil? Worms tunnel underground, making room in the soil for air, water, and plant roots. When worms eat food scraps and bacteria in the soil, they excrete their waste in the soil. Their waste, called castings, contains many bacteria, organic matter, and nutrients which help plants grow. Pronunciations of worm body parts are in brackets.

You will need:

- an earthworm (available from bait shops or find your own outside in moist soil)
- paper towels
- water
- hand lens
- ruler
- flashlight



**Observation**

**In this activity you will:**

- discover what worms do for the soil and where worms like to live.

*Be gentle with the worm. Do not allow it to dry out. When you are finished with your investigation, release the worm outside in a cool damp place.*

1. Carefully place your worm on a wet paper towel. Use the hand lens to look for the parts of the worm. Can you find them?  
\_\_\_\_\_
2. How long is your worm? Be very gentle not to hurt the worm as you stretch it out to measure it with the ruler. \_\_\_\_\_  
\_\_\_\_\_
3. Does your worm like light? Shine the flashlight on the worm. What does it do? \_\_\_\_\_  
\_\_\_\_\_
4. Does your worm respond to sound? (Whistle, clap, or shout.) \_\_\_\_\_
5. Does your worm like wet or dry? Put a dry paper towel beside the wet paper towel. Place the worm in the middle so that half of its body is on the wet towel and half is on the dry towel. Which way does the worm move? \_\_\_\_\_  
\_\_\_\_\_

Developed by: Angie Eckert, M.S.



# Field and Garden

## Small Grain Crops

In this activity you will do a word search, answer questions, and research grain products.

For this activity, you will need: food labels or boxes from hot and cold cereals, crackers, breads, and other snacks.

### Find the Grains

In the sequence of letters, find and circle the 4 small grains grown in Ohio.

g r a r y e s w h e a t s f a m b a r l e y i o a t s l y

What plant family do grains belong to? (Hint: look at the uncircled letters above) \_\_\_\_\_

Small grains are used in many ways. From the list below, circle the numbers that describe uses of grain.

1. ground into flour for bread, cake, cookies, crackers, snacks
2. food for animals
3. straw for bedding and mulch
4. planted to control erosion
5. planted to replenish nutrients to the soil (green manure)
6. used to produce malt for beverages
7. used to make paper and cardboard

### Grain Scoreboard

Collect food labels or containers of hot and cold cereals, crackers, breads, and other snacks. Read the ingredient labels and record the types of grains in each product on the score sheet. Draw a bar graph on graph paper to show your results.

Oats	Wheat	Rye	Barley

List four foods made from grain:

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_
4. \_\_\_\_\_

Developed by: Angie Eckert, M.S.

## Word Search

### In this activity you will:

- learn about small grains and their uses.

# Field and Garden

## Small Grain Crops

### Word Search—Key

#### In this activity you will:

- learn about small grains and their uses.

In this activity you will do a word search, answer questions, and research grain products.

For this activity, you will need: food labels or boxes from hot and cold cereals, crackers, breads, and other snacks.

### Find the Grains

In the sequence of letters, find and circle the 4 small grains grown in Ohio.

g r a r y e s w h e a t s f a m b a r l e y i o a t s l y

What plant family do grains belong to? (Hint: look at the uncircled letters above) grass family

Small grains are used in many ways. From the list below, circle the numbers that describe uses of grain.

- ground into flour for bread, cake, cookies, crackers, snacks
- food for animals
- straw for bedding and mulch
- planted to control erosion
- planted to replenish nutrients to the soil (green manure)
- used to produce malt for beverages
- used to make paper and cardboard

**All are uses. All should be circled.**

### Grain Scoreboard

Collect food labels or containers of hot and cold cereals, crackers, breads, and other snacks. Read the ingredient labels and record the types of grains in each product on the score sheet. Draw a bar graph on graph paper to show your results.

Oats	Wheat	Rye	Barley

List four foods made from grain:

- \_\_\_\_\_
- \_\_\_\_\_
- \_\_\_\_\_
- \_\_\_\_\_

**Answers will vary, but could include breads, cereals, pasta, crackers, oatmeal, cream of wheat, noodles, etc.**

Developed by: Angie Eckert, M.S.

# Field and Garden

## Wonderful Wheat

### Activities

#### In this activity you will:

- learn about the parts of a wheat kernel.
- discover unique facts about wheat.
- learn how wheat is harvested.

#### True or False

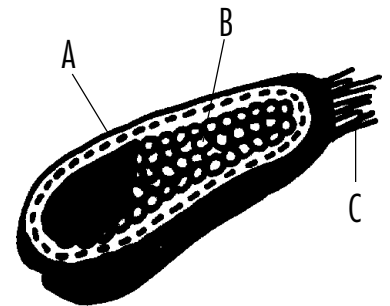
Which of the following are true? Mark true or false next to the statement.

- \_\_\_\_\_ 1. One acre of land can produce enough wheat for bread for a family for ten years.
- \_\_\_\_\_ 2. One bushel of wheat will make seventy one-pound loaves of bread.
- \_\_\_\_\_ 3. The average person consumes an average of 123 pounds of wheat products each year.
- \_\_\_\_\_ 4. A building that stores grain is called a "grain escalator."
- \_\_\_\_\_ 5. Bread, which is made of wheat, is the most widely eaten food.
- \_\_\_\_\_ 6. Wheat can be grown in the summer and the winter.
- \_\_\_\_\_ 7. Wheat plants are not damaged by diseases or weeds.

#### Matching

This is a picture of a kernel of wheat. The kernel is the part of the seed used in food products. Look at the letters on the drawing. Write the letter next to the coordinating description.

- \_\_\_\_\_ **Germ** is the smallest part of the kernel. It is the sprouting part of the seed and is also included in whole wheat flour.
- \_\_\_\_\_ **Endosperm** is the largest portion of the kernel. It is the only part of the kernel that is used in white flour.
- \_\_\_\_\_ **Bran** is the second largest part of the kernel. It is included in whole wheat flour and bran cereals and is high in protein and fiber. It is the outermost layer of the kernel.



#### Arrange in Correct Order

Imagine you are growing a winter crop of wheat. Number the steps of wheat production order that they occur, 1 through 9.

- \_\_\_\_\_ Chemicals are sprayed on the wheat to control weeds and insects.
- \_\_\_\_\_ The wheat is planted with a grain drill and fertilized in fall.
- \_\_\_\_\_ The wheat plants produce a milk-like fluid inside their seeds.
- \_\_\_\_\_ The plants turn from green to brown.
- \_\_\_\_\_ Wheat seeds become dry and hard.
- \_\_\_\_\_ The wheat plants sprout.
- \_\_\_\_\_ Harvest the wheat with a combine.
- \_\_\_\_\_ The wheat begins to grow again.
- \_\_\_\_\_ The plant stops growing during the cold months. The snow serves as a blanket to protect the crop from cold temperatures.
- \_\_\_\_\_

*Parts of this activity were adapted from the Ohio Ag in the Classroom: Fourth Grade Curriculum Guide.*

*Developed by: Angie Eckert, M.S.*

# Field and Garden

## Wonderful Wheat

### Activities—Key

#### In this activity you will:

- learn about the parts of a wheat kernel.
- discover unique facts about wheat.
- learn how wheat is harvested.

### True or False

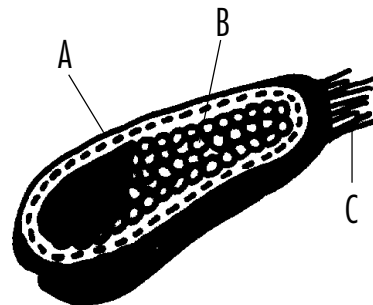
Which of the following are true? Mark true or false next to the statement.

- True** 1. One acre of land can produce enough wheat for bread for a family for ten years.
- True** 2. One bushel of wheat will make seventy one-pound loaves of bread.
- True** 3. The average person consumes an average of 123 pounds of wheat products each year.
- False** 4. A building that stores grain is called a “grain escalator.” **It is called a grain elevator.**
- True** 5. Bread, which is made of wheat, is the most widely eaten food.
- True** 6. Wheat can be grown in the summer and the winter.
- False** 7. Wheat plants are not damaged by diseases or weeds. **Diseases and weeds attack wheat. Farmers must use methods to control them.**

### Matching

This is a picture of a kernel of wheat. The kernel is the part of the seed used in food products. Look at the letters on the drawing. Write the letter next to the coordinating description.

- C** **Germ** is the smallest part of the kernel. It is the sprouting part of the seed and is also included in whole wheat flour.
- B** **Endosperm** is the largest portion of the kernel. It is the only part of the kernel that is used in white flour.
- A** **Bran** is the second largest part of the kernel. It is included in whole wheat flour and bran cereals and is high in protein and fiber. It is the outermost layer of the kernel.



### Arrange in Correct Order

Imagine you are growing a winter crop of wheat. Number the steps of wheat production order that they occur, 1 through 9.

- 5** Chemicals are sprayed on the wheat to control weeds and insects.
- 1** The wheat is planted with a grain drill and fertilized in fall.
- 6** The wheat plants produce a milk-like fluid inside their seeds.
- 7** The plants turn from green to brown.
- 8** Wheat seeds become dry and hard.
- 2** The wheat plants sprout.
- 9** Harvest the wheat with a combine.
- 4** The wheat begins to grow again.
- 3** The plant stops growing during the cold months. The snow serves as a blanket to protect the crop from cold temperatures.

*Parts of this activity were adapted from the Ohio Ag in the Classroom: Fourth Grade Curriculum Guide.  
Developed by: Angie Eckert, M.S.*

# Field and Garden

## Inside of a Tree

The inside of a tree is like a highway! Trees have networks inside of them that move water from the roots, through the trunk, to the leaves, and out into the air.

### Activities

#### In this activity you will:

- learn about the insides of a tree.

### Matching

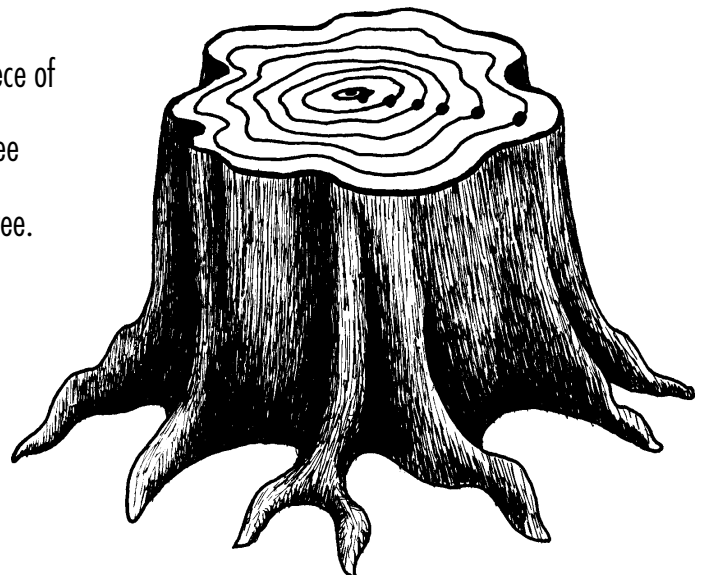
Draw a line from the words to their definitions.

- |                  |   |
|------------------|---|
| veins            | 1. These microscopic openings on the undersides of leaves open and close to release water from the leaves into the air. |
| cuticle          | 2. The underground network of a tree.   |
| root hairs       | 3. These underground parts of a tree absorb 95 percent of the plant's water and nutrients.                              |
| roots            | 4. The "pipes" inside the trunk that move nutrients up from the roots to the other parts of the tree.                   |
| xylem            | 5. These "pipes" move food made by the leaves down to the stems, trunk, and the roots.                                  |
| bark             | 6. This waxy coating on the leaf prevents the plant from losing too much water through its leaves.                      |
| phloem (flow-um) | 7. The network in a leaf that moves water and nutrients from the stem to the parts of the leaf.                         |
| stomata          | 8. The outside layer of the tree that protects the inside of the tree.  |

### Counting Rings

Look at the end of the piece of firewood. (If you don't have a piece of firewood, look at the drawing of the tree on this page.) As the tree ages, the inside of the tree hardens which gives strength to the tree.

A tree shows a new ring for each year of its life. Count the number of rings you see. How old do you think this tree was when it was cut? \_\_\_\_\_



Developed by: Angie Eckert, M.S.

# Field and Garden

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### Matching

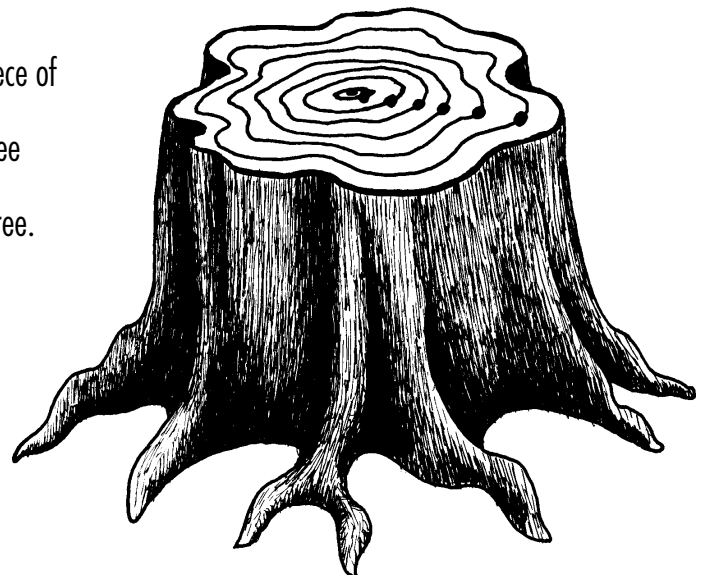
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A tree shows a new ring for each year of its life. Count the number of rings you see. How old do you think this tree was when it was cut? 8 years



Developed by: Angie Eckert, M.S.

# Field and Garden

## Leaf Identification

### Identification

**In this activity you will:**

- learn about leaves.

Find a leaf. Draw your leaf below or tape your leaf to the page. Look closely at the veins.

Are the veins parallel (side-by-side)? \_\_\_\_\_

Does it have one main vein or several main veins? \_\_\_\_\_

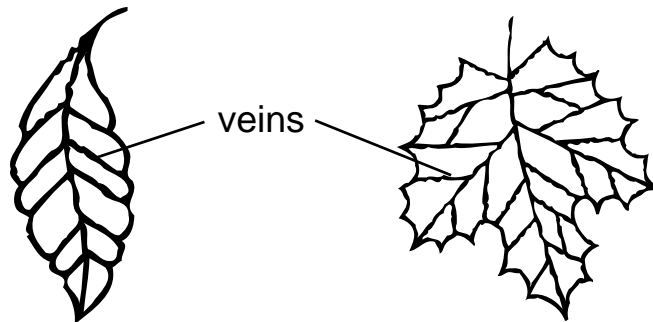
Can you count the number of branching veins? \_\_\_\_\_

What would happen to a tree if it had leaves without veins? \_\_\_\_\_

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# Field and Garden

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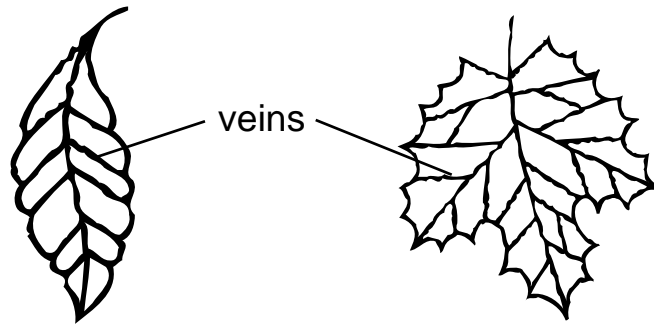
Can you count the number of branching veins? \_\_\_\_\_

What would happen to a tree if it had leaves without veins? **The tree would die from a lack of nourishment.**

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# Field and Garden

## The Name Game

Plants are given a common name (like Ohio Buckeye) and a Latin name (like *Aesculus glabra*). This allows people from different parts of the world to talk about plants using the same names. Latin is the world-wide language of plants.

### Key of Latin Terms

*cyan* = blue

*purpurea* = purple

*chloro* = green

*lutea* = yellow

*ruber* = red

*japonica* = from Japan

*lavendula* = lavender

*phylla* = leaf

*giganteum* = giant

*cordata* = heart

*rosea* = rosy

## Matching

### In this activity you will:

- learn what a plant's Latin name reveals about a plant's features.

### Solve the Mystery

Use the key to solve the mystery of the names.

1. What color are this plant's flowers? *Trillium lutea* \_\_\_\_\_
2. In what country do you think this plant was discovered? *Acer japonica* \_\_\_\_\_
3. What kind of shape would you expect this plant's leaves to be? *Viola cordata* \_\_\_\_\_
4. What color flowers does this plant have? *Coreopsis rosea* \_\_\_\_\_
5. What color do you think this tree's leaves are? *Acer purpurea* \_\_\_\_\_
6. What might the flowers of this plant be like? *Allium giganteum* \_\_\_\_\_

### Matching

Guess the answer to the questions using plants from this list:

*Cotoneaster horizontalis*

*Viburnum cylindricum*

*Pilea microphylla*

*Picea abies compacta*

*Dracena fragrans*

*Cucurbita maxima*

1. Which plant grows low to the ground? \_\_\_\_\_
2. Which plant is small? \_\_\_\_\_
3. Which plant has small leaves? \_\_\_\_\_
4. Which plant grows tall and narrow (like a cylinder)? \_\_\_\_\_
5. Which plant has fragrant leaves? \_\_\_\_\_
6. Which plant produces large fruits? \_\_\_\_\_

Developed by: Angie Eckert, M.S.

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Use the key to solve the mystery of the names.

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2. In what country do you think this plant was discovered? *Acer japonica* Japan
3. What kind of shape would you expect this plant's leaves to be? *Viola cordata* heart-shaped
4. What color flowers does this plant have? *Coreopsis rosea* rose-colored or pink
5. What color do you think this tree's leaves are? *Acer purpurea* purple
6. What might the flowers of this plant be like? *Allium giganteum* large in size

### Matching

Guess the answer to the questions using plants from this list:

*Cotoneaster horizontalis*

*Viburnum cylindricum*

*Pilea microphylla*

*Picea abies compacta*

*Dracena fragrans*

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6. Which plant produces large fruits? **Cucurbita maxima**

Developed by: Angie Eckert, M.S.

# Field and Garden

## Lawn Pests

A lawn pest is an organism that interferes with the healthy growth or appearance of the grass. Lawn pests include diseases, insects, weeds, and animals.

Find the following in the word search:

### *annual weeds*

(live for one year)

chickweed

crabgrass

purslane

henbit

### *perennial weeds*

(live for more than one year)

Canada thistle

ground ivy

dandelion

oxalis

### *insects*

cinch bug

billbug

sod webworm

white grub

aphid

### *diseases*

rust

powdery mildew

red thread

dollar spot

### *animals*

skunk

dog

mole

chipmunk

rabbit

## Word Search

### In this activity you will:

- learn some of the names of common lawn pests.
- complete a lawn pest word search.

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

# Field and Garden

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(live for one year)

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crabgrass

purslane

henbit

### perennial weeds

(live for more than one year)

Canada thistle

ground ivy

dandelion

oxalis

### insects

cinch bug

billbug

sod webworm

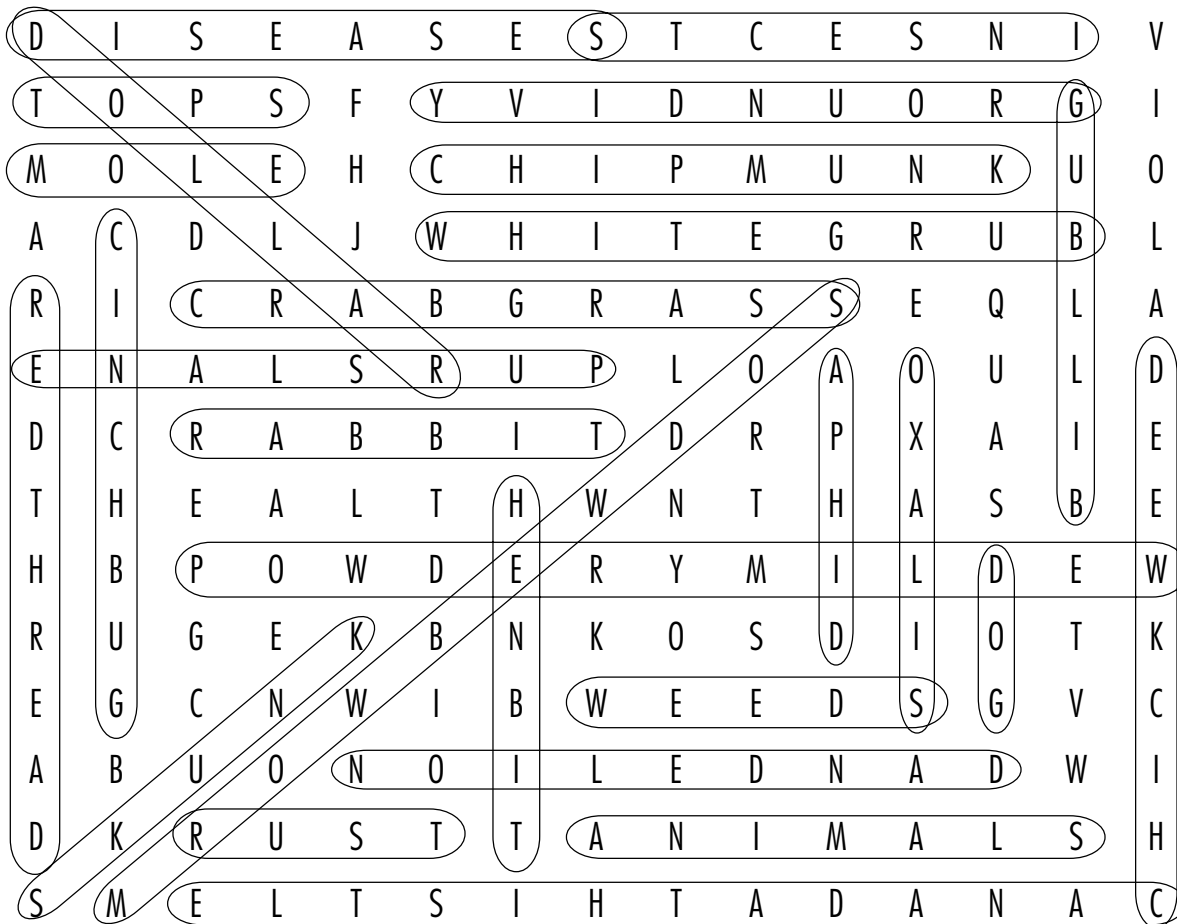
white grub

aphid

## Word Search—Key

### In this activity you will:

- learn some of the names of common lawn pests.
- complete a lawn pest word search.



# Field and Garden

## Compost for Your Garden

In this activity you will do a word circle and a word search.

Composting is a way to recycle kitchen and yard wastes into an organic matter that can be used in the garden. Over time, the wastes decompose into a rich soil-like material containing nutrients that plants need to grow.

### Activities

#### In this activity you will:

- learn what kinds of kitchen wastes and lawn wastes can be added to a compost pile.

### What Belongs?

Circle the things that you think belong in a compost pile.

flowers	weeds	eggshells	bones
leaves	bread	dairy products	fatty foods
dead animals	wood chips	meat	fish
large twigs	coffee grounds	fertilizer	water
grass clippings	soil	cooking oil	vegetables and fruits
twigs	yarn	apple peels	manure

### Word Search

All the items named in the search are good for a compost pile. Things that should not be added to the compost pile will not be found in the word search. Check your answers to see if you found all fifteen!

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

Developed by: Angie Eckert, M.S.

# Field and Garden

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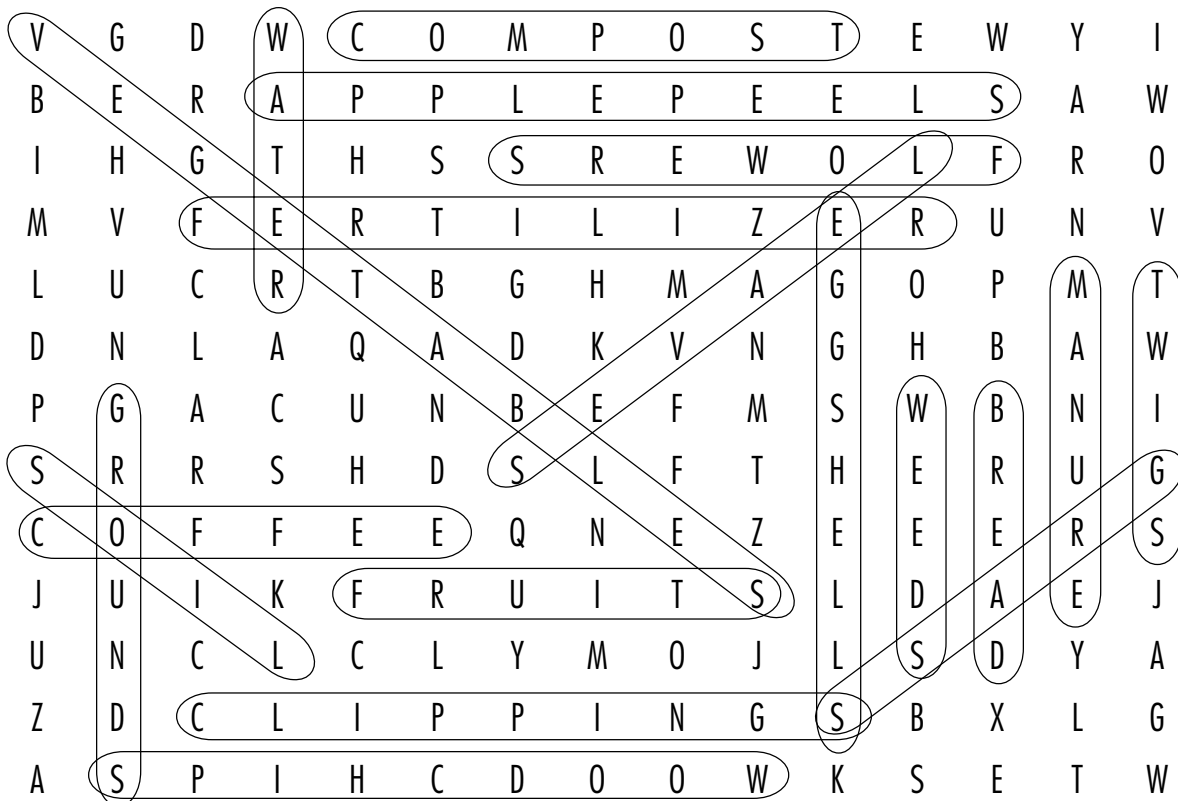
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- |                 |                |                |                       |
|-----------------|----------------|----------------|-----------------------|
| flowers         | weeds          | eggshells      | bones                 |
| leaves          | bread          | dairy products | fatty foods           |
| dead animals    | wood chips     | meat           | fish                  |
| large twigs     | coffee grounds | fertilizer     | water                 |
| grass clippings | soil           | cooking oil    | vegetables and fruits |
| twigs           | yarn           | apple peels    | manure                |

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Developed by: Angie Eckert, M.S.

# Field and Garden

## Recipe for Compost

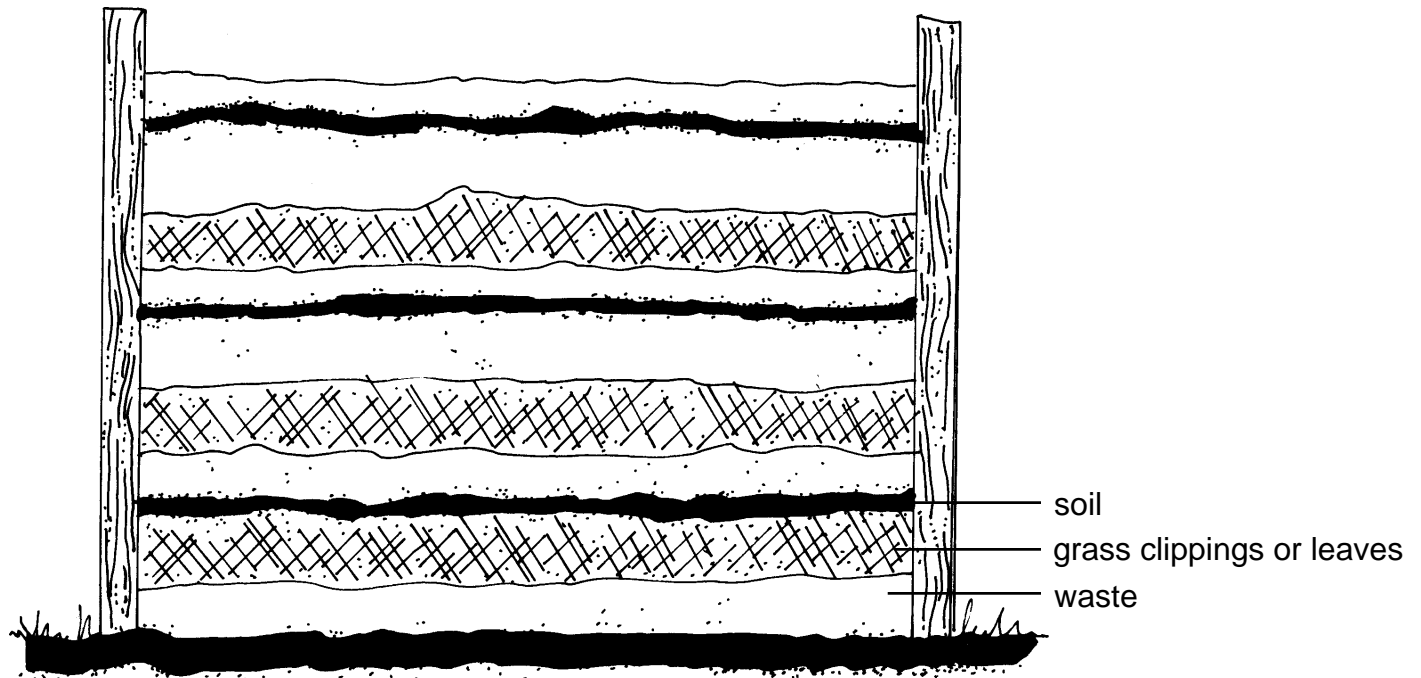
### Activity

#### In this activity you will:

- learn the steps in building a compost pile.

Compost piles are made by layering material. (It's like making lasagna!) Circle the correct answer in each of the steps.

- Step 1 Select a site for the compost pile in **full sun** or **shade**.
- Step 2 Build a compost pile on **concrete** or **soil**.
- Step 3 Add **6 to 8 inches** or **12 to 15 inches** of yard waste.
- Step 4 Add one inch of **soil** or **fertilizer**.
- Step 5 Sprinkle a thin layer of **soil** or **fertilizer**.
- Step 6 Repeat the layers until the pile is **one foot** or **three feet** or **nine feet** tall.
- Step 7 Turn the compost pile **once a day** or **every few weeks**.
- Step 8 In **several months** or **one year** the compost is ready for use in the garden.



*Cross Section of a Compost Pile—It's Like Making Lasagna!*

Developed by: Angie Eckert, M.S.

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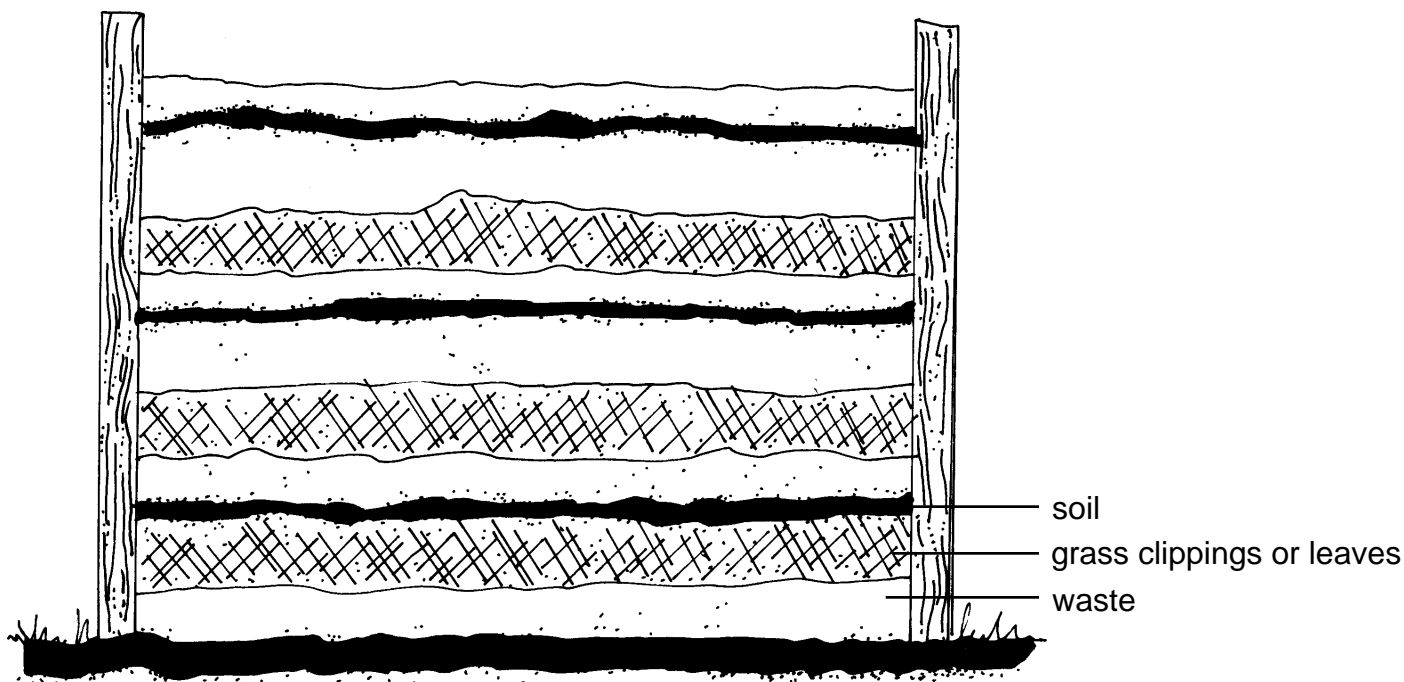
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*Cross Section of a Compost Pile—It's Like Making Lasagna!*

Developed by: Angie Eckert, M.S.

# Field and Garden

## Vegetable Chart

What part of the plant do we eat? Sort the following vegetables into categories:

broccoli	beets	collards	turnip
peas	tomatoes	corn	celery
cauliflower	kale	spinach	carrots
muskmelon	potatoes	watermelon	radish
cabbage	cucumber	beans	Swiss chard

### Word Search

**In this activity you will:**

- learn characteristics of vegetable plants.

<i>Stems We Eat</i>	<i>Leafy Greens We Eat</i>	<i>Flowers We Eat</i>
1. _____ 2. _____	1. _____ 2. _____ 3. _____ 4. _____ 5. _____ 6. _____	1. _____ 2. _____
<i>Plants With Underground Edible Parts</i>	<i>Vine Crops</i>	<i>Seeds We Eat</i>
1. _____ 2. _____ 3. _____ 4. _____ 5. _____	1. _____ 2. _____ 3. _____ 4. _____ 5. _____	1. _____ 2. _____ 3. _____

### Word Scramble

Unscramble these words to answer the questions. Choose from these possible words: asparagus, collards, legume, pumpkin, rhubarb, and spinach.

- Which vegetables are perennials (plants that will come back next year)?  
pasugaras \_\_\_\_\_ barrhbu \_\_\_\_\_
- Which family of plants can make nitrogen in the soil available to plants?  
gluseme \_\_\_\_\_

*Developed by: Angie Eckert, M.S.*

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2. <u>rhubarb</u>	2. <u>lettuce</u>	2. <u>cauliflower</u>
	3. <u>spinach</u>	
	4. <u>kale</u>	
	5. <u>Swiss chard</u>	
	6. <u>cabbage</u>	
<i>Plants With Underground Edible Parts</i>	<i>Vine Crops</i>	<i>Seeds We Eat</i>
1. <u>radish</u>	1. <u>cucumber</u>	1. <u>corn</u>
2. <u>carrots</u>	2. <u>muskmelon</u>	2. <u>peas</u>
3. <u>turnip</u>	3. <u>watermelon</u>	3. <u>beans</u>
4. <u>beets</u>	4. <u>pumpkin</u>	
5. <u>potatoes</u>	5. <u>squash</u>	

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2. Which family of plants can make nitrogen in the soil available to plants?

gluseme \_\_\_\_\_ **legume**

*Developed by: Angie Eckert, M.S.*

# Field and Garden Order Up

Use a seed catalog (or visit a store) to find the information necessary to complete the chart. There are many correct answers for each category. When you have found the price of seeds for each category, add the costs to find the total.

You will need:

- at least one seed catalog or
- to visit a store that sells seeds.

## Information, Please

### In this activity you will:

- learn how to select and order vegetable seeds.

<i>Find a vegetable that:</i>	<i>Name of the Seed or Vegetable</i>	<i>Number of Seeds in the Packet</i>	<i>Cost Per Packet</i>
Has oval-shaped vegetables.	<b>Milano Hybrid Tomato</b>	<b>30</b>	<b>\$1.69</b>
Has oval-shaped vegetables.			
Produces giant tomatoes.			
Can be harvested in 50 days or less.			
Produces a yellow vegetable.			
Needs at least 80 days to grow before harvest.			
Tolerates cool weather.			
Produces edible roots.			
Grows like a vine.			
Produces a giant squash.			
Tastes "hot."			
Produces a purple vegetable.			
<i>Total Cost</i>			

Developed by: Angie Eckert, M.S.

# Field and Garden

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Has oval-shaped vegetables.			
Produces giant tomatoes.	<b>Big Boy</b>		
Can be harvested in 50 days or less.	<b>Radishes</b>		
Produces a yellow vegetable.	<b>Summer Squash</b>		
Needs at least 80 days to grow before harvest.	<b>Pumpkin</b>		
Tolerates cool weather.	<b>Peas</b>		
Produces edible roots.	<b>Carrots, Radishes, Parsnips</b>		
Grows like a vine.	<b>Pumpkin, Squash</b>		
Produces a giant squash.			
Tastes "hot."	<b>Jalapeno Peppers</b>		
Produces a purple vegetable.	<b>Eggplant</b>		
<i>Total Cost</i>			

Developed by: Angie Eckert, M.S.

# Field and Garden

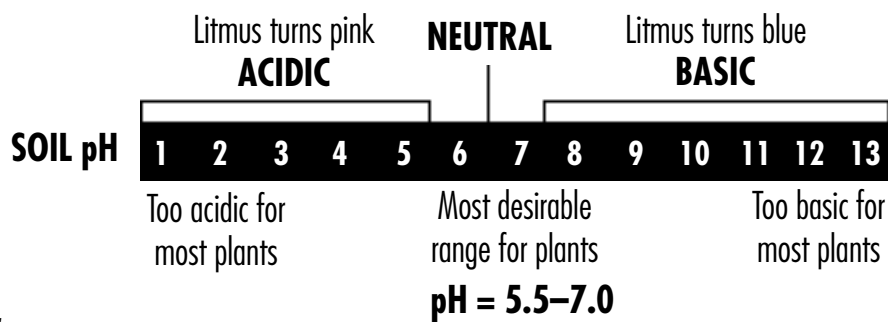
## Soil pH

You will need:

- two glass jars with lids
- masking tape
- litmus paper (available from teacher supply stores or science suppliers)
- spoon
- limestone (available at garden centers)
- iron sulfate (available at garden centers)
- measuring cup
- water
- soil from the lawn or garden

Nutrients in the soil are only available to plants if the pH of the soil is between 5.5 and 7.0. If the soil pH is too acidic or too basic, the plants will not grow. Gardeners test the soil with a kit or send it to a lab to have the pH measured. Then they decide whether to add limestone and iron sulfate to the soil to change the pH.

Experiment with pH by using litmus paper. Litmus paper changes color when it touches acidic or basic solutions. Blue litmus paper turns red when it touches an acidic solution. Red litmus paper will turn blue if it touches a basic solution.



### Experiment

Use the chart above to help you with the experiment.

Test the pH of limestone and iron sulfate.

Step 1 Label two jars with masking tape.

Step 2 Put a strip of litmus paper at the bottom of each jar.

Step 3 Put a spoonful of limestone in one jar and a spoonful of iron sulfate in the other.

Step 4 Add 1/2 to 1 cup water to each jar.

Step 5 Place the lid on the jar and shake it.

Step 6 Look at the litmus paper.

*Developed by: Angie Eckert, M.S.*

## Soil Test

### In this activity you will:

- learn about soil pH and why it is important to plants.
- do an experiment with a partner to measure pH.

1. What color is the litmus paper in the jar with limestone? \_\_\_\_\_
2. Is limestone acidic or basic? \_\_\_\_\_
3. What color is the litmus paper in the jar with iron sulfate? \_\_\_\_\_
4. Is iron sulfate acidic or basic? \_\_\_\_\_
5. Circle which one you would add to the soil if the pH was too high.            iron sulfate            limestone
6. Circle which one you would add to the soil if the pH was too low.            iron sulfate            limestone

### **Soil Test**

Collect a sample of soil from outside. Perform the litmus test on the soil. Is the soil acidic, neutral, or basic? Do you need to add anything to change the pH to the desirable range?

Practice testing the pH of items such as fruits, drinking water, beverages, soapy water, vinegar, milk, juice, tomatoes, potatoes, etc.

# Field and Garden

## Soil pH

You will need:

- two glass jars with lids
- masking tape
- litmus paper (available from teacher supply stores or science suppliers)
- spoon
- limestone (available at garden centers)
- iron sulfate (available at garden centers)
- measuring cup
- water
- soil from the lawn or garden

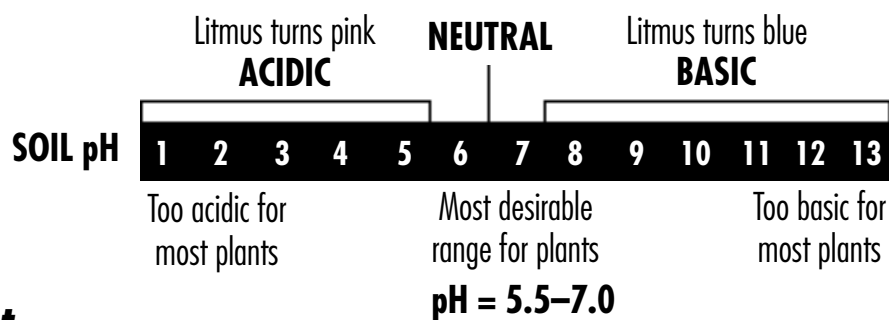
### Soil Test—Key

#### In this activity you will:

- learn about soil pH and why it is important to plants.
- do an experiment with a partner to measure pH.

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Step 6 Look at the litmus paper.

Developed by: Angie Eckert, M.S.

1. What color is the litmus paper in the jar with limestone? \_\_\_\_\_ **blue**
2. Is limestone acidic or basic? \_\_\_\_\_ **basic**
3. What color is the litmus paper in the jar with iron sulfate? \_\_\_\_\_ **pink**
4. Is iron sulfate acidic or basic? \_\_\_\_\_ **acidic**
5. Circle which one you would add to the soil if the pH was too high.      iron sulfate      limestone
6. Circle which one you would add to the soil if the pH was too low.      iron sulfate      limestone

### **Soil Test**

Collect a sample of soil from outside. Perform the litmus test on the soil. Is the soil acidic, neutral, or basic? Do you need to add anything to change the pH to the desirable range?

Practice testing the pH of items such as fruits, drinking water, beverages, soapy water, vinegar, milk, juice, tomatoes, potatoes, etc.

**Answers will vary.**

# Field and Garden

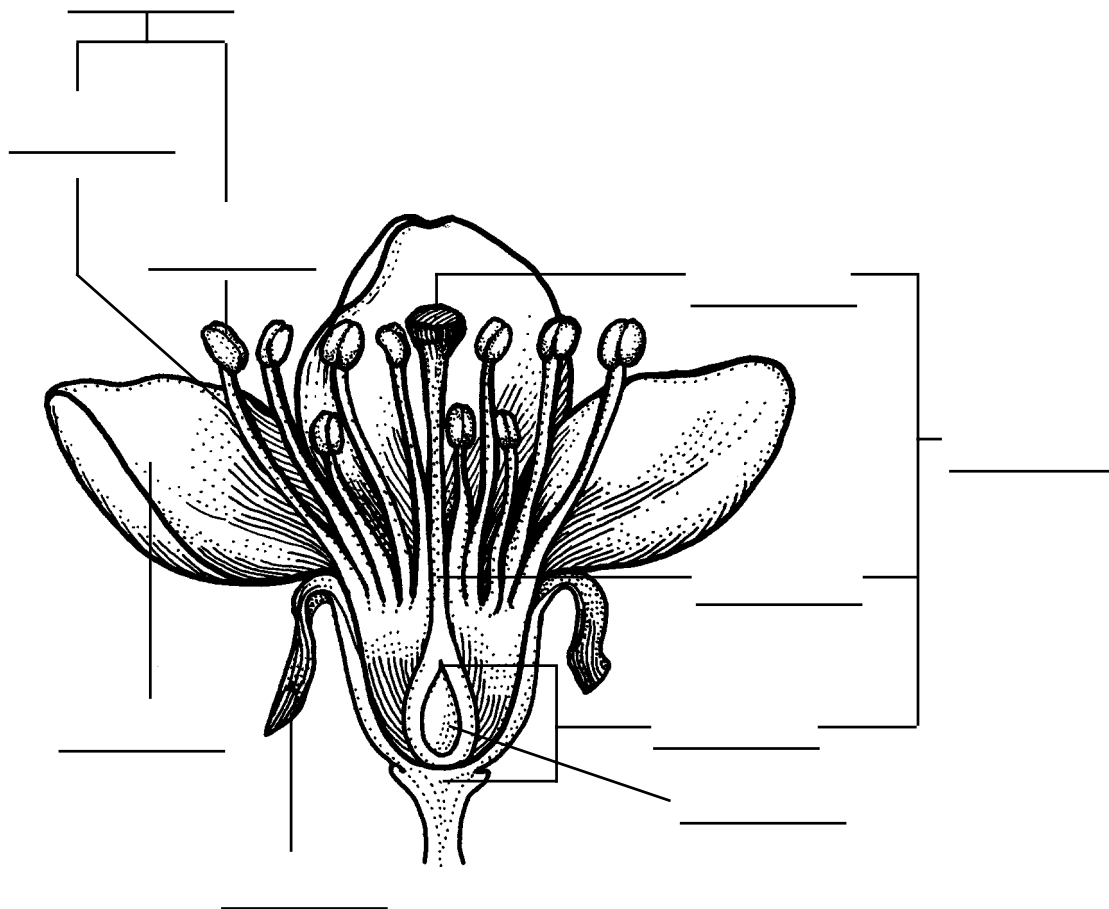
## Parts of a Flower

Identify the parts of a flower and design your own flower. Number the parts of a flower on the drawing and match them with the correct description.

### Matching

**In this activity you will:**

- learn the parts of a flower.



- |             |       |  |
|-------------|-------|--|
| 1. stamen   | _____ | A. made up of the stigma, style, and the ovary                                       |
| 2. anther   | _____ | B. the brightly colored parts of a flower that surround the pistil and the stamens   |
| 3. filament | _____ | C. the male part of the flower that includes the filament and the anther             |
| 4. pistil   | _____ | D. connects the stigma to the ovary  |
| 5. stigma   | _____ | E. the long, stem-like tube that attaches to the anther                              |
| 6. style    | _____ | F. the tip of the filament that holds pollen   |
| 7. ovary    | _____ | G. the sticky part of the pistil that collects pollen                                |
| 8. ovule    | _____ | H. the outer part of the flower, look like leaves outside the petals in many flowers |
| 9. petal    | _____ | I. the part of the flower that holds the ovule                                       |
| 10. sepals  | _____ | J. the part of the ovary that becomes the seed                                       |

*Developed by: Angie Eckert, M.S.*

## **Create Your Own Flower**

Work by yourself or with a partner to make your own flower out of the following materials: colored construction paper, glue, cotton swabs, pipe cleaners, straws, gumdrops, small beads and/or beans. Be sure to include all the parts from the drawing on the previous page in your model.

# Field and Garden

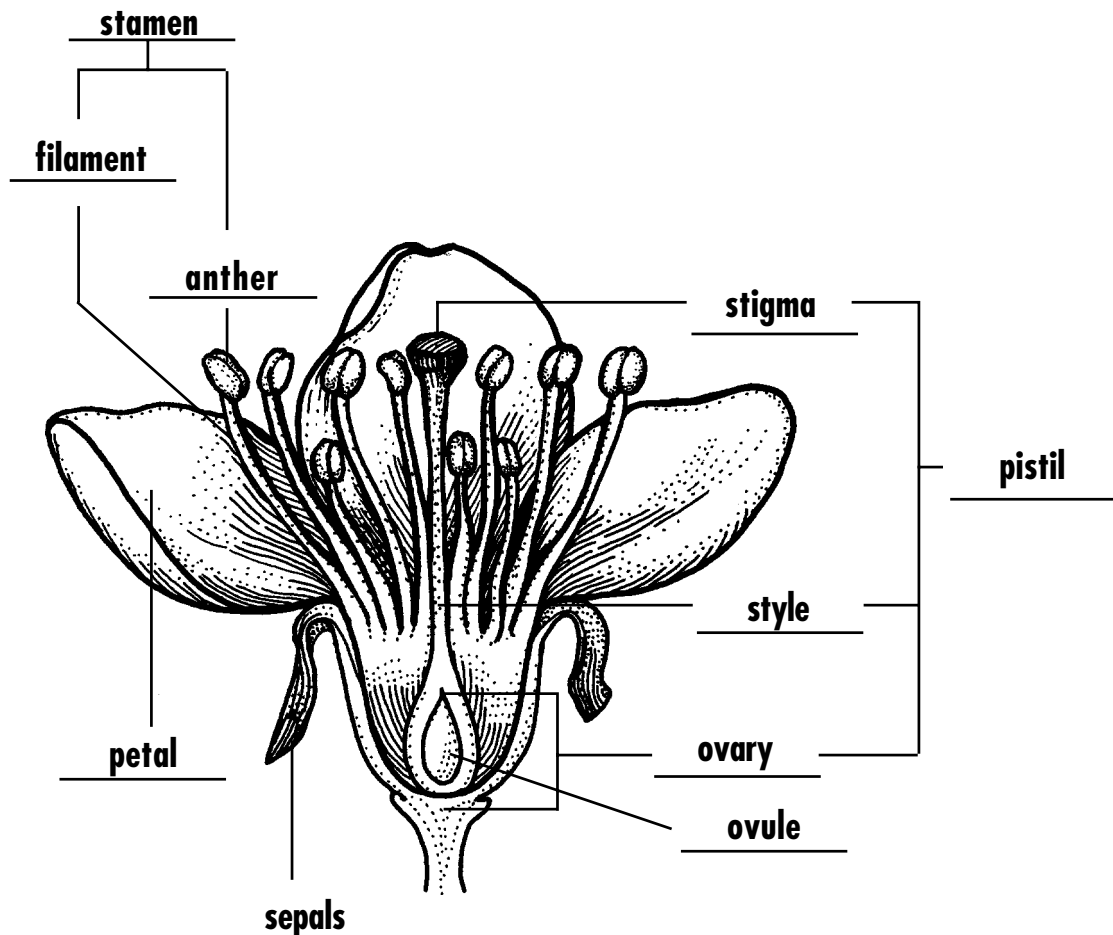
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|-------------|--------------|--|
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| 10. sepals  | <u>  H  </u> | J. the part of the ovary that becomes the seed                                       |

Developed by: Angie Eckert, M.S.



# Field and Garden

## First Class Travelers

### Word Scramble

#### In this activity you will:

- learn about seeds that travel with the help of their special adaptations.

In this activity you will need:

- beans
- glue
- tape

miscellaneous supplies (several of the following: paper clips, rubber bands, cotton swabs, feathers, aluminum foil, tape, cotton balls, paper, plastic wrap (such as Saran Wrap™), balloons, scissors, adhesive bandages, plastic bags)

Seeds cannot walk or drive as people do, so they have to find other ways to move themselves to a place where they can grow.

Unscramble the words to see how seeds travel. Can you think of an example of a plant that travels each way? For example, raspberries, which contain seeds, can travel by animal (birds often carry them away).

Seeds can travel by:

Example:

nwid

\_\_\_\_\_

\_\_\_\_\_

mnalsia

\_\_\_\_\_

\_\_\_\_\_

terwa

\_\_\_\_\_

\_\_\_\_\_

eeopl

\_\_\_\_\_

\_\_\_\_\_

### Make Your Own Seeds

Use one bean seed and the materials of your choice to design each of the following seeds.

1. A seed that can float on water for more than one minute.
2. A seed that can fly in the air for five feet.
3. A seed that attracts an animal.
4. A seed that sticks to you while you walk 15 feet.

# Field and Garden

## First Class Travelers

### Word Scramble—Key

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Unscramble the words to see how seeds travel. Can you think of an example of a plant that travels each way? For example, raspberries, which contain seeds, can travel by animal (birds often carry them away).

Seeds can travel by:

nwid	<u>wind</u>
mnalsia	<u>animals</u>
terwa	<u>water</u>
eeopl	<u>people</u>

Example:

milkweed, dandelions, cottonwood, samaras (helicopters from a maple tree), etc.

nuts and fruits: acorns, walnuts, cherries, apples, etc.

very light-weight seeds and fruits that float: coconuts and cranberries, etc.

cockleburrs, fruit (when we throw down the core or seed), etc.

### Make Your Own Seeds

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# Field and Garden

## Plant Nutrients

Use words from the list below to help you fill in the missing letters and unscramble the words.

molybdenum

oxygen

carbon

magnesium

hydrogen

nitrogen

sulfur

phosphorus

calcium

boron

zinc

manganese

copper

iron

potassium

chlorine

## Word Scramble

**In this activity you will:**

- learn what nutrients plants need to survive and grow.

### Fill in the Blanks

Plants get these nutrients from the air.

\_\_\_ R \_\_\_ N

O \_\_\_\_\_

Plants need these primary nutrients for healthy growth.

\_\_\_ I \_\_\_ G \_\_\_ N

\_\_\_ H \_\_\_ S \_\_\_ O \_\_\_ U \_\_\_

\_\_\_ T \_\_\_ S I \_\_\_

Plants need these micronutrients in smaller amounts than the primary nutrients.

CA \_\_\_\_\_

M \_\_\_\_\_ UM

S \_\_\_\_\_

B \_\_\_\_\_ N

\_\_\_\_\_ C

C \_\_\_\_\_ R

\_\_\_\_\_ SE

I \_\_\_\_\_ N

\_\_\_\_\_ BD \_\_\_\_\_

### Word Scramble

Plants get these nutrients from the rain:

ygodreh \_\_\_\_\_

uulfrs \_\_\_\_\_

lorinche \_\_\_\_\_

Plants get these nutrients from organic matter in the soil:

rabnoc \_\_\_\_\_

gdroyhen \_\_\_\_\_

togrinne \_\_\_\_\_

gonexy \_\_\_\_\_

furuls \_\_\_\_\_

Which nutrients do you find on more than one of these lists? \_\_\_\_\_

Developed by: Angie Eckert, M.S.

# Field and Garden

## Plant Nutrients

Use words from the list below to help you fill in the missing letters and unscramble the words.

molybdenum

oxygen

carbon

magnesium

hydrogen

nitrogen

sulfur

phosphorus

calcium

boron

zinc

manganese

copper

iron

potassium

chlorine

### Word Scramble—Key

#### In this activity you will:

- learn what nutrients plants need to survive and grow.

### Fill in the Blanks

Plants get these nutrients from the air.

C A R B O N

O X Y G E N

Plants need these primary nutrients for healthy growth.

N I T R O G E N

P H O S P H O R U S

P O T A S S I U M

Plants need these micronutrients in smaller amounts than the primary nutrients.

CA        L C I U M

M        A G N E S I        U M

S        U L F U R

B        O R O        N

       Z I N        C

C        O P P E        R

       M A N G A N E        S E

I        R O        N

       M O L Y        B D        E N U M

### Word Scramble

Plants get these nutrients from the rain:

ygodreh        **hydrogen**       

uulfrs        **sulfur**       

lorinche        **chlorine**       

Plants get these nutrients from organic matter in the soil:

rabnoc        **carbon**       

gdroyhen        **hydrogen**       

togrinne        **nitrogen**       

gonexy        **oxygen**       

furuls        **sulfur**       

Which nutrients do you find on more than one of these lists? **oxygen, carbon, hydrogen,**

**nitrogen, sulfur**

Developed by: Angie Eckert, M.S.

# Field and Garden

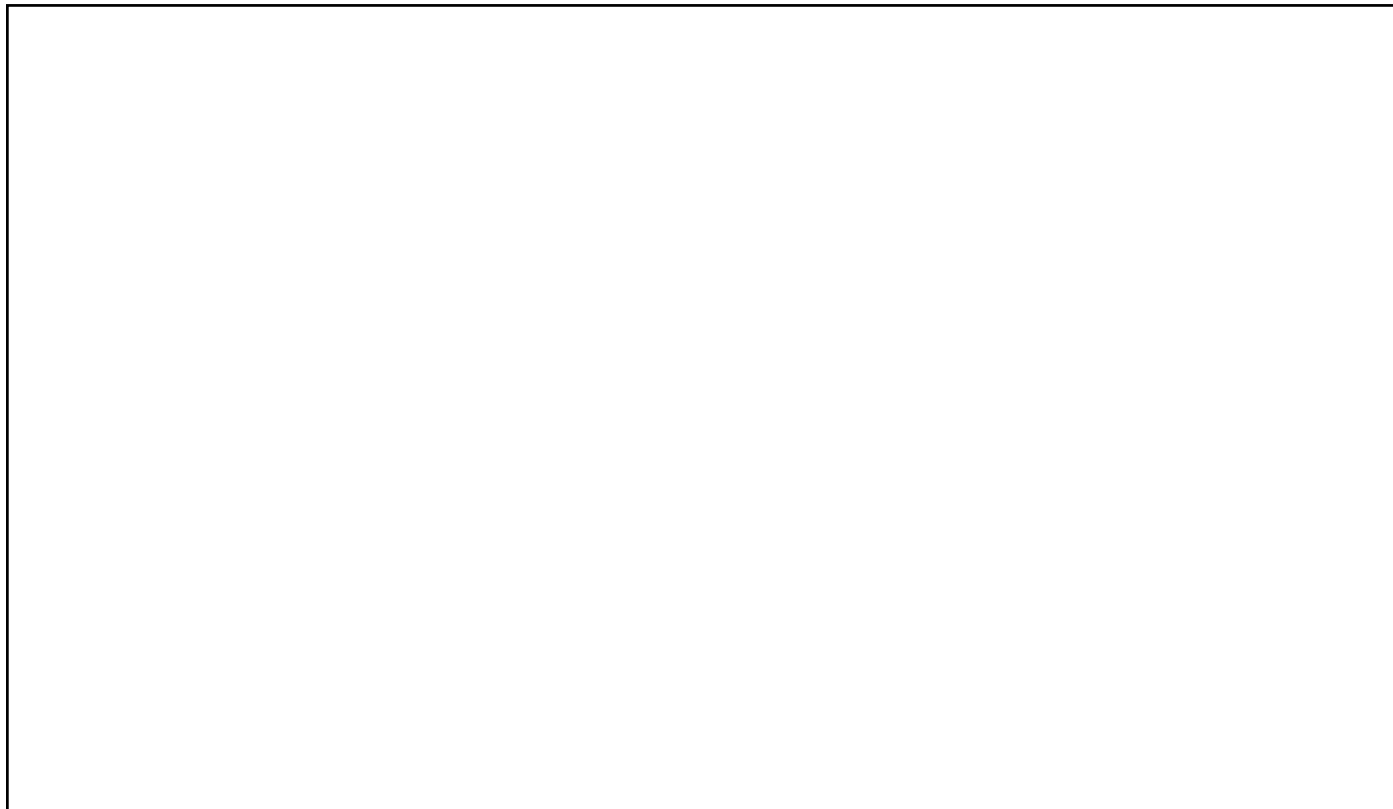
## Adopt a Plant

Using a garden catalog or a book about garden plants, cut out a picture or draw a picture of a plant that interests you.

### Observation

#### In this activity you will:

- learn about a plant that interests you.



Answer as many of the following questions as you can from the information about the plant.

1. Where does the plant grow?
2. How tall does the plant grow?
3. How wide does the plant grow?
4. What color are the flowers?
5. What color are the leaves?
6. Are the leaves deciduous (fall off in winter)? Are they evergreen (remain on the plant year-round)?
7. What is special about this plant?
8. Where could you plant this plant? In a pot? In your lawn? In a garden?



# Field and Garden

## Corn Plant and Seed Part Identification

Identify the parts by writing its name on the respective line.

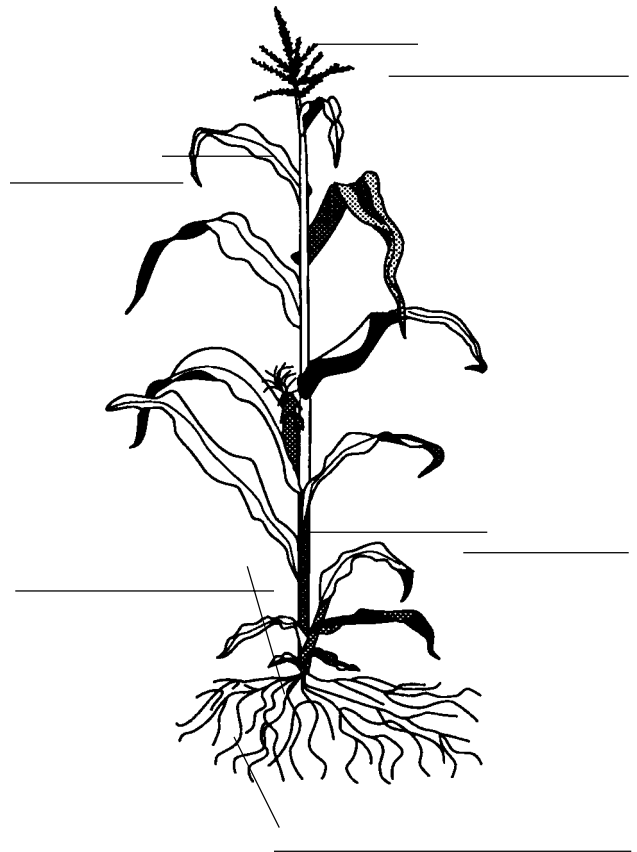
### Identification

**In this activity you will:**

- learn about the parts of a corn plant and seed.

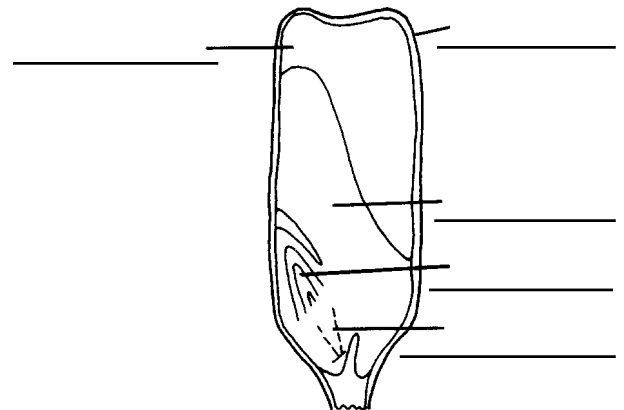
### Plant

- Seminal roots** Part of the root system that develops early in the plant's growth and helps to anchor the plant and supply it with nourishment.
- Prop Roots** Roots which add stability and support to the corn plant and are especially important because of the height of the corn plant.
- Leaves** Use water and nutrients provided by the roots and energy provided by the sunlight and photosynthesis process to manufacture food for the plant.
- Stalk** The portion which gives the plant its internal structure and to which the leaves and ears are attached.
- Tassel** The flowers of the plant which usually appear during the hottest part of the growing season and which produce and disburse the plant's pollen.



### Seed

- Pericarp** The hard, outer coat that protects the seed both before and after planting.
- Endosperm** Has the chief function of providing food energy for the young plant after germination and until the plant is mature enough to produce its own food.
- Plumule** The five to six miniature new leaves of the young corn plant.
- Radicle** The main root of the seedling that takes up water and nutrients from the soil to nourish the seedling.
- Cotyledon** Provides food for the tiny new plant during germination.



Developed by: Angie Eckert, M.S.

# Field and Garden

## Corn Plant and Seed Part Identification

Identify the parts by writing its name on the respective line.

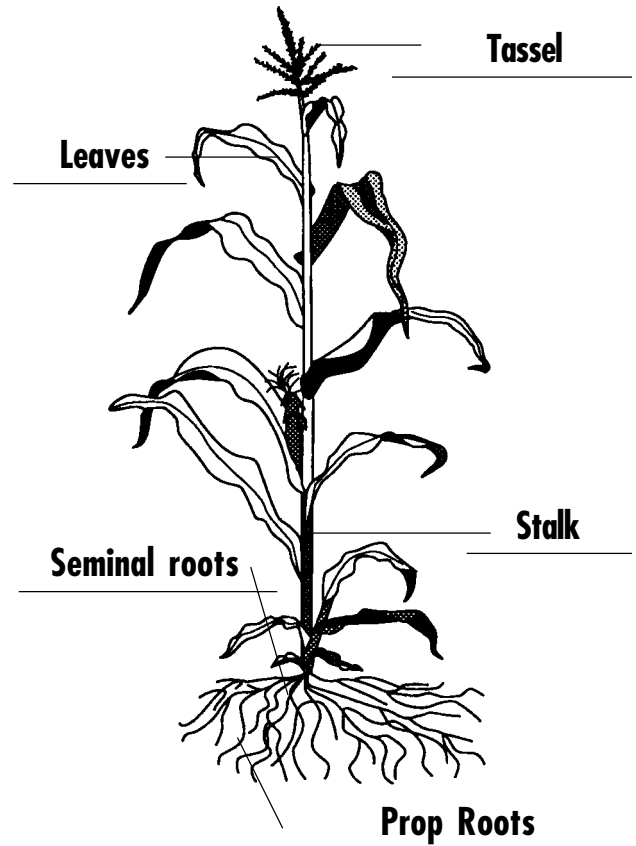
### Identification—Key

In this activity you will:

- learn about the parts of a corn plant and seed.

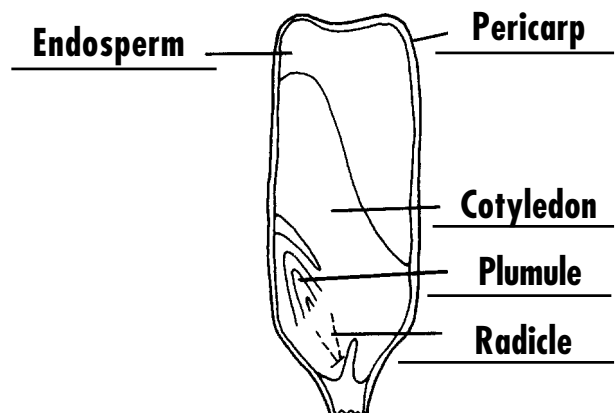
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Developed by: Angie Eckert, M.S.

# Field and Garden

## Corn Fill-In

### Fill-In

#### In this activity you will:

- learn about corn and its production in the United States.

Using the words below, fill in the blanks to complete these sentences about corn.

weed                      one-half                      livestock                      silage  
nitrogen                      annual                      cornstarch                      bushels  
sweet corn                      wallboard                      fifty-six                      grass  
corn belt                      maturity

1. In the United States, 80 percent of the corn produced is used to feed \_\_\_\_\_.
2. When corn is used for feeding cattle, the entire plant is often harvested and used to make \_\_\_\_\_.
3. \_\_\_\_\_ is a popular American vegetable and may be purchased fresh, canned, or frozen.
4. Gasohol is made from fermented \_\_\_\_\_.
5. The stalk of the corn plant can be used to manufacture paper and \_\_\_\_\_.
6. Much of the United States' corn is produced in the fertile, well drained land of the north central United States, an area often called the \_\_\_\_\_.
7. Ohio farmers produce approximately 450 million \_\_\_\_\_ of corn each year.
8. The United States produces more than \_\_\_\_\_ of the corn grown in the world.
9. Corn is a tall member of the \_\_\_\_\_ family of plants.
10. Corn is an \_\_\_\_\_ plant, meaning that it cannot survive the winter and must be planted anew each year.
11. The length of time that it takes for corn to grow from the day it is planted until the ears have filled out is called its \_\_\_\_\_ time.
12. \_\_\_\_\_ is a primary nutrient that is required for sturdy stalks and wide leaves, and is a major portion of the protein found in the corn kernel.
13. A \_\_\_\_\_ is a plant growing in a place where it isn't wanted or needed.
14. There are \_\_\_\_\_ pounds of corn in a bushel.

*Developed by: Angie Eckert, M.S.*

# Field and Garden

## Corn Fill-In

Using the words below, fill in the blanks to complete these sentences about corn.

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nitrogen                      annual                      cornstarch                      bushels  
sweet corn                      wallboard                      fifty-six                      grass  
corn belt                      maturity

### Fill-In—Key

#### In this activity you will:

- learn about corn and its production in the United States.

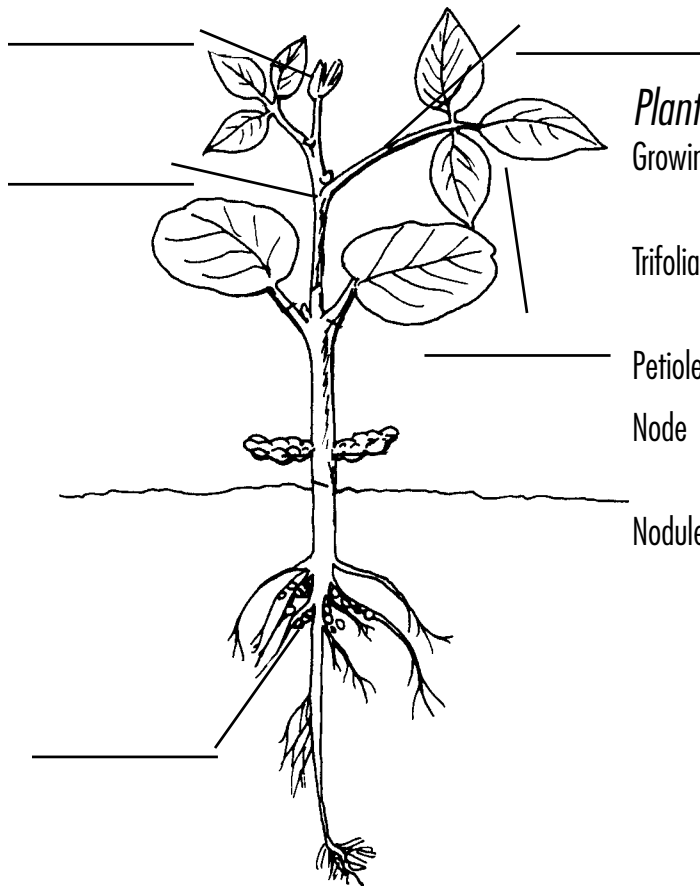
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8. The United States produces more than one-half of the corn grown in the world.
9. Corn is a tall member of the grass family of plants.
10. Corn is an annual plant, meaning that it cannot survive the winter and must be planted anew each year.
11. The length of time that it takes for corn to grow from the day it is planted until the ears have filled out is called its maturity time.
12. Nitrogen is a primary nutrient that is required for sturdy stalks and wide leaves, and is a major portion of the protein found in the corn kernel.
13. A weed is a plant growing in a place where it isn't wanted or needed.
14. There are fifty-six pounds of corn in a bushel.

Developed by: Angie Eckert, M.S.

# Field and Garden

## Soybean Plant and Seed Parts

Identify the part by writing its name on the respective line.



### Plant

Growing Point

This is the tip or point where the epicotyl continues to grow upward producing more stems and leaves.

Trifoliate Leaf

The leaves which develop above the pair of unifoliate leaves.

Petiole

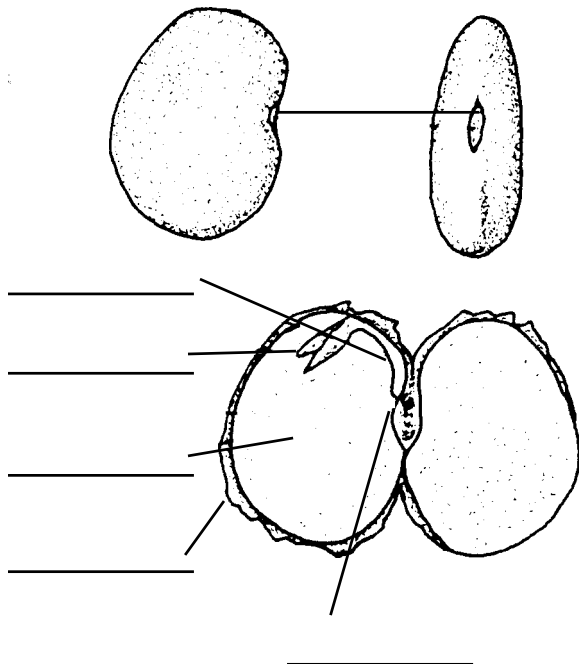
The slender stalk which supports the trifoliate leaves.

Node

The point at which the petiole is connected with the main stem of the plant.

Nodules

A swelling of the roots due to the presence of the bacterium *Rhizobia japonicum*.



### Seed

Hypocotyl

The lower portion of the seedling's stem.

Hilum

Part of the seed where it was once attached to the soybean pod.

Radicle

Main root of the seedling that takes up water and nutrients from the soil to nourish the seedling.

Epicotyl

The uppermost part of the seedling which has two leaves that are unifoliate.

Cotyledon

The part of the seed in which food for the seedling is stored. Each bean seed has two cotyledons which form a protective shield around the seedling.

## Identification

### In this activity you will:

- learn about the parts of a soybean plant and seed.

# Field and Garden

## Soybean Plant and Seed Parts

Identify the part by writing its name on the respective line.

Growing Point

Petiole

Node

*Plant*

Growing Point

Trifoliolate Leaf

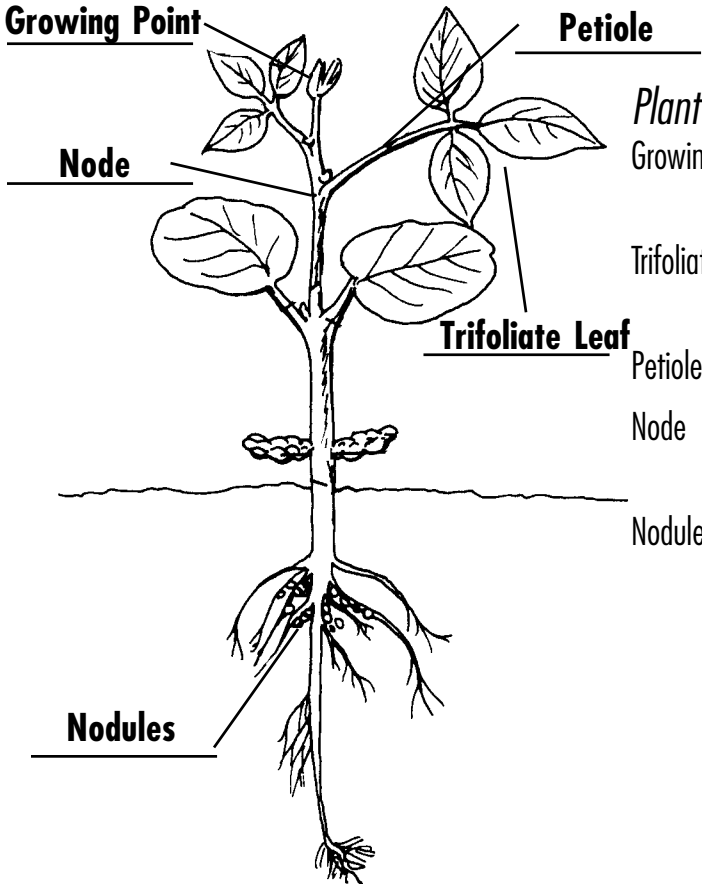
Trifoliolate Leaf

Petiole

Node

Nodules

Nodules



### Identification—Key

**In this activity you will:**

- learn about the parts of a soybean plant and seed.

This is the tip or point where the epicotyl continues to grow upward producing more stems and leaves.

The leaves which develop above the pair of unifoliolate leaves.

The slender stalk which supports the trifoliolate leaves.

The point at which the petiole is connected with the main stem of the plant.

A swelling of the roots due to the presence of the bacterium *Rhizobia japonicum*.

*Seed*

Hypocotyl

Hilum

Radicle

Epicotyl

Cotyledon

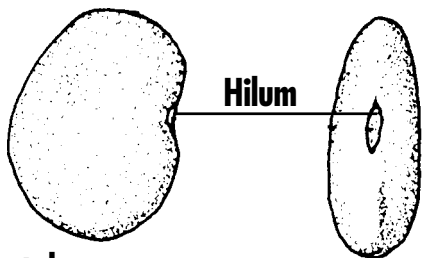
The lower portion of the seedling's stem.

Part of the seed where it was once attached to the soybean pod.

Main root of the seedling that takes up water and nutrients from the soil to nourish the seedling.

The uppermost part of the seedling which has two leaves that are unifoliolate.

The part of the seed in which food for the seedling is stored. Each bean seed has two cotyledons which form a protective shield around the seedling.



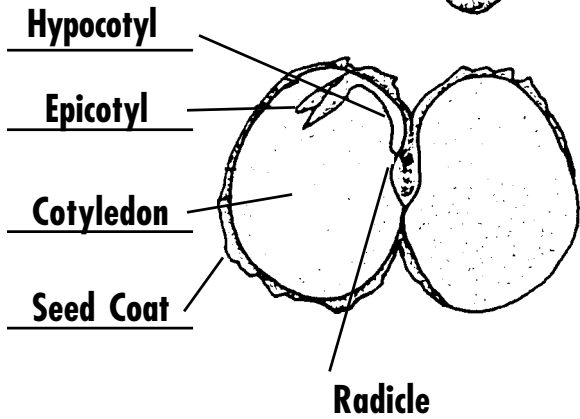
Hypocotyl

Epicotyl

Cotyledon

Seed Coat

Radicle



Developed by: Angie Eckert, M.S.

# Field and Garden

## Sensational Soybeans

Soybeans are included in a number of food products that you eat regularly or household products that you use — and you probably don't even know that you are eating or using soybeans.

In these two activities, you and your club will learn more about which food and household products are made with soybeans. One bushel (or 60 pounds) of soybeans produces about 11 pounds of soybean oil or 47 pounds of soybean meal. Both soybean oil and soybean meal are used to make food and other usable products.

### It's in There!

Give each individual three index cards and a copy of the SoyOil™ symbol. Ask members to visit a local grocery store and look for food items that include the symbol on the label. They can also check the list of ingredients for soy meal or other soybean products.

Once they locate a food item made with soybeans, the students should write the name and list of ingredients on one of the index cards. They should make special note of where soybeans occur in the ingredient list (ingredients are listed in the order by amount included in the food item; i.e., if soybeans are listed first, there are more soybeans in the food item than any other ingredient). At your next gathering, have each person share what they learned.

### Soy Oil versus Soy Meal

Each member will need a copy of the Soy Oil versus Soy Meal worksheet.

Both soy oil and soy meal are used to make several products that you eat or use every day. Write on the line whether the food was made with soy oil or soy meal.

Margarine	_____
Salad Oil	_____
Soaps	_____
Paint	_____
Cosmetics	_____
Chocolate	_____
Mayonnaise	_____
Feed for livestock	_____
Meat extenders	_____
Baby food	_____
Adhesives/Glue	_____
Flour	_____

## Identification

### In this activity you will:

- learn more about which food and household products are made with soybeans.



Developed by: Angie Eckert, M.S.

# Field and Garden

## Sensational Soybeans

Soybeans are included in a number of food products that you eat regularly or household products that you use — and you probably don't even know that you are eating or using soybeans.

In these two activities, you and your club will learn more about which food and household products are made with soybeans. One bushel (or 60 pounds) of soybeans produces about 11 pounds of soybean oil or 47 pounds of soybean meal. Both soybean oil and soybean meal are used to make food and other usable products.

### It's in There!

Give each individual three index cards and a copy of the SoyOil™ symbol. Ask members to visit a local grocery store and look for food items that include the symbol on the label. They can also check the list of ingredients for soy meal or other soybean products.

Once they locate a food item made with soybeans, the students should write the name and list of ingredients on one of the index cards. They should make special note of where soybeans occur in the ingredient list (ingredients are listed in the order by amount included in the food item; i.e., if soybeans are listed first, there are more soybeans in the food item than any other ingredient). At your next gathering, have each person share what they learned.

### Soy Oil versus Soy Meal

Each member will need a copy of the Soy Oil versus Soy Meal worksheet.

Both soy oil and soy meal are used to make several products that you eat or use every day. Write on the line whether the food was made with soy oil or soy meal.

Margarine	<u>Soy Oil</u>
Salad Oil	<u>Soy Oil</u>
Soaps	<u>Soy Oil</u>
Paint	<u>Soy Oil</u>
Cosmetics	<u>Soy Oil</u>
Chocolate	<u>Soy Oil</u>
Mayonnaise	<u>Soy Oil</u>
Feed for livestock	<u>Soy Meal</u>
Meat extenders	<u>Soy Meal</u>
Baby food	<u>Soy Meal</u>
Adhesives/Glue	<u>Soy Meal</u>
Flour	<u>Soy Meal</u>

## Identification—Key

### In this activity you will:

- learn more about which food and household products are made with soybeans.



**SOYOIL**

# ***Countdown Chapter 4***

# ***Food and Nutrition***



# **Countdown Chapter 4**

## **Food and Nutrition**

### **Contents**

Are You a Couch Potato? .....	1
Fitness Fun .....	3
Eating Healthy .....	5
Is a Tomato a Fruit or a Vegetable? .....	7
What Should You Eat? .....	9

# Food and Nutrition

## Are You a Couch Potato?

Select someone to read the statements below. After each statement is read, decide if it is a couch potato activity or a “get moving” activity.

Use the following gestures to give your answer:

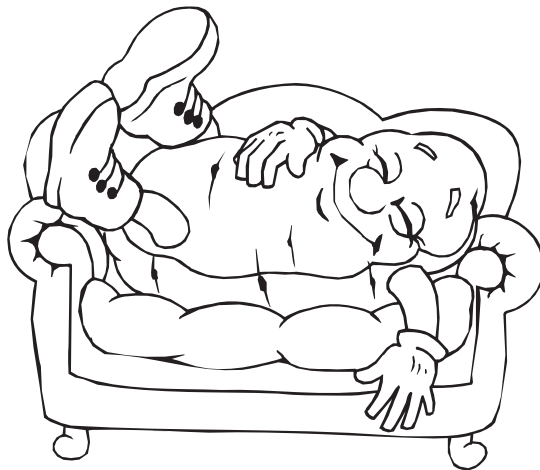
- thumbs down—couch potato activity
- thumbs up—get moving activity

### Decision-Making

#### In this activity you will:

- learn that exercise is a key to staying healthy.
- learn fun activities you can do to stay fit.

1. I think riding a bike is exercise.
2. I think watching TV is exercise.
3. I think riding in a car is exercise.
4. I think running is exercise.
5. I think walking is exercise.
6. I think dancing is exercise.
7. I think sleeping is exercise.
8. I think studying is exercise.
9. I think lifting weights is exercise.
10. I think swimming is exercise.
11. I think switching the TV channels is exercise.
12. I think jumping rope is exercise.
13. I think playing basketball is exercise.
14. I think playing baseball is exercise.
15. I think talking on the phone is exercise.



*Developed by: Mary Forster, Extension Associate, 4-H Youth Development/Family and Consumer Sciences*

# Food and Nutrition

## Are You a Couch Potato?

Select someone to read the statements below. After each statement is read, decide if it is a couch potato activity or a “get moving” activity.

Use the following gestures to give your answer:

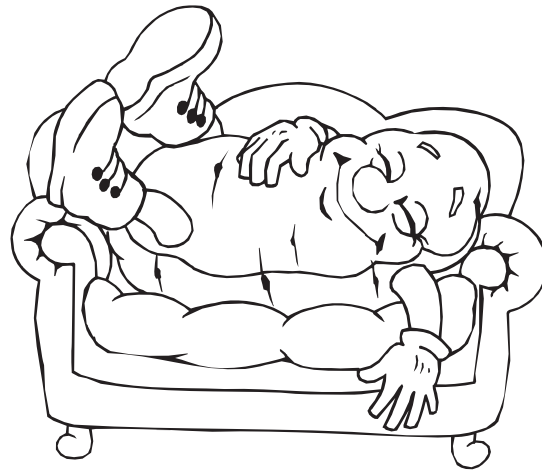
- thumbs down—couch potato activity
- thumbs up—get moving activity

### Decision-Making—Key

#### In this activity you will:

- learn that exercise is a key to staying healthy.
- learn fun activities you can do to stay fit.

1. I think riding a bike is exercise. **thumbs up**
2. I think watching TV is exercise. **thumbs down**
3. I think riding in a car is exercise. **thumbs down**
4. I think running is exercise. **thumbs up**
5. I think walking is exercise. **thumbs up**
6. I think dancing is exercise. **thumbs up**
7. I think sleeping is exercise. **thumbs down**
8. I think studying is exercise. **thumbs down**
9. I think lifting weights is exercise. **thumbs up**
10. I think swimming is exercise. **thumbs up**
11. I think switching the TV channels is exercise. **thumbs down**
12. I think jumping rope is exercise. **thumbs up**
13. I think playing basketball is exercise. **thumbs up**
14. I think playing baseball is exercise. **thumbs up**
15. I think talking on the phone is exercise. **thumbs down**



# Food and Nutrition

## Fitness Fun

Use the words below to complete each statement. Each word is used only once.  
Unscramble the circled letters to spell an important word.

### Word Scramble

**In this activity you will:**

- learn concepts for keeping fit and staying healthy.

aerobic

easily

calories

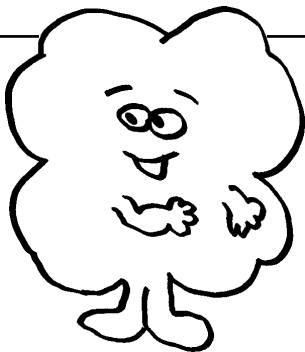
heart

stretch

strong

unhealthy

1. Jumping rope is an     activity.
2.     before you work out.
3. The     pumps blood and oxygen through your body.
4. Smoking can cause     lungs.
5. Flexibility is the ability to stretch    .
6. You burn     while exercising.
7. Exercise makes muscles    .



*The important word is*

\_\_\_\_\_

Source: 4-H 355, Keeping Fit

Developed by: Dee Jepsen, Extension Associate, Ag Eng/Health/Safety

# Food and Nutrition

## Fitness Fun

Use the words below to complete each statement. Each word is used only once. Unscramble the circled letters to spell an important word.

### Word Scramble—Key

**In this activity you will:**

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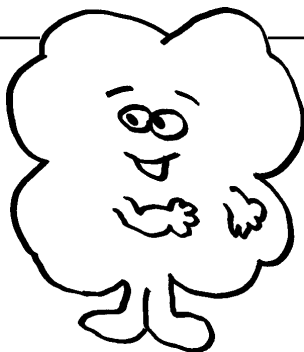
heart

stretch

strong

unhealthy

1. Jumping rope is an a e r o b i c activity.
2. s t r e t c h before you work out.
3. The h e a r t pumps blood and oxygen through your body.
4. Smoking can cause u n h e a l t h y lungs.
5. Flexibility is the ability to stretch e a s i l y.
6. You burn c a l o r i e s while exercising.
7. Exercise makes muscles s t r o n g.



*The important word is*

h e a l t h y

Source: 4-H 355, Keeping Fit

Developed by: Dee Jepsen, Extension Associate, Ag Eng/Health/Safety

# Food and Nutrition

## Eating Healthy

Find the words hidden in the word search. Words can be across, down, diagonal, or backwards.

fats  
cereal  
cheese  
poultry

fruit  
milk  
two  
four

oils  
pasta  
vegetables  
fish

bread  
yogurt  
five  
eleven

sweets  
pyramid  
meat  
eggs

apple  
three  
food groups

pear

## Word Search

**In this activity you will:**

- learn important words to know when choosing healthy foods.

i y h j s g m o f i v e r g  
a o u b r e a d r x e g g s  
e g h i s h a j l q g i y o  
p u n x k e o s q f e e s p  
z r l t s w f r u i t m w d  
k t a e m a o m x v a h e f  
c e e m t d s r i t b x e y  
i h b s w l a t m i l k t r  
c m q p i m x l p c e d s t  
b f o o d g r o u p s u g l  
l o v c a s u n s y w m l u  
q u c h p e a r k r e n f o  
q r e n p o s a p a t s a p  
j b r k l t c n d m b y v n  
c w e j e h z i w i o t j v  
p r a t s r g n d d h w q r  
f e l e v e n g f a n o y m  
v z t k q e d o g f i s h e

Source: 4-H 460, Adventures With Food

Developed by: Dee Jepsen, Extension Associate, Ag Eng/Health/Safety

# Food and Nutrition

## Eating Healthy

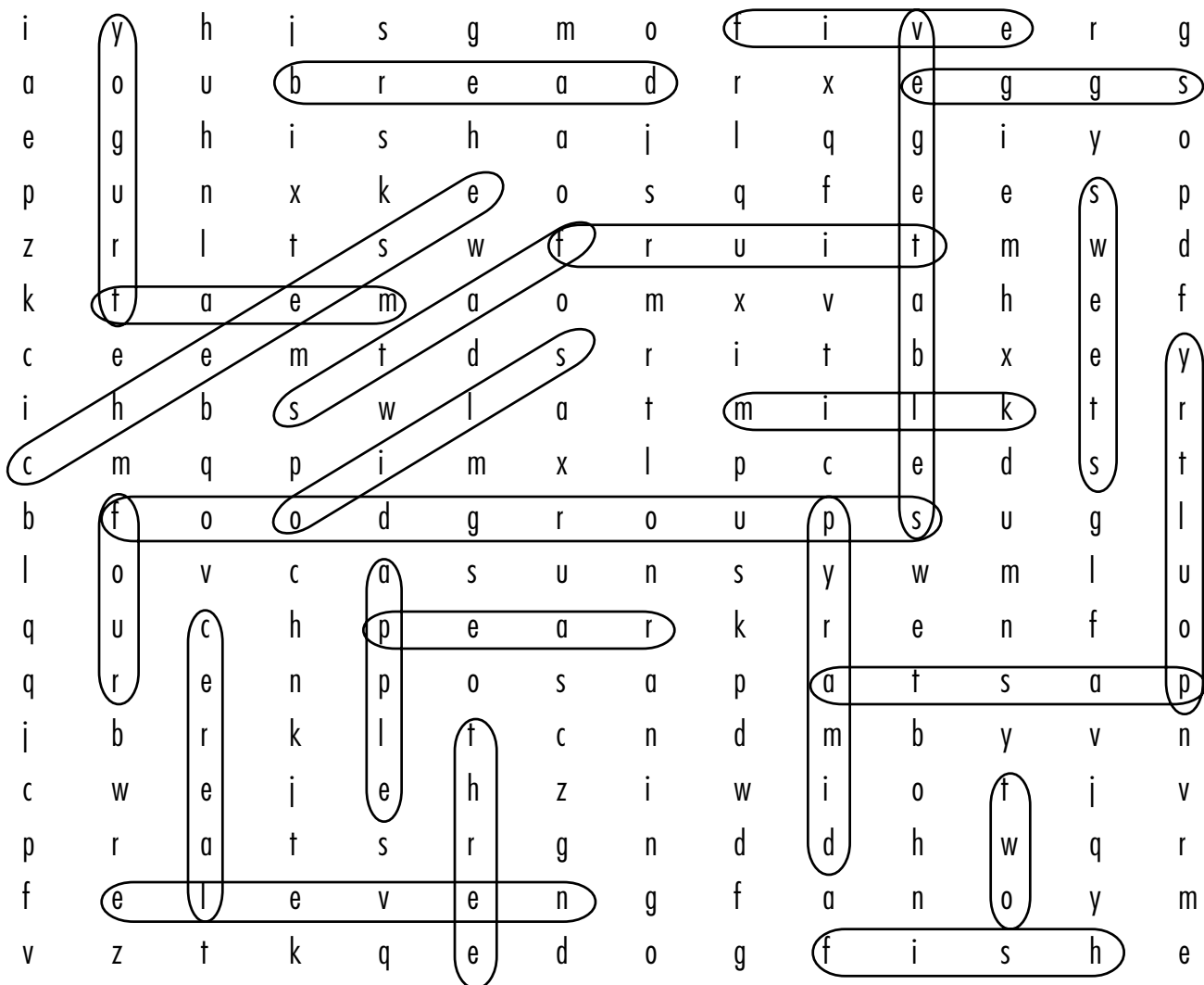
Find the words hidden in the word search. Words can be across, down, diagonal, or backwards.

fats	fruit	oils	bread	sweets		
cereal	milk	pasta	yogurt	pyramid	apple	
cheese	two	vegetables	five	meat	three	
poultry	four	fish	eleven	eggs	food groups	pear

### Word Search—Key

**In this activity you will:**

- learn important words to know when choosing healthy foods.



Source: 4-H 460, Adventures With Food

Developed by: Dee Jepsen, Extension Associate, Ag Eng/Health/Safety

# Food and Nutrition

## Is a Tomato a Fruit or a Vegetable?

### Decision-Making

#### In this activity you will:

- learn how to classify different foods into each food group.

Match the different foods with their correct food groups.

- |                 |                  |
|-----------------|------------------|
| A. Apple        | N. Baked Beans   |
| B. Banana       | O. Oatmeal       |
| C. Carrots      | P. Peanut Butter |
| D. Spaghetti    | Q. Milk          |
| E. Cereal       | R. Rice          |
| F. Fish         | S. Steak         |
| G. Green Beans  | T. Tomatoes      |
| H. Hamburger    | U. Turkey        |
| I. Strawberries | V. Cheese        |
| J. Potato Chips | W. Coke          |
| K. Cucumbers    | X. Bread         |
| L. Margarine    | Y. Yogurt        |
| M. Macaroni     | Z. Zucchini      |

Breads & Cereals

Vegetables

Meats

Fruits

Dairy (Milk Products)

Fats, Sweets, & Oils

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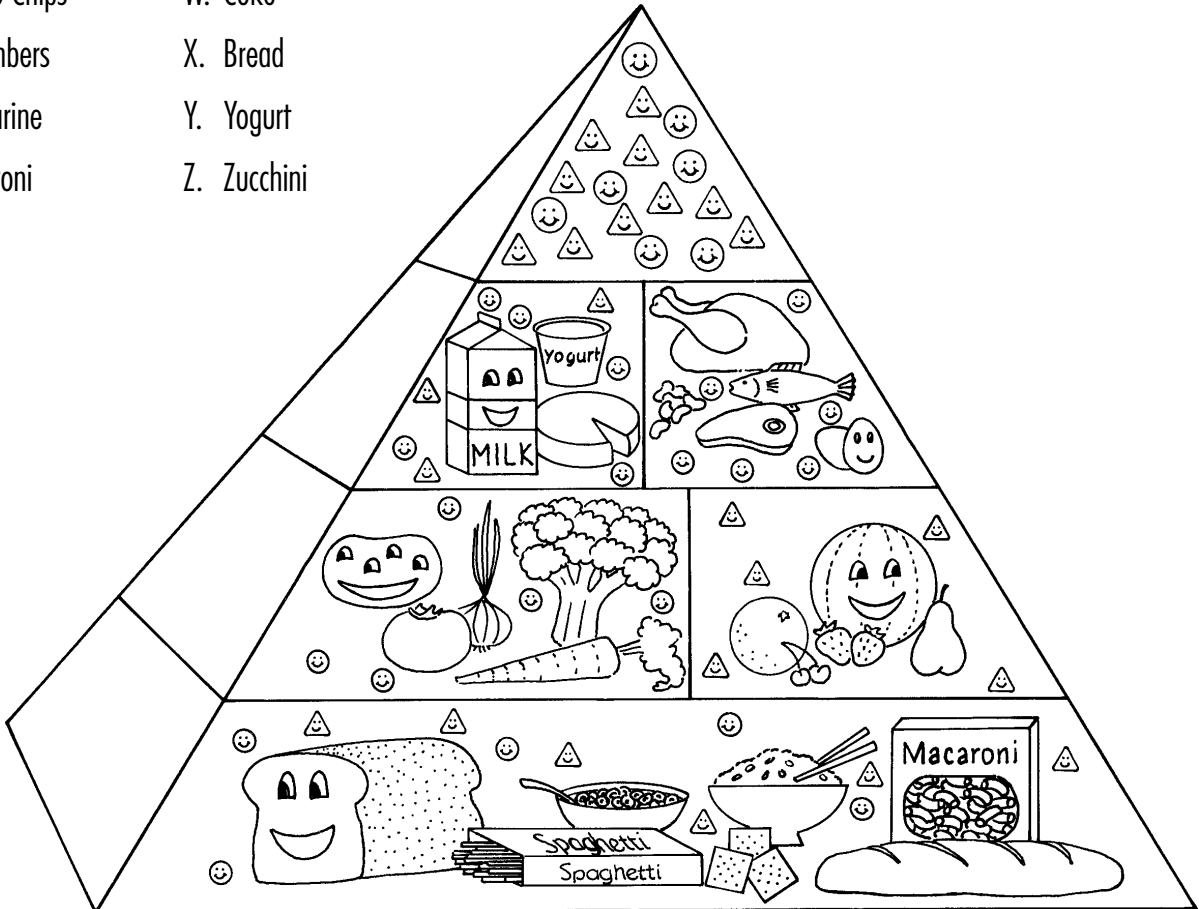
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Developed by: Ken Culp, III, Extension Specialist, Volunteerism

# Food and Nutrition

## Is a Tomato a Fruit or a Vegetable?

### Decision-Making—Key

#### In this activity you will:

- learn how to classify different foods into each food group.

Match the different foods with their correct food groups.

- |                 |                  |
|-----------------|------------------|
| A. Apple        | N. Baked Beans   |
| B. Banana       | O. Oatmeal       |
| C. Carrots      | P. Peanut Butter |
| D. Spaghetti    | Q. Milk          |
| E. Cereal       | R. Rice          |
| F. Fish         | S. Steak         |
| G. Green Beans  | T. Tomatoes      |
| H. Hamburger    | U. Turkey        |
| I. Strawberries | V. Cheese        |
| J. Potato Chips | W. Coke          |
| K. Cucumbers    | X. Bread         |
| L. Margarine    | Y. Yogurt        |
| M. Macaroni     | Z. Zucchini      |

Breads & Cereals

**D, E, M, O, R, X**

Vegetables

**C, G, K, P, Z**

Meats

**F, H, B, P, S, U**

Fruits

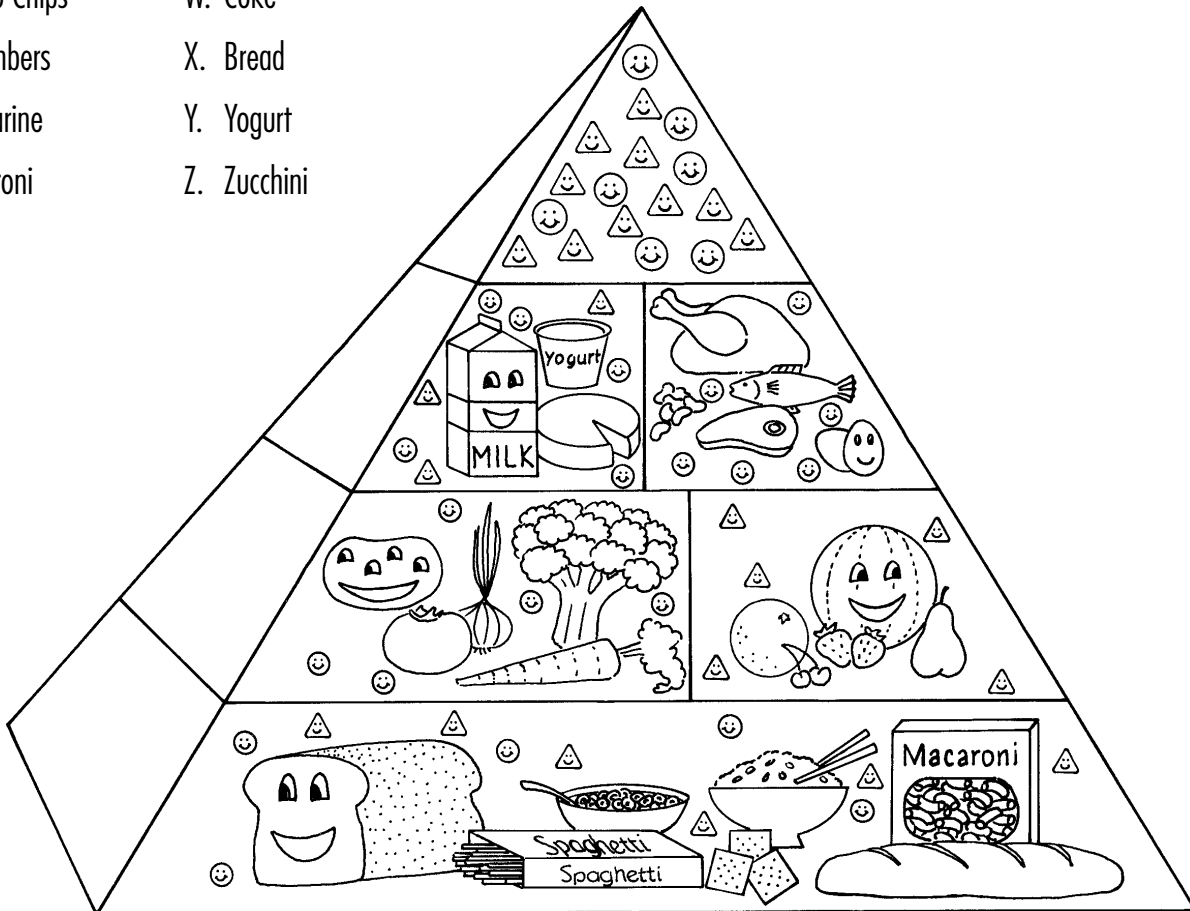
**A, B, I, T**

Dairy (Milk Products)

**M, V, Y**

Fats, Sweets, & Oils

**J, L, W**



Developed by: Ken Culp, III, Extension Specialist, Volunteerism

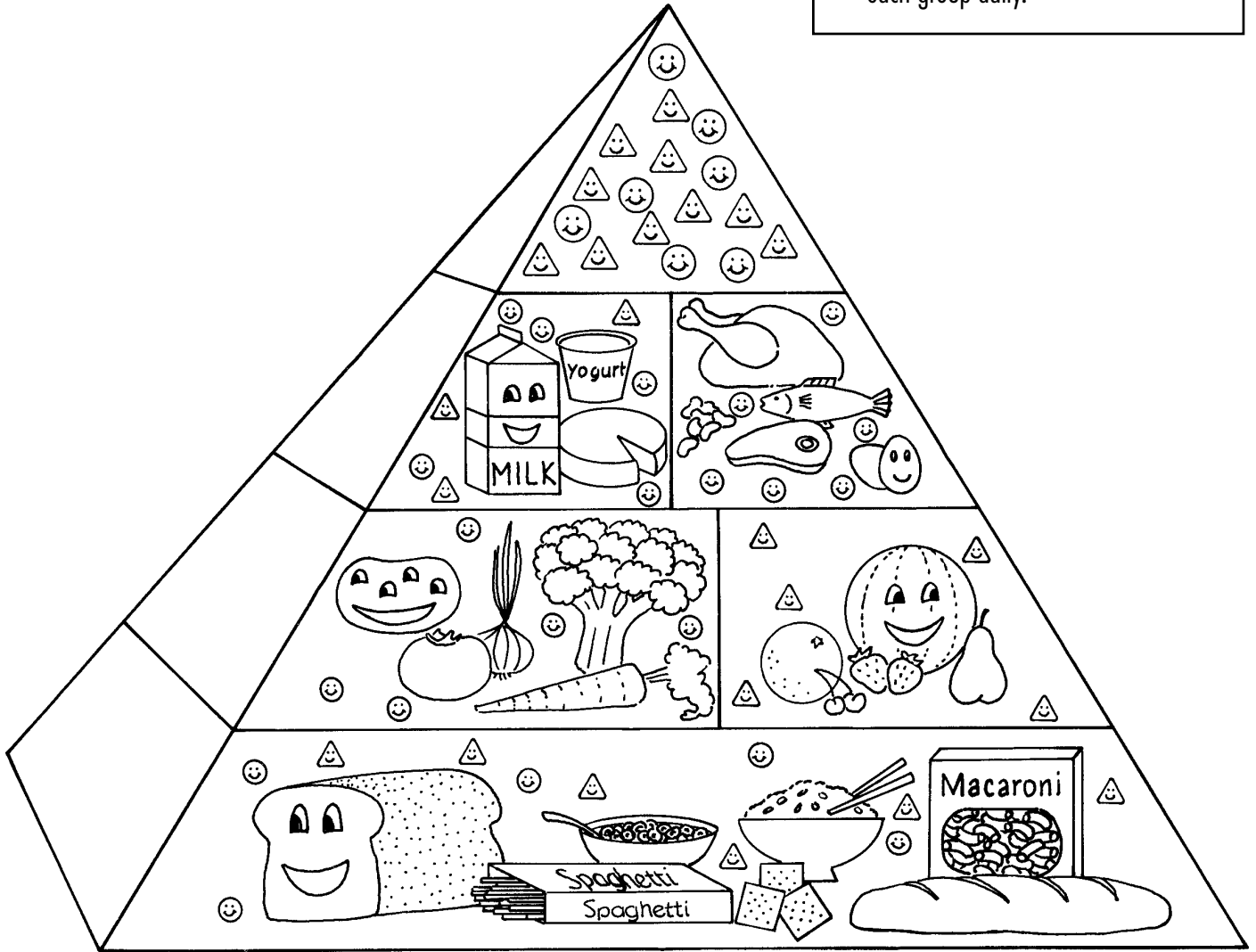
# Food and Nutrition

## What Should You Eat?

### Fill in the Blanks

#### In this activity you will:

- understand the food pyramid.
- learn how many foods to eat from each group daily.



Chris Clover says you need  
? servings of each food  
group each day.

Fats, oils, and sweets \_\_\_\_\_

Milk, yogurt, and cheese \_\_\_\_\_

Vegetables \_\_\_\_\_

Meat, fish, and eggs \_\_\_\_\_

Breads and cereals \_\_\_\_\_

Fruits \_\_\_\_\_

Source: 4-H 460, Adventures with Foods

Developed by: Dee Jepsen, Extension Associate, Safety, and Ken Culp, III, Extension Specialist, Volunteerism

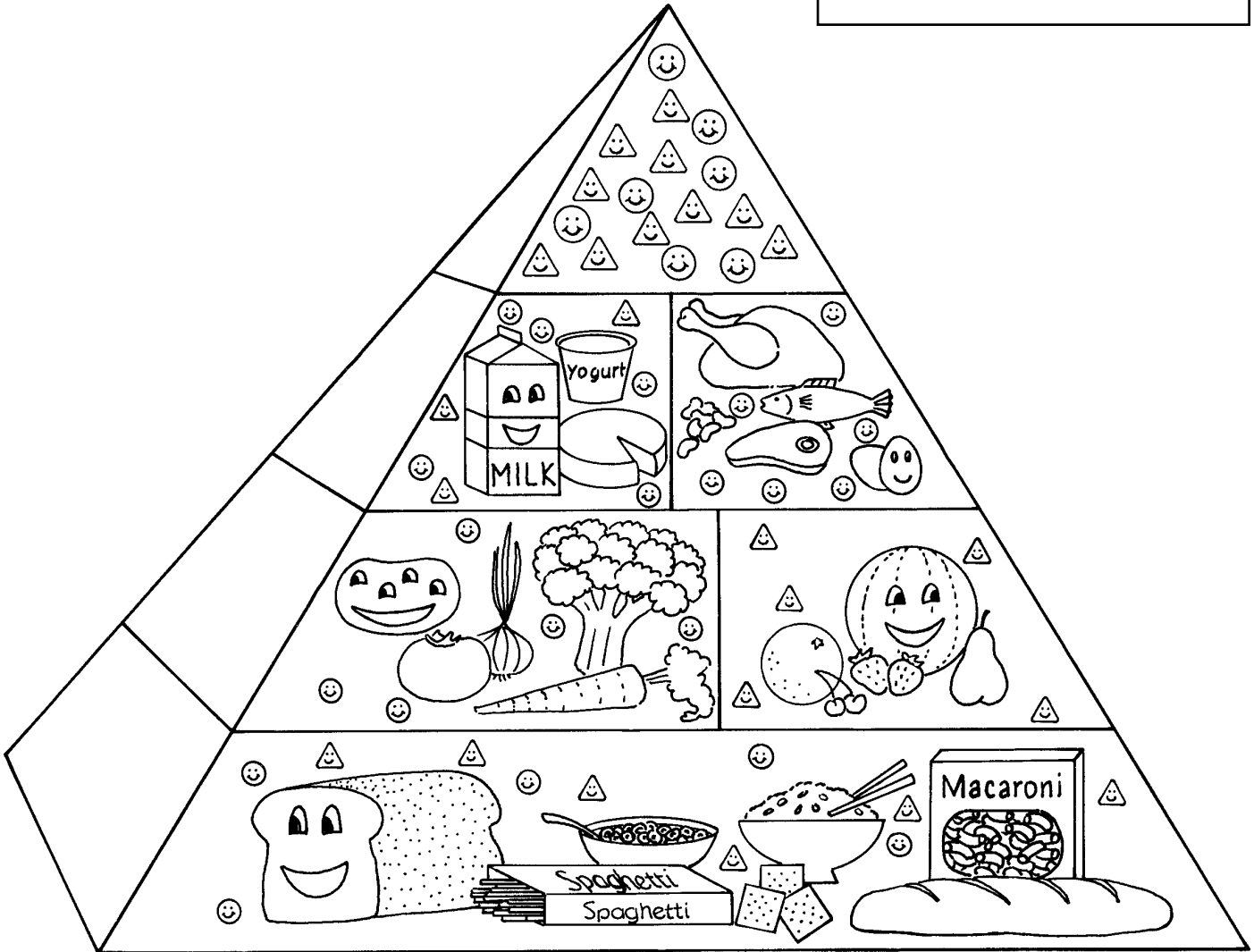
# Food and Nutrition

## What Should You Eat?

### Fill in the Blanks—Key

#### In this activity you will:

- understand the food pyramid.
- learn how many foods to eat from each group daily.



Chris Clover says you need  
?\_ servings of each food  
group each day.

Fats, oils, and sweets sparingly  
Milk, yogurt, and cheese 2-3  
Vegetables 3-5

Meat, fish, and eggs 2-3  
Breads and cereals 6-11  
Fruits 2-3

Source: 4-H 460, Adventures with Foods

Developed by: Dee Jepsen, Extension Associate, Safety, and Ken Culp, III, Extension Specialist, Volunteerism

## ***Countdown Chapter 3***

# ***Citizenship, International, Careers, Leadership, and Communications***



# **Countdown Chapter 3**

## **Citizenship, International, Careers, Leadership, and Communications**

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# Citizenship

## Citizenship Vocabulary

Circle these words arranged vertically, horizontally, diagonally, forwards, and backwards in the puzzle. Then with a partner discuss the meaning of each word and how it relates to developing citizenship.

citizen	election	contribute	flag
government	county	help	patriot
service	state	assist	responsible
vote	federal	involved	respect

## Word Search

**In this activity you will:**

- learn to identify sixteen concepts related to developing citizenship.
- circle sixteen words related to citizenship.
- discuss the meaning of these words with a partner.

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

*Developed by: Kathryn J. Cox, Extension 4-H Specialist, Youth Development; David Farrell, Extension Associate, 4-H Communications; Mary Lynn Thalheimer, Extension Associate, 4-H International Exchange Program*

# Citizenship

## Citizenship Vocabulary

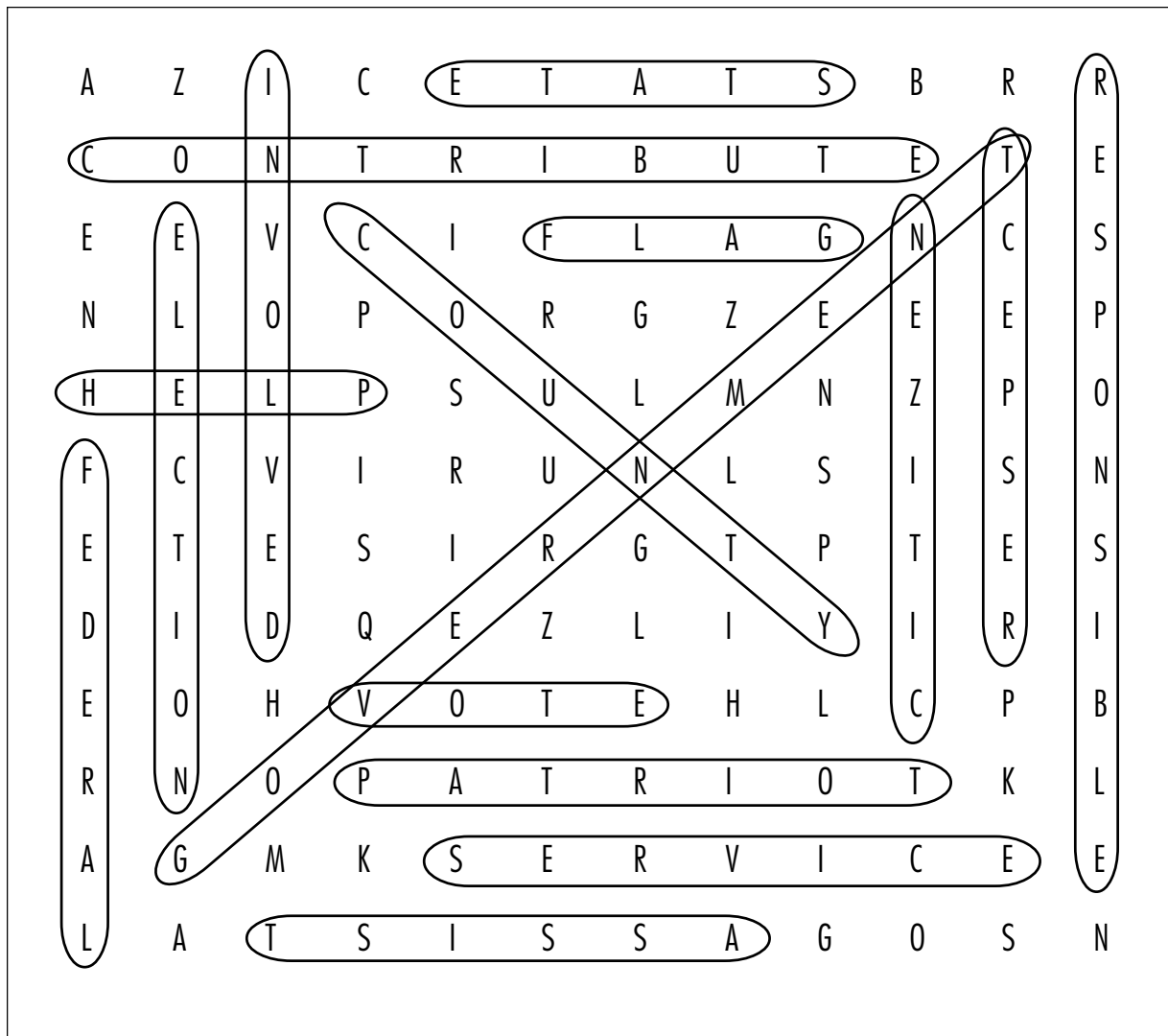
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service	state	assist	responsible
vote	federal	involved	respect

### Word Search—Key

**In this activity you will:**

- learn to identify sixteen concepts related to developing citizenship.
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Developed by: Kathryn J. Cox, Extension 4-H Specialist, Youth Development; David Farrell, Extension Associate, 4-H Communications; Mary Lynn Thalheimer, Extension Associate, 4-H International Exchange Program

# Citizenship

## Ohio County Names

Fill in the blanks with the name of an Ohio county.

1. \_\_\_\_\_ helps to make a successful farmer.
2. A president of the United States \_\_\_\_\_
3. A famous elm tree \_\_\_\_\_
4. Inventor of the steamboat \_\_\_\_\_
5. Three Indian tribes a) \_\_\_\_\_ b) \_\_\_\_\_  
c) \_\_\_\_\_
6. A fish \_\_\_\_\_
7. A railroad \_\_\_\_\_
8. Found in rich man's home \_\_\_\_\_
9. A candy bar \_\_\_\_\_
10. A breed of cattle \_\_\_\_\_
11. A breed of chickens \_\_\_\_\_
12. A body of water \_\_\_\_\_
13. To carry from one lake to another \_\_\_\_\_
14. Some children are afraid of the \_\_\_\_\_
15. What every child dislikes \_\_\_\_\_
16. A famous gelatin \_\_\_\_\_
17. An admiral of Great Lakes history \_\_\_\_\_
18. Who discovered electricity \_\_\_\_\_
19. A famous Greek city \_\_\_\_\_
20. A man's given name \_\_\_\_\_

Compare your answers with those of a partner, and discuss these questions:

1. Which of the counties have you visited? Describe what you did there.
2. Which of the counties do you know least about? How could you learn more?

### Fill in the Blanks

#### In this activity you will:

- learn to identify 25 different Ohio counties.
- assess current knowledge of Ohio counties, and identify counties about which more knowledge is needed.
- fill in the blanks with the names of Ohio counties.
- discuss your responses with a partner.

# Citizenship

## Ohio County Names

Fill in the blanks with the name of an Ohio county.

1. Richland helps to make a successful farmer.
2. A president of the United States Adams, Harding, Harrison, Jackson, Jefferson, Madison, Monroe, and Washington
3. A famous elm tree Logan
4. Inventor of the steamboat Fulton
5. Three Indian tribes a) Seneca b) Wyandot  
c) Tuscarawas
6. A fish Pike
7. A railroad Erie
8. Found in rich man's home Butler
9. A candy bar Clark
10. A breed of cattle Guernsey
11. A breed of chickens Wyandot
12. A body of water Lake
13. To carry from one lake to another Portage
14. Some children are afraid of the Darke
15. What every child dislikes Licking
16. A famous gelatin Knox
17. An admiral of Great Lakes history Perry
18. Who discovered electricity Franklin
19. A famous Greek city Athens
20. A man's given name Henry

Compare your answers with those of a partner, and discuss these questions:

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*Developed by: Kathryn J. Cox, Extension 4-H Specialist, Youth Development; David Farrell, Extension Associate, 4-H Communications; Mary Lynn Thalheimer, Extension Associate, 4-H International Exchange Program*

# Citizenship

## State Slogans

Here is a list of slogans found on some state automobile license plates. How many can you identify with the right state? Work with a partner and place the number of the slogan on the map below.

- |                        |                          |                         |
|------------------------|--------------------------|-------------------------|
| 1. Vacationland        | 9. Peace Garden State    | 16. Water Wonderland    |
| 2. The Wheat State     | 10. Heart of Dixie       | 17. Grand Canyon State  |
| 3. Scenic              | 11. Empire State         | 18. Famous Potatoes     |
| 4. Land of Opportunity | 12. Sportsman's Paradise | 19. Land of Enchantment |
| 5. Colorful            | 13. 10,000 Lakes         | 20. Peach State         |
| 6. Drive Safely        | 14. The Beef State       | 21. Land of Lincoln     |
| 7. America's Dairyland | 15. Sunshine State       |                         |
| 8. See                 |                          |                         |

## Map Skills

### In this activity you will:

- learn to identify state slogans.
- learn why organizations adopt slogans.
- match the slogans with the correct state.
- discuss with a partner why organizations adopt slogans.



Discuss these questions with a partner.

1. Which of the slogans and states were easy to match? Why?
2. Which were hard to match? Why?
3. Why do you think states use slogans?
4. How are slogans used in advertising other organizations? How many slogans can you think of that are used in commercials today? How do they compare with the state slogans?

*Developed by: Kathryn J. Cox, Extension 4-H Specialist, Youth Development; David Farrell, Extension Associate, 4-H Communications; Mary Lynn Thalheimer, Extension Associate, 4-H International Exchange Program*

# Citizenship

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| 7. America's Dairyland | 15. Sunshine State       |                         |
| 8. See                 |                          |                         |

## Map Skills—Key

### In this activity you will:

- learn to identify state slogans.
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*Developed by: Kathryn J. Cox, Extension 4-H Specialist, Youth Development; David Farrell, Extension Associate, 4-H Communications; Mary Lynn Thalheimer, Extension Associate, 4-H International Exchange Program*

# Citizenship

## Ohio Facts



### Identification

#### In this activity you will:

- Work with a partner to answer these questions. See which team or group learns the most about Ohio!

1. What Ohio city was the rubber capital of the world? \_\_\_\_\_
2. Six of the 100 largest U.S. cities are located in Ohio. Can you name them? \_\_\_\_\_  
\_\_\_\_\_
3. What city boasts of the world's largest soap factory? \_\_\_\_\_
4. In what town was the McGuffey Reader originated? \_\_\_\_\_
5. What Ohio city is the world's largest coal shipping port? \_\_\_\_\_
6. What Ohio city produces the most lawn fertilizer? \_\_\_\_\_
7. What city fielded the first major league baseball team? What year? \_\_\_\_\_
8. Which president of the U.S. used the red carnation in his lapel? \_\_\_\_\_
9. What Ohio city boasts of the first concrete street? \_\_\_\_\_
10. Can you name America's first billionaire? From what Ohio city? \_\_\_\_\_
11. In what city was the song, "Down By The Old Mill Stream" written? Who wrote it? \_\_\_\_\_
12. At what elevation is the highest point in Ohio? \_\_\_\_\_
13. Ohio's first capital was not in Columbus. Can you name the city? \_\_\_\_\_
14. What Ohio city housed the first Japanese auto plant to ship cars to Japan? \_\_\_\_\_

Developed by: Kathryn J. Cox, Extension 4-H Specialist, Youth Development; David Farrell, Extension Associate, 4-H Communications; Mary Lynn Thalheimer, Extension Associate, 4-H International Exchange Program

# Citizenship

## Ohio Facts



### Identification—Key

#### In this activity you will:

- Work with a partner to answer these questions. See which team or group learns the most about Ohio!

1. What Ohio city was the rubber capital of the world? Akron
2. Six of the 100 largest U.S. cities are located in Ohio. Can you name them? Columbus, Cleveland, Cincinnati, Toledo, Akron, Dayton
3. What city boasts of the world's largest soap factory? Cincinnati
4. In what town was the McGuffey Reader originated? Cincinnati
5. What Ohio city is the world's largest coal shipping port? Toledo
6. What Ohio city produces the most lawn fertilizer? Marysville
7. What city fielded the first major league baseball team? What year? Cincinnati, 1869
8. Which president of the U.S. used the red carnation in his lapel? Garfield
9. What Ohio city boasts of the first concrete street? Bellefontaine
10. Can you name America's first billionaire? From what Ohio city? John D. Rockefeller, Cleveland
11. In what city was the song, "Down By The Old Mill Stream" written? Who wrote it? Findlay, Tell Taylor
12. At what elevation is the highest point in Ohio? 1,550 feet near Bellefontaine
13. Ohio's first capital was not in Columbus. Can you name the city? Chillicothe
14. What Ohio city housed the first Japanese auto plant to ship cars to Japan? Marysville

Developed by: Kathryn J. Cox, Extension 4-H Specialist, Youth Development; David Farrell, Extension Associate, 4-H Communications; Mary Lynn Thalheimer, Extension Associate, 4-H International Exchange Program

# Citizenship

## Labels and Stereotypes

### Decision-Making

#### In this activity you will:

- learn to identify the pros and cons of labeling and stereotyping.
- choose gifts for imaginary people and discuss the reasons for your choices.

It's the week before the holidays and you are given the task of buying a present for each of the following people:

- \_\_\_\_\_ 1. Harry Skinner, a cab driver
- \_\_\_\_\_ 2. Marsha Truelove, a Red Cross volunteer
- \_\_\_\_\_ 3. Freddy Faster, a sixth grade "A" student
- \_\_\_\_\_ 4. Abigail Watson, a senior citizen

Which of the following gifts would you choose for each? Write the letter of the gift you would choose beside each person's name.

- A. a desk dictionary
- B. a rocking chair
- C. two tickets to the opera
- D. a pair of skis
- E. a leather jacket
- F. a make-up kit
- G. a Michael Bolton album
- H. a first-aid kit

Discuss the following questions with a partner:

1. Why did you choose these gifts?
2. Would you choose different gifts if you knew the following information? Why?

**Harry** is a voice student who drives a cab in his spare time. He has nothing against leather jackets, but he'd prefer opera tickets. He hopes to be an opera singer.

**Marsha** thinks Michael Bolton is "super" and listens to his records while doing volunteer work at the Red Cross canteen.

**Freddy** is working on a clown routine for the school talent show right now. A make-up kit would help his act a lot more than a dictionary would!

**Abigail**, born in Vermont, enjoys skiing on winter days. She would put new skis to good use and has no need for a rocking chair.

3. What, if any difference does it make if you stereotype people? Do you think stereotypes are a form of prejudice?

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# International

## Major Food Exporters

Circle the names of the countries that export more food out of their country than they import into their country.

After completing the word search, discuss these questions with a partner.

1. Were any of the six countries easy or hard to identify?
2. What are two or three reasons why people go hungry in some countries?
3. What do you think needs to be done to make sure all the children in the world get enough to eat?

### Word Search

#### In this activity you will:

- find the names of the six food exporting countries.
- identify factors which contribute to world hunger.
- consider possible ways to reduce world hunger.
- discuss alternatives to world hunger with a partner.

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

Source: Minnesota 4-H Global Awareness

Developed by: Kathryn J. Cox, Extension 4-H Specialist, Youth Development; David Farrell, Extension Associate, 4-H Communications; Mary Lynn Thalheimer, Extension Associate, 4-H International Exchange Program

# International Major Food Exporters

Circle the names of the countries that export more food out of their country than they import into their country. **Only six countries export more food out of their countries than they buy from other countries. They are Argentina, the United States, South Africa, Australia, New Zealand, and Canada.**

After completing the word search, discuss these questions with a partner.

1. Were any of the six countries easy or hard to identify?
2. What are two or three reasons why people go hungry in some countries?
3. What do you think needs to be done to make sure all the children in the world get enough to eat?

## Word Search—Key

### In this activity you will:

- find the names of the six food exporting countries.
- identify factors which contribute to world hunger.
- consider possible ways to reduce world hunger.
- discuss alternatives to world hunger with a partner.

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

Source: Minnesota 4-H Global Awareness

Developed by: Kathryn J. Cox, Extension 4-H Specialist, Youth Development; David Farrell, Extension Associate, 4-H Communications; Mary Lynn Thalheimer, Extension Associate, 4-H International Exchange Program

# International Countries and Capitals

Match the countries with their capitals. Discuss the purpose of capitals with a partner.

<b>Country</b>	<b>Capital</b>
_____ 1. India	a. Buenos Aires
_____ 2. Thailand	b. Bangkok
_____ 3. Switzerland	c. Paris
_____ 4. Argentina	d. Warsaw
_____ 5. Sweden	e. Lisbon
_____ 6. Hungary	f. Vienna
_____ 7. Taiwan	g. Budapest
_____ 8. Spain	h. Lima
_____ 9. Turkey	i. Tehran
_____ 10. Austria	j. Taipei
_____ 11. Scotland	k. Washington, D.C.
_____ 12. Venezuela	l. Gaborone
_____ 13. Greece	m. Brussels
_____ 14. United States	n. Bern
_____ 15. Belgium	o. Dublin
_____ 16. Portugal	p. Ankara
_____ 17. Poland	q. Caracas
_____ 18. France	r. Madrid
_____ 19. Iran	s. Stockholm
_____ 20. Botswana	t. New Delhi
_____ 21. Philippines	u. Athens
_____ 22. Finland	v. Edinburgh
_____ 23. Ireland	w. Manila
_____ 24. Peru	x. Helsinki

## Matching

### In this activity you will:

- learn to identify the capitals of 24 countries.
- learn why nations make capitals.

Discuss these questions with a partner:

1. Which countries were easy to match with their capitals? Which were hard? Why?
2. Why do you think countries have capitals? What purpose do capitals serve?
3. Why do we have governments?
4. Do you think governments serve people, or do people serve governments? Why?

*Developed by: Kathryn J. Cox, Extension 4-H Specialist, Youth Development; David Farrell, Extension Associate, 4-H Communications; Mary Lynn Thalheimer, Extension Associate, 4-H International Exchange Program*

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Match the countries with their capitals. Discuss the purpose of capitals with a partner.

<b>Country</b>		<b>Capital</b>
<u>t</u>	1. India	a. Buenos Aires
<u>b</u>	2. Thailand	b. Bangkok
<u>n</u>	3. Switzerland	c. Paris
<u>a</u>	4. Argentina	d. Warsaw
<u>s</u>	5. Sweden	e. Lisbon
<u>g</u>	6. Hungary	f. Vienna
<u>i</u>	7. Taiwan	g. Budapest
<u>r</u>	8. Spain	h. Lima
<u>p</u>	9. Turkey	i. Tehran
<u>f</u>	10. Austria	j. Taipei
<u>v</u>	11. Scotland	k. Washington, D.C.
<u>q</u>	12. Venezuela	l. Gaborone
<u>u</u>	13. Greece	m. Brussels
<u>k</u>	14. United States	n. Bern
<u>m</u>	15. Belgium	o. Dublin
<u>e</u>	16. Portugal	p. Ankara
<u>d</u>	17. Poland	q. Caracas
<u>c</u>	18. France	r. Madrid
<u>i</u>	19. Iran	s. Stockholm
<u>l</u>	20. Botswana	t. New Delhi
<u>w</u>	21. Philippines	u. Athens
<u>x</u>	22. Finland	v. Edinburgh
<u>o</u>	23. Ireland	w. Manila
<u>h</u>	24. Peru	x. Helsinki

## Matching—Key

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# International

## International Issues: What Do You Think?

This is not a true/false test. Decide whether you agree (A) or disagree (D) with each statement. Circle your answer. Then compare your answers with those of a partner, and discuss why you agree and why you disagree about your responses.

### Decision-Making

#### In this activity you will:

- learn to identify your personal positions on major international issues.
- learn to develop understanding of others' values and perspectives.

#### Agree    Disagree

- |   |   |  |
|---|---|--|
| A | D | 1. The U.S. should be independent of foreign energy sources.   |
| A | D | 2. The U.S. should greatly reduce its foreign aid to those countries without effective birth control programs. |
| A | D | 3. The United Nations should control world rationing of energy and mineral resources.                          |
| A | D | 4. The U.S. should give food to needy nations to promote world peace.  |
| A | D | 5. The U.S. should play an active role in spreading our political and economic systems abroad.                 |
| A | D | 6. All exports of nuclear technology should be banned until importing nations agree to effective controls.     |
| A | D | 7. The ideal family consists of two children.  |

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# International

## Cross-Cultural Understanding: International Bingo

Move among the members of your group and have them write their names in the box for any of the 16 items that describe them. Then discuss how many people in your group match each of the descriptions. Discuss possible ways members of the group could participate in international experiences. If everyone is able to fill in all the boxes on their bingo card, play a game of international bingo by pulling members' names out of a box and seeing who gets four in a row first.

### Matching

#### In this activity you will:

- learn to develop cross-cultural understanding.
- learn about other people's international experiences.

Has used something made in another country.	Speaks two languages.	Knows a dance from another country.	A former 4-H exchange participant or host.
Has lived in another country.	Is wearing something made in another country.	Can name a game from another country.	Can cook an international food.
Has traveled in a foreign country.	Has received a letter from another country.	Was born in another country.	Writes to someone in another country.
Likes a food from another country.	Has traveled in Canada or Mexico.	Has eaten in a restaurant serving food from another country.	Can count to five in another language.

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# Careers

## Goal Setting and Values

### Decision-Making

#### In this activity you will:

- learn what you value.
- identify some of your values.
- identify personal and career goals for the next five years.

Complete the following sentences. Answer how you honestly feel at the moment.

1. I wish I could \_\_\_\_\_ .
2. I don't like \_\_\_\_\_ .
3. What is most important to me is \_\_\_\_\_ .
4. Going to school is \_\_\_\_\_ .
5. I'm happiest when \_\_\_\_\_ .
6. Working is \_\_\_\_\_ .
7. My friends think I'm \_\_\_\_\_ .
8. I admire \_\_\_\_\_ .

List your most important career or education goals:

- In one year \_\_\_\_\_
- In three years \_\_\_\_\_
- In five years \_\_\_\_\_

List your most important personal goals (family, recreational, organizational, etc.).

- In one year \_\_\_\_\_
- In three years \_\_\_\_\_
- In five years \_\_\_\_\_

Discuss your answers with a partner.

*Source: Rose Fisher Merkowitz, Highland County Extension Agent, "Developing Backbone for Career Choices"*

*Developed by: Kathryn J. Cox, Extension 4-H Specialist, Youth Development; David Farrell, Extension Associate, 4-H Communications; Mary Lynn Thalheimer, Extension Associate, 4-H International Exchange Program*

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# Careers

## Personal Values: Job Openings

There are five applicants for one job opening. Rank the candidates from 1st through 5th in the order you would hire them if you were the employer.

\_\_\_\_\_ A woman whose husband recently died. She has four young children, ages one to six, whom she now must support. She will be getting \$200 a month from insurance, but this is not enough to live on.

\_\_\_\_\_ A former drug addict who has kept away from drugs for eleven months. He is a very serious young man who is determined to do well. He has had trouble finding jobs because of his former addiction, and his psychologist and priest say there is a strong possibility he will return to drugs if he is not employed soon.

\_\_\_\_\_ A highly intelligent black man who lives in a slum. He needs the job to continue his college education and to help support his brothers and sisters. He wants to become a doctor and help the poor in his neighborhood.

\_\_\_\_\_ A young woman who left her parent's home to try to make it on her own. She has a strong interest in this type of work, and is the best qualified of all the applicants.

\_\_\_\_\_ A recent immigrant to this country who is the father of four. His knowledge of English is poor, and this will probably slow him down on the job at first. But he is a clever and confident person who learns quickly.

Discuss these questions with a partner.

1. Why did you rank the candidates in the order you did?
2. What personal or group values do your choices indicate?
3. As you make job decisions is it important to consider the requirements of the job task or the needs of the people involved?

*Adapted from: "Values: Developing Backbones for Career Choices," Kelly Manion, Clark County Extension Agent*

*Developed by: Kathryn J. Cox, Extension 4-H Specialist, Youth Development; David Farrell, Extension Associate, 4-H Communications; Mary Lynn Thalheimer, Extension Associate, 4-H International Exchange Program*

## Ranking

### In this activity you will:

- learn to become aware of your personal values and how they affect your opinions of others.
- rank five candidates for a job and discuss your responses with a partner.

*Developed by: Kathryn J. Cox, Extension 4-H Specialist, Youth Development; David Farrell, Extension Associate, 4-H Communications; Mary Lynn Thalheimer, Extension Associate, 4-H International Exchange Program*

# Careers

## Candy Bar Job Search

### Materials Needed

A candy bar with a list of ingredients on the wrapper for each participant.

With a partner, examine the wrapper of a candy bar and brainstorm the types of jobs and careers associated with producing candy bars for consumers. Then list the types of job skills and training required for each job/career you identify.

### Brainstorming

#### In this activity you will:

- learn the wide variety of jobs and careers associated with producing products.
- determine which types of jobs and careers may interest you.
- identify and discuss jobs and careers associated with producing candy bars.

<b>Job/Career</b> ex: advertiser	<b>Skill</b> professional	<b>Training</b> college (marketing or business)
ex: cocoa farmer	skilled and unskilled	tech school or college

Discuss these questions with a partner.

1. In which of these jobs would you be most interested, if you had to pick one? Why?
2. Which of these jobs are least interesting to you?
3. What types of work are you interested in doing as an adult? Why?
4. What training will you need?

*Adapted from: Career Education Resources by Fred Bruny, Extension 4-H Specialist, Emeritus and Becky Cropper, Brown County Extension Agent*

*Developed by: Kathryn J. Cox, Extension 4-H Specialist, Youth Development; David Farrell, Extension Associate, 4-H Communications; Mary Lynn Thalheimer, Extension Associate, 4-H International Exchange Program*

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# Careers

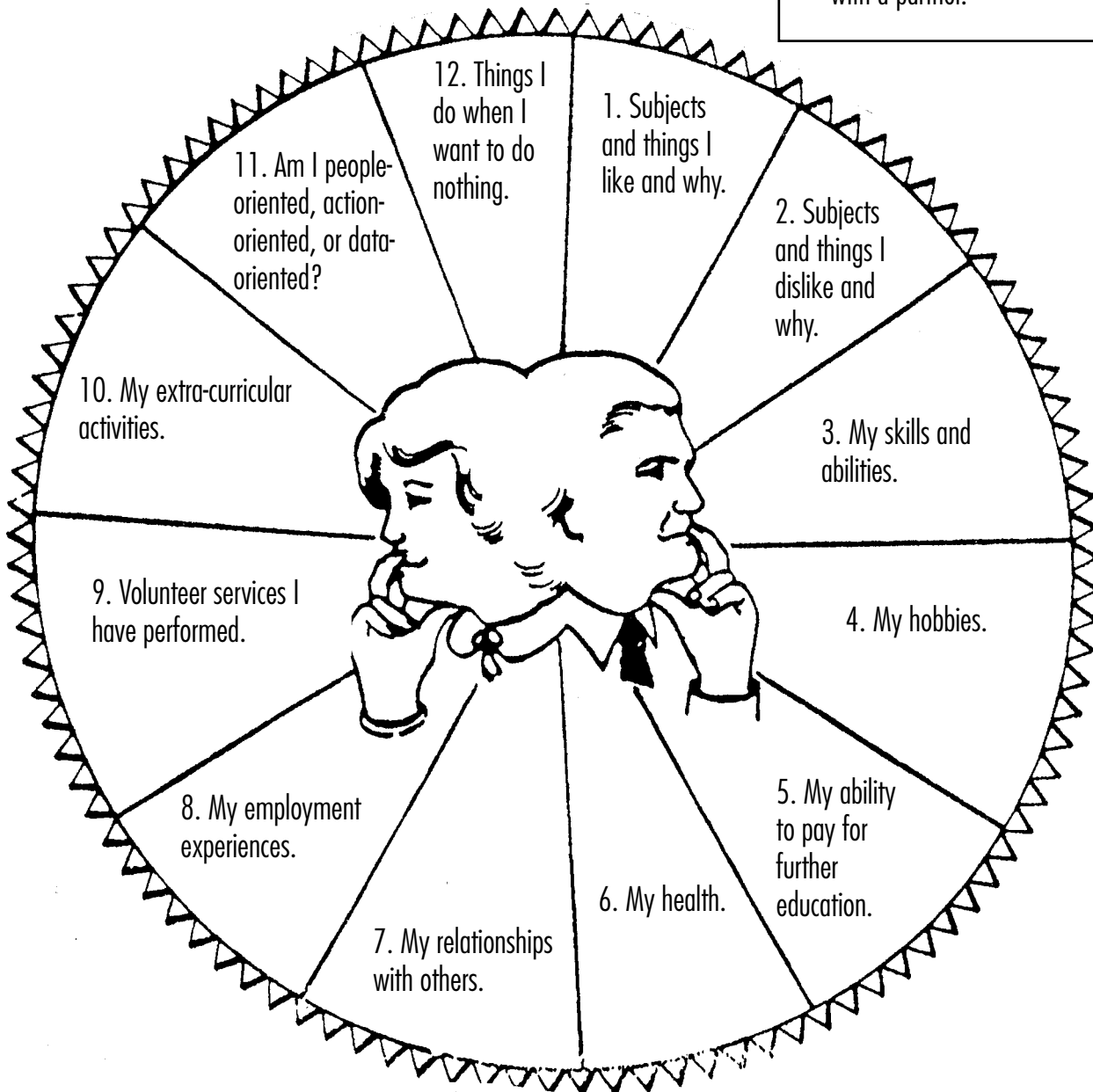
## Study Yourself Wheel

The Study Yourself Wheel has 12 different areas. Write short statements that describe how you feel about each area. There are no correct answers, only what is right for you. Then discuss your answers with a partner, and talk about what types of jobs or careers you think would be best for you.

### Writing

#### In this activity you will:

- learn your personal preferences and abilities which should be considered in making career decisions.
- identify your preferences, abilities, and experiences in 12 areas.
- discuss your answers and how they relate to your job and career decisions with a partner.



Adapted from: *Developing Backbones for Career Choices Interest Survey* by Becky Cropper, Brown County Extension Agent  
Developed by: Kathryn J. Cox, Extension 4-H Specialist, Youth Development; David Farrell, Extension Associate, 4-H Communications; Mary Lynn Thalheimer, Extension Associate, 4-H International Exchange Program

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# Careers

## Recognizing Assertive vs. Aggressive Behavior

In each of these situations, check whether each response is assertive, non-assertive, or aggressive in each of these situations. Discuss your answers with a partner and describe what improvements you can make to develop positive assertiveness.

### Identification

#### In this activity you will:

- learn to recognize assertive, non-assertive, and aggressive behavior.
- develop habits of positive assertiveness which are needed for success in the workforce.

	Assertive	Non-Assertive	Aggressive
<b>Situation 1</b>			
A friend has just complimented you on your new suit. It's the first time you've worn it and you really like it. You say:			
1a. Thank you			
1b. This? It's nothing special.			
1c. Well...I picked it up at a sale...well...			
<b>Situation 2</b>			
You're out with a group of friends. You're all deciding which movie to see. One person has just mentioned a movie you don't want to see. You say:			
2a. You always pick movies I don't like. You only think about yourself. You're very selfish.			
2b. I don't want to see that one. How about a movie over at the Plaza Theater?			
2c. Well, I don't know much about the movie. But, I guess, if you want to, we can see it.			

*Adapted from: Developing Backbones for Career Choices by Nikki Eyre, Highland County Extension Agent*

*Developed by: Kathryn J. Cox, Extension 4-H Specialist, Youth Development; David Farrell, Extension Associate, 4-H Communications; Mary Lynn Thalheimer, Extension Associate, 4-H International Exchange Program*

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# Leadership

## Leadership Skills Vocabulary

Match each of these leadership skills with the correct definition.

### Leadership Skill

- \_\_\_ 1. envisioning
- \_\_\_ 2. consensus-building
- \_\_\_ 3. negotiation
- \_\_\_ 4. creating rewards
- \_\_\_ 5. creating an image
- \_\_\_ 6. gaining legitimacy
- \_\_\_ 7. advocacy
- \_\_\_ 8. coalition-building
- \_\_\_ 9. perspective-taking

### Definition

- a. skill in building acceptance and support
- b. skill in getting people to make decisions during conflict, usually involving give-and-take
- c. skill in getting people to have an image or mission for the future
- d. skill in uniting groups to achieve mutual goals
- e. skill in seeing situations from different points of view
- f. skill in getting people to make decisions which everyone accepts as the best solution
- g. skill in establishing credibility, and gaining respect and trust
- h. skill in meeting people's needs and helping them benefit from being involved
- i. skill in persuading people to support ideas and plans

## Matching

### In this activity you will:

- learn to identify and define nine leadership skills that work.
- match leadership skills with their correct definition.
- discuss which leadership skills are most important for your group.

Discuss these questions with a partner.

1. Which of these leadership skills are most important in our group right now?
  
  
  
  
  
  
  
  
  
  
2. Which are least important? Why?
  
  
  
  
  
  
  
  
  
  
3. Which of these skills are needed by 4-H advisors? Teen leaders? Committee chairs and members? Other 4-H leaders?

*Developed by: Kathryn J. Cox, Extension 4-H Specialist, Youth Development; David Farrell, Extension Associate, 4-H Communications; Mary Lynn Thalheimer, Extension Associate, 4-H International Exchange Program*

# Leadership

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# Leadership

## How I Make Decisions

Consider the ways you make seven types of decisions.

Place an "X" in the space that shows the way you make decisions, then compare your answers with a partner.

## Decision-Making

### In this activity you will:

- learn how you make decisions.
- learn what kinds of decisions require careful, thoughtful deliberations, and what kinds of decisions are easier for you to make.
- determine similarities and differences between the way you and your friends make personal decisions and as members and leaders within a group.

	I think it through carefully.	I give it some thought.	I don't stop to think.
1. Spending money on a bike			
2. Making friends			
3. Choosing hobbies			
4. Buying clothes			
5. Getting along with friends			
6. Joining clubs or teams			
7. What to eat for lunch			

Discuss these questions with a partner:

1. How do you usually make decisions?
2. What kinds of decisions do you carefully think about, and what kinds of decisions are easier to make?
3. Which kinds of decisions are most important to you? Which kinds of decisions are least important to you?
4. What are the similarities and differences between your answers and your partner's answers? Why do you differ, and why are you similar?
5. What are the differences and similarities in how you make personal decisions, and how you make decisions as a member or leader in a group?

Source: Adapted from "Leadership Skills You Never Outgrow," Kathryn J. Cox, 10/96

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# Leadership

## Are You an "N" or an "S"?

Check which item in each of the following seven pairs you prefer:

- N1 \_\_\_\_\_ being called imaginative or intuitive, or  
S1 \_\_\_\_\_ being called factual and accurate?
- S2 \_\_\_\_\_ using methods you know well that get the job done, or  
N2 \_\_\_\_\_ trying to think of new methods of doing tasks?
- N3 \_\_\_\_\_ thinking about possibilities, or  
S3 \_\_\_\_\_ dealing with actualities and real life?
- S4 \_\_\_\_\_ concrete and real things, or  
N4 \_\_\_\_\_ ideas and theories?
- N5 \_\_\_\_\_ possible views of the whole, or  
S5 \_\_\_\_\_ the factual details available?
- S6 \_\_\_\_\_ facts, or  
N6 \_\_\_\_\_ ideas?
- N7 \_\_\_\_\_ designing plans without necessarily carrying them out, or  
S7 \_\_\_\_\_ carrying out carefully laid, detailed plans with precision?

Next, score your responses. Did you check more "N's" or "S's"?

If you checked more "N's" than "S's," you rely on intuition. "N" (intuitive) leaders prefer looking for possibilities and relationships rather than working with facts. You like solving new problems, dislike doing the same things over and over, enjoy learning new skills, work in bursts of energy, reach conclusions quickly, and are impatient with routine details.

If you checked more "S's" than "N's," you rely on your senses. "S" (sensory) leaders prefer working with facts rather than looking for possibilities and relationships. You dislike new problems unless there are standard ways to solve them. You like an established way of doing things, using old skills, seldom make errors, and are good at precise work.

Discuss with these questions with a partner.

How well does the description describe you? Are you similar or different?

Are there situations in which "N's" would be better leaders? How about "S's"?

## Decision-Making

### In this activity you will:

- learn whether you rely more on your intuition or your senses in making decisions.
- see strengths and weaknesses associated with your preferred leadership style.

*Developed by: Kathryn J. Cox, Extension 4-H Specialist, Youth Development; David Farrell, Extension Associate, 4-H Communications; Mary Lynn Thalheimer, Extension Associate, 4-H International Exchange Program*

*Developed by: Kathryn J. Cox, Extension 4-H Specialist, Youth Development; David Farrell, Extension Associate, 4-H Communications; Mary Lynn Thalheimer, Extension Associate, 4-H International Exchange Program*

# Leadership

## Cone of Experience

Arrange the ten types of experience in order from least effective on the top to most effective on the bottom of this puzzle. Write the letter of each type of experience on the cone to show which experience should go in each of the ten blanks.

## Decision-Making

### In this activity you will:

- learn to select as a leader experience which maximize the development of people in groups you lead.
- arrange ten types of experiences in order of their effectiveness in helping people learn, and discuss your responses with a partner.

**least effective**

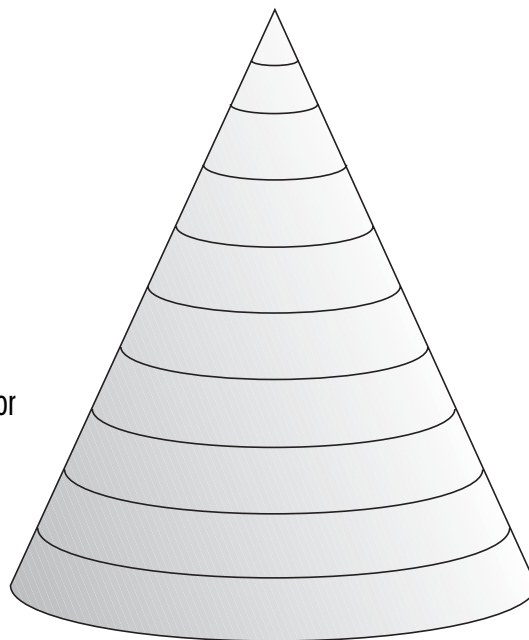
a. taking part in role playing

b. reading words

c. listening to recordings or looking at still slides or pictures

d. practicing with specimens, objects, or models

e. watching television or videos



f. taking part in field trips

g. actual hands-on "learn-by-doing" activities

h. viewing habits

i. observing demonstrations

j. looking at symbols

**most effective**

Compare your rankings with the correct ranking, and discuss these questions with a partner.

1. Why do you think the most effective method is better than the least effective method?
2. In what situations might a leader want to use a less effective method, rather than one of the most effective methods?
3. What factors do leaders need to consider in deciding which methods to use?

*Developed by: Kathryn J. Cox, Extension 4-H Specialist, Youth Development; David Farrell, Extension Associate, 4-H Communications; Mary Lynn Thalheimer, Extension Associate, 4-H International Exchange Program*

# Leadership

## Cone of Experience

Arrange the ten types of experience in order from least effective on the top to most effective on the bottom of this puzzle. Write the letter of each type of experience on the cone to show which experience should go in each of the ten blanks.

### Decision-Making—Key

#### In this activity you will:

- learn to select as a leader experience which maximize the development of people in groups you lead.
- arrange ten types of experiences in order of their effectiveness in helping people learn, and discuss your responses with a partner.

**least effective**

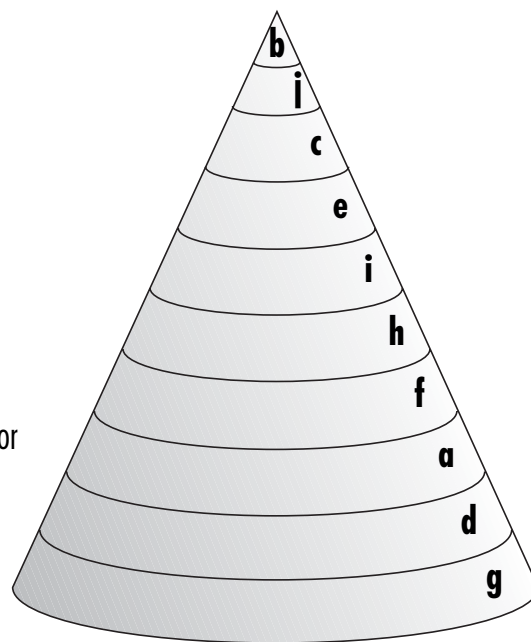
a. taking part in role playing

b. reading words

c. listening to recordings or looking at still slides or pictures

d. practicing with specimens, objects, or models

e. watching television or videos



f. taking part in field trips

g. actual hands-on “learn-by-doing” activities

h. viewing habits

i. observing demonstrations

j. looking at symbols

**most effective**

Compare your rankings with the correct ranking, and discuss these questions with a partner.

1. Why do you think the most effective method is better than the least effective method?
2. In what situations might a leader want to use a less effective method, rather than one of the most effective methods?
3. What factors do leaders need to consider in deciding which methods to use?

*Developed by: Kathryn J. Cox, Extension 4-H Specialist, Youth Development; David Farrell, Extension Associate, 4-H Communications; Mary Lynn Thalheimer, Extension Associate, 4-H International Exchange Program*

# Communications

## Ways of Communication

### Writing/Drawing

#### In this activity you will:

- learn to examine different ways people communicate with each other.

1. Think of the many ways people communicate. In the box below, write (or draw a picture of) those methods. Consider how you communicate with other people and then think about how people with different backgrounds might communicate with and without words. For example, people might talk face-to-face or by drawing pictures, etc.



2. Compare your responses with a partner. Discuss reasons why people might choose to communicate in one way rather than another. For example, why might someone communicate with a smile when they like what you are doing rather than telling you with words?

*Developed by: David Farrell, Extension Associate, Communications*



# Communications

## Non-Verbal Communication

Before this activity, prepare at least eight slips of paper, each describing a way a participant might feel about the group or its activities. It can be a personal feeling or mood.

### Role Playing

#### In this activity you will:

- learn how people can communicate non-verbally.

1. In this activity, talk to the group about the importance of non-verbal messages. Point out that sometimes what you don't say vocally can send just as strong of a message as what is spoken out loud.
2. Give each person (or team) a slip of paper listing a specific feeling or mood.

### Suggested Feelings/Moods

anxious

unhappy

mad

happy

scared

unsure

worried

nice

mean

tired

sick

bored

stuck up

energetic

hungry

3. Give each person (or team) time to privately practice and discuss how to act out the feeling listed on the paper.
4. Without revealing what the feeling is, have each person (or team) use facial expressions and/or body language to try and show the group how he or she is feeling.
5. Have the group members guess what feeling is being portrayed. Talk about other ways people might express the emotion.



# Communications

## Body Language

### Role Playing

#### In this activity you will:

- learn how body postures (body language) communicate feeling and meaning.

1. Tell the group that this activity is a way of exploring how body postures can communicate feeling and meaning.
2. Ask group members to find partners. One partner will be a “statue builder” and the other will be the “statue material.” Ask the partners to decide who will play which role first.
3. Explain that when you call out a feeling or situation, the job of the “statue builder” is to move his or her partner (the “statue material”) into a posture that expresses the feeling. Show them appropriate ways they can move their partner’s arms, legs, and heads to express the word you give them.
4. Demonstrate the activity by using a volunteer to serve as “material” for you to “build” a statue expressing one of the words listed below. Then call out one of the other situations or feelings and give the pairs time to create their statues.

### Situations

dancing  
waiting  
being very happy  
skating  
thinking

### Feelings

tired	ignored
joyful	mocking
happy	tranquil
grieving	jealous
discouraged	bored
amused	giddy

5. When each builder has created a statue, invite group members to look around at what others have built. Statues can move their eyes, but not their bodies.
6. Have the partners switch roles. Call out different feelings to have the new builders create statues.
7. Have each pair secretly pick a feeling, create a “statue” to show the feeling, and then have a group try to guess what the statue expresses.
8. Discuss what members could learn from this activity.



# **Communications**

## **Cross-Cultural Communication**

### **Role Playing**

#### **In this activity you will:**

- learn to examine ways people from different countries might communicate.

1. Have everyone in the group form teams of two.
2. Pretend each team member is from a different country and speaks a language that the others cannot understand.
3. Using non-verbal signs only, have one member of the team ask one of the questions below and have the other member of the team answer the question non-verbally.
4. Afterwards, have the entire group discuss why communicating with someone who speaks a different language can be difficult. Also, discuss what seems to work when trying to communicate if you are unable to speak someone else's language.

## **Questions**

1. How old are you?
2. Are you hungry?
3. What is your name?
4. Where are you from?
5. Are you thirsty?
6. Are we friends?
7. Are you tired or sleepy?



# Communications

## Public Speaking Roll Call

Think of five different roll call responses your club could use at meetings and write them in the box below. These might be about subjects that each club member could respond to to show that he or she is present. Think of a subject everyone shares and that most people would find interesting. A good idea is "my favorite hobby." Discuss your ideas with the group and decide which roll call ideas would be appropriate. Use the roll call subjects at the rest of your meetings.

*Note: Be sensitive to the fact there might be topics that not all members of your group can respond to. Also, respect the fact that there might be some topics that club members would not want to answer.*

### Public Speaking

#### In this activity you will:

- create an opportunity to encourage speaking in front of a group.



# Communications

## Group Discussion

Have each person list their favorite activities (sports, free-time activities, hobbies, school activities, etc.) in the box below. After a few minutes have the group sit in a circle. Then have each person in the group stand up one at a time and share something they like to do and why. Discuss the activity and recognize participants for speaking in public.

### Public Speaking

#### In this activity you will:

- learn basic public speaking skills.



# Communications

## Performing Skits

### Role Playing

#### In this activity you will:

- learn how a skit can communicate a message.

1. Form teams of three to five people. Have each team pick one of the situations listed below and develop a skit to illustrate the situation. Each team member should have some acting role in the skit. Then have each team perform the skit in front of the whole group.
2. After the skits are finished, discuss what participants think makes a “good” skit compared with an “average” one. If participants were helping younger 4-H’ers plan a skit, what advice would they give them?

### Situations

1. Your group is sitting and waiting for the bus. Act out what kind of things you would do and what kind of things you would talk about while you wait.
2. Your group is doing warm-up exercises to get ready to go outside for gym class. Act out what kind of things you would do and what kind of things you would talk about while you warm up.
3. Your group is traveling to Grandma’s house in a car. Act out what kind of things you would do and what kind of things you would talk about while you are riding to Grandma’s.
4. Your group is part of a family getting ready to have their picture taken at a studio. Act out what kind of things you would do and what you would talk about while waiting to have your picture taken.
5. Your group is watching a television show. Act out what kind of things you would do and what you would talk about while you watch television.
6. Your group is eating breakfast. Act out what kind of things you would do and what you would talk about while you eat breakfast.
7. Your group is on a canoe trip. Act out what kind of things you would do and what you would talk about while you canoe.

*Note: If you or anyone in your group is interested in participating in a skit contest, ask your county OSU Extension office for more information.*



# Communications

## Show and Tell

### Public Speaking

#### In this activity you will:

- learn effective communication skills through giving a project talk.

Volunteer to “show and tell” something about your favorite project. Your subject may be something you made in the project, a tool you used, or a general activity you enjoy. Explain why you picked this project, what you learned, what you like best about it, and how to make or use the item you brought. For example, you could tell about a birdhouse made in woodworking or a picture taken in photography.

List some reasons why you picked this subject/item. \_\_\_\_\_

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What have you learned about this subject/item? \_\_\_\_\_

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---

What do you like best about it? \_\_\_\_\_

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---

---

What has been the most difficult thing about it? \_\_\_\_\_

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---

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Other things of interest about it: \_\_\_\_\_

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# Communications

## Illustrated Talk

### Public Speaking

#### In this activity you will:

- learn how to effectively give directions as part of an illustrated talk.

Before this activity, prepare ten to fifteen blank note cards. Write a simple task on each card. Some examples of tasks are: tying a shoe, sharpening a pencil, opening a carton of milk, unwrapping and chewing a stick of gum, zipping a jacket, or opening a can with a can opener.

1. Explain that this activity will provide experience in giving directions as part of an illustrated talk or demonstration.
2. Give each person (or team) one of the cards which contains a simple task.

### Suggested Tasks

Tying a shoe	Sharpening a pencil
Opening a carton of milk	Ziping a jacket
Making a peanut butter sandwich	Unwrapping and chewing a stick of gum
Opening a can with a can opener	Reading a book
Answering the telephone	Climbing up and going down a slide
Brushing your teeth	Painting a picture
Mailing a birthday card	Popping popcorn
Catching a fish in a pond	Climbing a ladder

3. Give each person (or team) time to privately practice giving verbal instructions on how to perform the task.
4. Without revealing what the task is, have each person (or team) give verbal directions to the group in his or her own words as if he or she were actually doing the task.
5. Have the group members guess what the task is. Then discuss what tips or pointers participants think are important when giving directions.

*Note: If you or anyone in your group is interested in participating in a Demonstration Contest, ask your county OSU Extension office for more information.*



# Communications

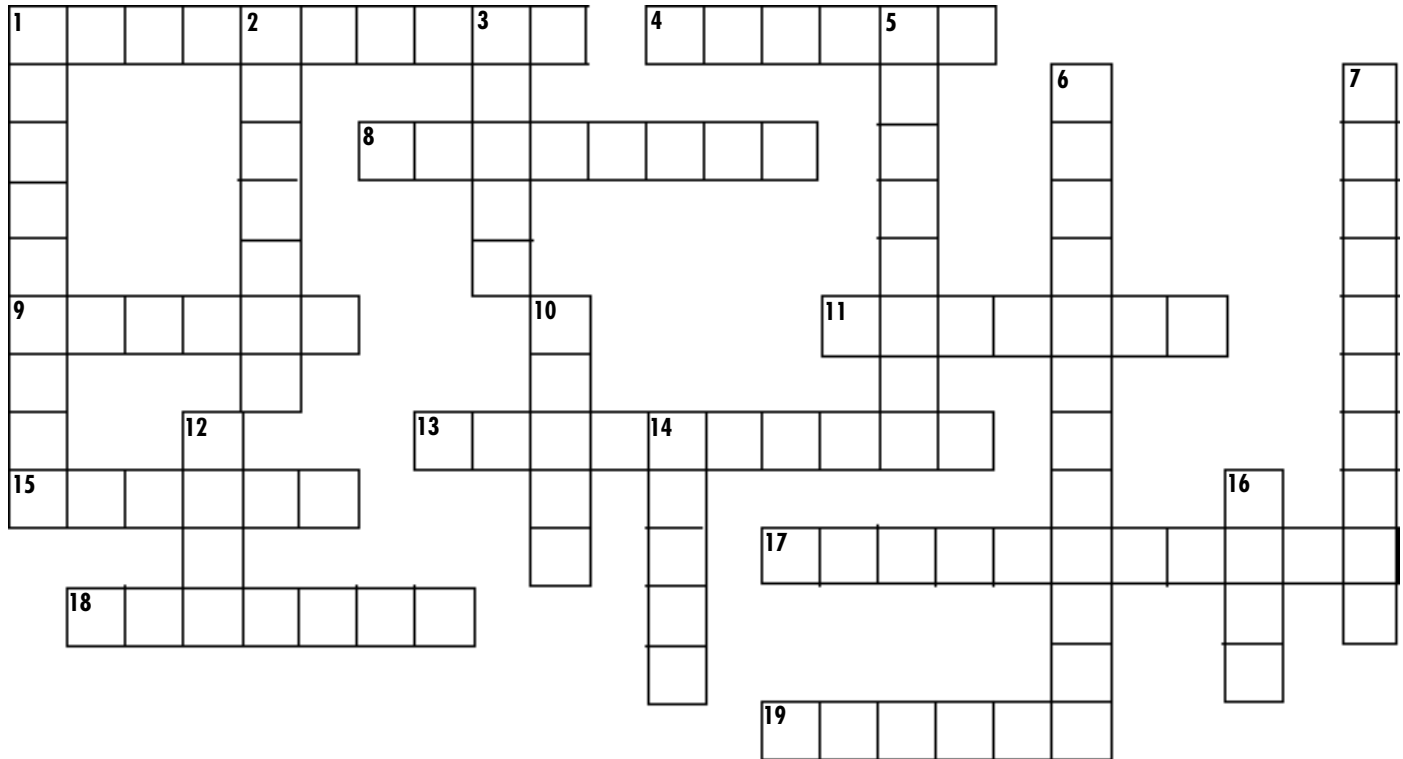
## Photography Vocabulary

Determine the correct answer to each statement. Place the letters of each answer in the correct squares of the crossword puzzle. When everyone has finished the puzzle, discuss the correct answers to each item.

### Crossword

#### In this activity you will:

- learn basic definitions and terms used in photography.



#### Down

- An \_\_\_\_\_ camera adjusts itself.
- A \_\_\_\_\_ controls the amount of time that the light reaches the film.
- \_\_\_\_\_ is recorded on the film in the camera.
- \_\_\_\_\_ is the amount of light that reaches the film when the shutter is released.
- \_\_\_\_\_ occurs when too much light reaches the film.
- \_\_\_\_\_ is necessary in order for the invisible image on the film to be a picture.
- Film \_\_\_\_\_ is the sensitivity of the film to light.
- The \_\_\_\_\_ collects light reflected from a subject to form an image on the film.
- A \_\_\_\_\_ is used when lighting is inadequate.
- The material that records the light which comes through the camera lens is \_\_\_\_\_.

#### Across

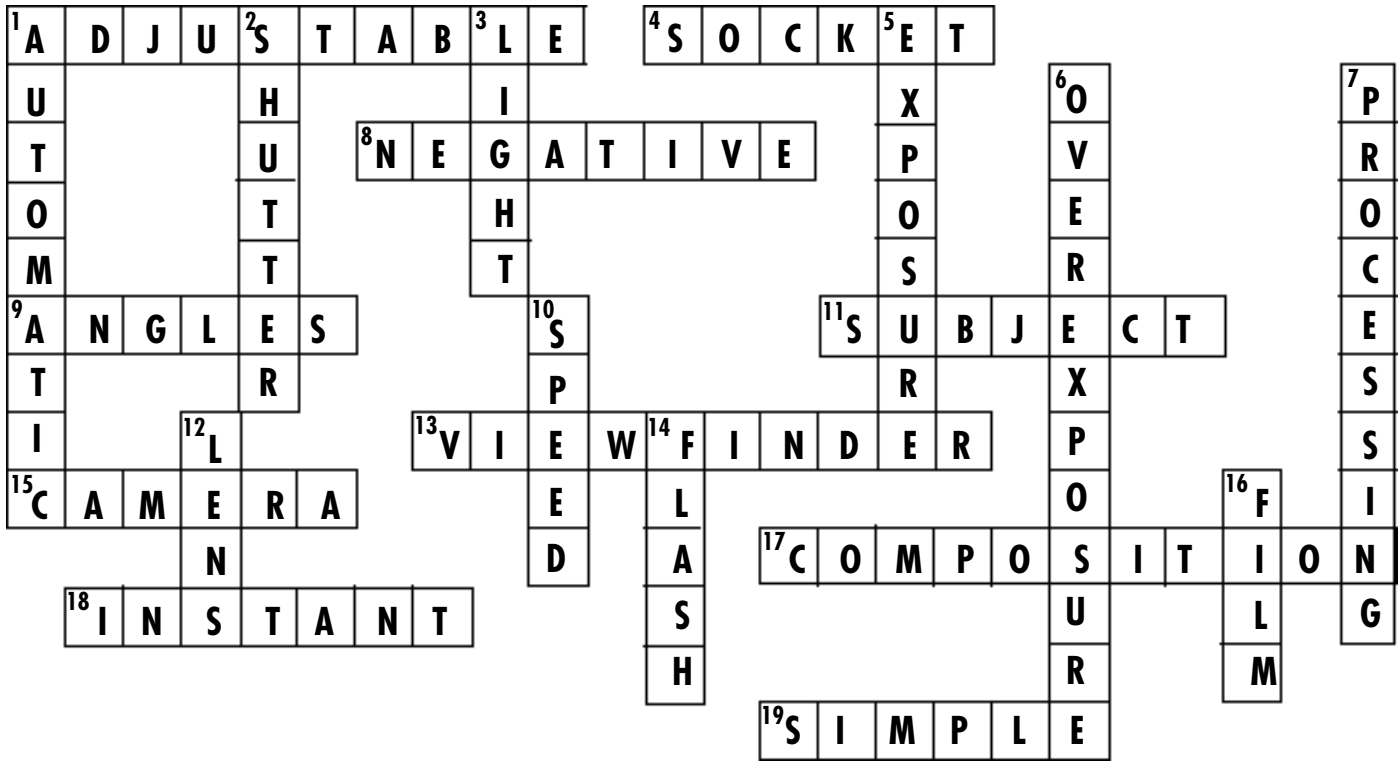
- An \_\_\_\_\_ camera has controls so a person can make adjustments.
- A \_\_\_\_\_ holds the flash in place on the camera.
- The developed film that contains a reversed-tone image is a \_\_\_\_\_.
- Camera \_\_\_\_\_ are various positions of the camera in relation to the subject.
- What you take a picture of is your \_\_\_\_\_.
- A \_\_\_\_\_ is used to frame the picture area.
- Your \_\_\_\_\_ is a precision instrument.
- The \_\_\_\_\_ is the arrangement of all elements in a picture.
- An \_\_\_\_\_ camera produces a finished print soon after you take the picture.
- A \_\_\_\_\_ camera has no adjustments.

Developed by: David Farrell, Extension Associate, Communications

# Communications

## Photography Vocabulary

Determine the correct answer to each statement. Place the letters of each answer in the correct squares of the crossword puzzle. When everyone has finished the puzzle, discuss the correct answers to each item.



### Crossword—Key

**In this activity you will:**

- learn basic definitions and terms used in photography.

### Down

- An \_\_\_\_\_ camera adjusts itself.
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- An \_\_\_\_\_ camera produces a finished print soon after you take the picture.
- A \_\_\_\_\_ camera has no adjustments.

Developed by: David Farrell, Extension Associate, Communications

# Communications

## Photography Basics

Answer each question. If you are unsure about the correct response, ask others in your group for help.

### Research

#### In this activity you will:

- learn basic photography information.

1. Why is light essential to photography? \_\_\_\_\_  
\_\_\_\_\_
2. How should you clean the lens on your camera? \_\_\_\_\_  
\_\_\_\_\_
3. Why does the lens need to be cleaned? \_\_\_\_\_  
\_\_\_\_\_
4. What are two tips you should follow when using an eye-level viewfinder? \_\_\_\_\_  
\_\_\_\_\_
5. Explain the conditions that would be present when you use a fast-speed film, a medium-speed film, and a slow-speed film.  
\_\_\_\_\_  
\_\_\_\_\_
6. Explain the use of front-lighting, side-lighting, and back-lighting. \_\_\_\_\_  
\_\_\_\_\_
7. What are two tips for taking indoor flash pictures? \_\_\_\_\_  
\_\_\_\_\_
8. What occurs if your pictures are underexposed? \_\_\_\_\_  
\_\_\_\_\_
9. How should you clean the inside of your camera? \_\_\_\_\_  
\_\_\_\_\_
10. List three ways to add interest to a picture of your dog. \_\_\_\_\_  
\_\_\_\_\_

# Communications

## Photography Basics

Answer each question. If you are unsure about the correct response, ask others in your group for help.

### Research—Key

#### In this activity you will:

- learn basic photography information.

1. Why is light essential to photography? **Light is what is recorded on film.**
2. How should you clean the lens on your camera? **Blow away dust or grit on surface, breathe on lens surface, and gently wipe lens clean with lint-free cloth or lens-cleaning paper.**
3. Why does the lens need to be cleaned? **The lens acts as a window for the film; the film will see a blurry scene with a dirty lens.**
4. What are two tips you should follow when using an eye-level viewfinder? **Keep your eye close to the viewfinder; the bottom of the viewfinder should be level with the horizon.**
5. Explain the conditions that would be present when you use a fast-speed film, a medium-speed film, and a slow-speed film. **Fast-speed film—poor lighting conditions; Medium-speed film—used for most picture taking conditions on sunny or bright cloudy days; Slow-speed film—bright light conditions**
6. Explain the use of front-lighting, side-lighting, and back-lighting. **Front-lighting—the sun is at your back and shines on the side of your subject that is facing you; Side-lighting—the sun shines on the subject from one side; Back-lighting—the sun shines from behind your subject.**
7. What are two tips for taking indoor flash pictures? **Don't take any pictures if you're directly facing a mirror, window, or shiny surface. Use flash extension so people's or animal's eyes won't have red glow.**
8. What occurs if your pictures are underexposed? **Too little light reaches the film so the pictures are dark.**
9. How should you clean the inside of your camera? **Blow out any dirt with a rubber syringe or brush it out with a soft brush.**
10. List three ways to add interest to a picture of your dog. **Give the dog an object to play with, take an "action shot," and/or include a person in the picture.**

# Communications

## Evaluating Photographs

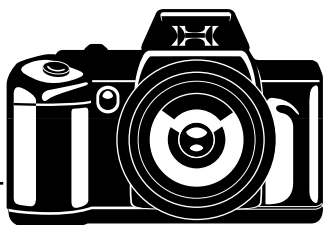
Look through a magazine and cut out a photograph that you think is a good picture. Paste the picture in the box below.

Discuss or list what things make a good photograph (such as lighting, colors, subject, distance, etc.).

### Discussion

#### In this activity you will:

- learn basic photography information.



*Developed by: David Farrell, Extension Associate, Communications*











# **Communications**

## **Evaluating News Stories**

Find a news story in a newspaper. Cut the story out of the paper and paste it in this box. Study the story and then read a few paragraphs out loud. Explain why it is news. What makes it newsworthy?

### **Discussion**

#### **In this activity you will:**

- study a news story.







## ***Countdown Chapter 2***

# ***Livestock***



# Countdown Chapter 2

## Livestock

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# Livestock

## Beef Breeds

Read the descriptions and fill in the blanks with the breed names.

1. \_\_\_\_\_

2. \_\_\_\_\_

3. \_\_\_\_\_

4. \_\_\_\_\_

5. \_\_\_\_\_

6. \_\_\_\_\_

7. \_\_\_\_\_

8. \_\_\_\_\_

9. \_\_\_\_\_

10. \_\_\_\_\_

11. \_\_\_\_\_

12. \_\_\_\_\_

### Fill in the Blanks

#### In this activity you will:

- learn the breeds of beef, where the breeds originated from, and what they look like.

### Clues

1. This breed originated in Scotland, is polled with a black smooth coat, and is known for carcass quality, milking, mothering, and reproductive abilities.
2. This breed was developed in the southwestern United States by crossing Angus with Brahman cattle from India. It is black and known for the ability to withstand heat and insects.
3. This breed was developed in France and imported into the United States from Mexico in 1936. It is large, white, and is noted for fast growth and lean carcasses.
4. Developed in Italy, this breed is white with black pigmentation. It is the largest breed and is noted for growth and beef producing abilities.
5. Originating in Germany, this breed is a solid cream to a reddish-yellow in color. It is a general purpose breed with good mothering abilities.
6. This breed was developed in England and brought to the United States in 1817. It is red with a white face, and is known for its vigor, hardiness, foraging ability, and quiet disposition.
7. This is a breed that originated in west-central France. It is light to golden red in color with lighter circles around the eyes and muzzle. When this breed is slaughtered at an early age, it yields a high percentage of lean meat with a minimum amount of fat.
8. Developed in the United States from the Hereford breed, this breed displays the same characteristics as Herefords except for the polled trait.
9. This breed was developed on the King Ranch in Texas, is five-eighths Shorthorn and three-eighths Brahman, and is known for its hardiness, growth rate, long life, heat tolerance, and insect resistance.
10. This breed was brought to the United States from England in 1783. Animals can be red, white, or roan in color, and are also noted for their good disposition, mothering, and milking ability.
11. Imported into the United States from Switzerland, France, and Germany, this breed is red to dark red, spotted with a white face, and is noted for its fast growth and milking ability.
12. This breed originated from Spanish Antilysin cattle and has long horns and several different color patterns. It is known for longevity, hardiness, strong survival instincts, and resistant to disease and parasites.

References: Beef Learning Laboratory Kit; 4-H Beef Resource Handbook  
Prepared By: Jodi Black, State Extension Associate, 4-H/Animal Sciences; Andrea Auker, Animal Sciences Student

# Livestock

## Beef Breeds

### Fill in the Blanks—Key

#### In this activity you will:

- learn the breeds of beef, where the breeds originated from, and what they look like.

Read the descriptions and fill in the blanks with the breed names.

1. A n g u s

2. B r a n g u s

3. C h a r o l a i s

4. C h i a n i n a

5. G e l b v i e h

6. H e r e f o r d

7. L i m o u s i n

8. P o l l e d H e r e f o r d

9. S a n t a G e r t r u d i s

10. S h o r t h o r n

11. S i m m e n t a l

12. T e x a s L o n g h o r n

### Clues

1. This breed originated in Scotland, is polled with a black smooth coat, and is known for carcass quality, milking, mothering, and reproductive abilities.
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10. This breed was brought to the United States from England in 1783. Animals can be red, white, or roan in color, and are also noted for their good disposition, mothering, and milking ability.
11. Imported into the United States from Switzerland, France, and Germany, this breed is red to dark red, spotted with a white face, and is noted for its fast growth and milking ability.
12. This breed originated from Spanish Antilysin cattle and has long horns and several different color patterns. It is known for longevity, hardiness, strong survival instincts, and resistant to disease and parasites.

References: *Beef Learning Laboratory Kit; 4-H Beef Resource Handbook*  
Prepared By: Jodi Black, State Extension Associate, 4-H/Animal Sciences; Andrea Auker, Animal Sciences Student

# Livestock

## Dairy Cattle Breeds

Read the descriptions and fill in the blanks with the breed names.

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_
4. \_\_\_\_\_
5. \_\_\_\_\_
6. \_\_\_\_\_

### Fill in the Blanks

#### In this activity you will:

- learn the breeds of dairy cattle, where the breeds originated from, and what they look like.

### Clues

1. This breed was developed in 1750 in the county of Ayr, Scotland, is medium in size with average milk production, and has strongly-attached, well-shaped udders. Cows are known for their extreme hardiness and good foraging ability. They are red or mahogany, and white in color.
2. Originated in Switzerland, this breed is large with high milk production and was developed to graze the mountains and produce high protein milk for cheese. Cows are known for their strength, ruggedness, and good feet and leg structure. Animals are solid brown with a black nose, switch, and hooves.
3. This breed was developed on an island in the English Channel to produce high fat milk for making butter. Cows are known for their gentle nature and their yellow-tinted milk, and they can be characterized by their fawn and white markings.
4. This breed originated in the Netherlands. It is largest and most numerous breed. Cows are known for producing the highest volume of milk of all breeds. They are black and white, or red and white in color.
5. This breed was developed on an island in the English Channel. They are the smallest cows and produce milk that is the highest in fat and protein. They are characterized by a shade of fawn with or without white markings.
6. Developed from an English breed of cattle, this breed association was formed in 1972, from cattle who are intermediate in size and milk production, are efficient in converting feed into meat or milk, and have a high heat tolerance. They can be red, white, or roan in color.

Reference: Dairy Learning Laboratory Kit

Prepared By: Jodi Black, State Extension Associate, 4-H/Animal Sciences; Andrea Auker, Animal Sciences Student

# Livestock

## Dairy Cattle Breeds

### Fill in the Blanks—Key

#### In this activity you will:

- learn the breeds of dairy cattle, where the breeds originated from, and what they look like.

Read the descriptions and fill in the blanks with the breed names.

1. A y r s h i r e
2. B r o w n S w i s s
3. G u e r n s e y
4. H o l s t e i n
5. J e r s e y
6. M i l k i n g S h o r t h o r n

### Clues

1. This breed was developed in 1750 in the county of Ayr, Scotland, is medium in size with average milk production, and has strongly-attached, well-shaped udders. Cows are known for their extreme hardiness and good foraging ability. They are red or mahogany, and white in color.
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Reference: Dairy Learning Laboratory Kit

Prepared By: Jodi Black, State Extension Associate, 4-H/Animal Sciences; Andrea Auker, Animal Sciences Student

# Livestock

## Goat Breeds

Read the descriptions and fill in the blanks with the breed names.

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_
4. \_\_\_\_\_
5. \_\_\_\_\_
6. \_\_\_\_\_
7. \_\_\_\_\_
8. \_\_\_\_\_

### Fill in the Blanks

#### In this activity you will:

- learn the breeds of goats, where the breeds originated from, and what they look like.

### Clues

1. This breed originated in France, has upright ears, and can be any color or combination of colors. It has a straight face, medium to short hair, and is medium to large in size.
2. This is the only breed developed in the United States. It has either "gopher" or "elf ears." Any color or combination of colors is acceptable, and it has short, fine, glossy hair.
3. A Swiss breed of rugged bone, it is medium to large in size, and either white or cream in color. It has short and fine hair, is erect-eared, and has either a straight or dished face.
4. A Swiss breed known for upright ears, straight faces, and chamiosee color, it has a black belly and a light gray to black udder. One of the smaller Swiss breeds, it is a minimum of 28 inches in height and is the newest recognized breed by the A.D.G.A.
5. This breed was originated in the Himalaya Mountains of Asia, has a straight or concave nose, pendulous ears, and twisted horns. It is usually a small, white, breed, with a long, fine, and lustrous mohair fiber coat. The fine underwool is a valuable product called cashmere. This breed is known primarily as a browsing animal.
6. This breed came from West and Central Africa and the Caribbean. Dwarf, short legged, hardy and alert, its profile should have a dished appearance with a broad, strong, and well-muscled jaw. It has a small compact body and its main colors are white caramel, caramel, gray agouti, black agouti, and charcoal.
7. This breed originated in India and Egypt, is known for its high quality, high butterfat, and milk production. It has a strong convex facial profile between the ears and the muzzle and long, bell shaped, wide ears. It can have any color pattern and have short, glossy, fine hair.
8. Of Swiss origin, this breed is medium in size, has upright ears and a dished or straight face, is solid colored varying from light fawn to dark chocolate. It has white ears with dark spots in the middle, two white stripes down the face from each eye to the muzzle, white hind legs, and a white triangle on either side of the tail. It is known for its high milk productivity.

References: Goat Learning Laboratory Kit; 4-H Goat Resource Handbook

Prepared By: Jodi Black, State Extension Associate, 4-H/Animal Sciences; Andrea Auker, Animal Sciences Student

# Livestock

## Goat Breeds

### Fill in the Blanks—Key

#### In this activity you will:

- learn the breeds of goats, where the breeds originated from, and what they look like.

Read the descriptions and fill in the blanks with the breed names.

1. A I p i n e
2. A n g o r a
3. L a m a n c h a
4. N u b i a n
5. O b e r h a s l i
6. P y g m y
7. S a a n e n
8. T o g g e n b u r g

### Clues

1. This breed originated in France, has upright ears, and can be any color or combination of colors. It has a straight face, medium to short hair, and is medium to large in size.
2. This is the only breed developed in the United States. It has either “gopher” or “elf ears.” Any color or combination of colors is acceptable, and it has short, fine, glossy hair.
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6. This breed came from West and Central Africa and the Caribbean. Dwarf, short legged, hardy and alert, its profile should have a dished appearance with a broad, strong, and well-muscled jaw. It has a small compact body and its main colors are white caramel, caramel, gray agouti, black agouti, and charcoal.
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8. Of Swiss origin, this breed is medium in size, has upright ears and a dished or straight face, is solid colored varying from light fawn to dark chocolate. It has white ears with dark spots in the middle, two white stripes down the face from each eye to the muzzle, white hind legs, and a white triangle on either side of the tail. It is known for its high milk productivity.

References: Goat Learning Laboratory Kit; 4-H Goat Resource Handbook  
Prepared By: Jodi Black, State Extension Associate, 4-H/Animal Sciences; Andrea Aufer, Animal Sciences Student

# Livestock

## Sheep Breeds

Read the descriptions and fill in the blanks with the breed names. The circled letters will then spell out one remaining breed.

1. \_\_\_\_\_ (O) \_\_\_\_\_
2. \_\_\_\_\_ (O) \_\_\_\_\_
3. \_\_\_\_\_ (O) \_\_\_\_\_
4. \_\_\_\_\_ (O) \_\_\_\_\_
5. (O) \_\_\_\_\_
6. \_\_\_\_\_ (O) \_\_\_\_\_
7. \_\_\_\_\_ (O) \_\_\_\_\_
8. \_\_\_\_\_ (O) \_\_\_\_\_
9. \_\_\_\_\_ \_\_\_\_\_ (O) \_\_\_\_\_

### Fill in the Blanks

#### In this activity you will:

- learn the breeds of sheep, where the breeds originated from, and what they look like.

The last breed name is

\_\_\_\_\_

The circled answer is a breed that was developed in Southern England. It is large framed, wool capped, black faced, and medium woolled. It has good milking ability and high carcass cutability.

### Clues

1. This breed is fine-boned, produces medium grade wool, reaches sexual maturity early, and is very prolific, producing two to four lambs each lambing.
2. This breed is white faced and was developed in New Zealand from a Lincoln and Leicester X Merino crosses. It is medium in size and yields heavy, medium wool fleeces.
3. This breed was developed in the United States from a Lincoln ram and Rambouillet ewe cross. It is known for size, wool producing ability, and productivity under range conditions. It is a white faced, polled breed and has wool on the legs.
4. This breed was developed in England, is dark faced, polled, has wool on the head and face, and is heavy muscled and milks well.
5. This breed is polled with a black head and legs and has the greatest number of purebred registrations in the United States. It is a sire breed known for its meatiness and carcass quality.
6. This is the oldest breed from England and is known for producing a meaty carcass. It is polled with a gray to a mouse-brown colored face, has wool on the legs, and produces a medium wool.
7. This breed was developed in Scotland and is adaptable to a variety of climates. It is small in size, white faced, bare legged and headed, and is a good milker possessing excellent lamb vigor.
8. This breed, developed in Southern England, is polled, scurred, or horned. A ewe breed, it is known for breeding out of season, heavy milking ability, and producing more than one lamb crop per year. This breed also yields heavily muscled carcasses.
9. This breed was developed in France. It is long lived, rugged, and will breed out of season. It has fine wool, is large and white faced, and has wool on the head and legs.

References: Sheep Learning Laboratory Kit; 4-H Sheep Resource Handbook  
 Prepared By: Jodi Black, State Extension Associate, 4-H/Animal Sciences; Andrea Auker, Animal Sciences Student

# Livestock

## Sheep Breeds

Read the descriptions and fill in the blanks with the breed names. The circled letters will then spell out one remaining breed.

1. F i n n s (h) e e p
2. C o r r i e d (a) l e
3. C o l u (m) b i a
4. S h r o (p) s h i r e
5. (S) u f f o l k
6. S o u t (h) d o w n
7. C h e v (i) o t
8. D o (r) s e t
9. R a m b o u i l l (e) t

### Fill in the Blanks—Key

#### In this activity you will:

- learn the breeds of sheep, where the breeds originated from, and what they look like.

The last breed name is  
**Hampshire.**

The circled answer is a breed that was developed in Southern England. It is large framed, wool capped, black faced, and medium woolled. It has good milking ability and high carcass cutability.

### Clues

1. This breed is fine-boned, produces medium grade wool, reaches sexual maturity early, and is very prolific, producing two to four lambs each lambing.
2. This breed is white faced and was developed in New Zealand from a Lincoln and Leicester X Merino crosses. It is medium in size and yields heavy, medium wool fleeces.
3. This breed was developed in the United States from a Lincoln ram and Rambouillet ewe cross. It is known for size, wool producing ability, and productivity under range conditions. It is a white faced, polled breed and has wool on the legs.
4. This breed was developed in England, is dark faced, polled, has wool on the head and face, and is heavy muscled and milks well.
5. This breed is polled with a black head and legs and has the greatest number of purebred registrations in the United States. It is a sire breed known for its meatiness and carcass quality.
6. This is the oldest breed from England and is known for producing a meaty carcass. It is polled with a gray to a mouse-brown colored face, has wool on the legs, and produces a medium wool.
7. This breed was developed in Scotland and is adaptable to a variety of climates. It is small in size, white faced, bare legged and headed, and is a good milker possessing excellent lamb vigor.
8. This breed, developed in Southern England, is polled, scurred, or horned. A ewe breed, it is known for breeding out of season, heavy milking ability, and producing more than one lamb crop per year. This breed also yields heavily muscled carcasses.
9. This breed was developed in France. It is long lived, rugged, and will breed out of season. It has fine wool, is large and white faced, and has wool on the head and legs.

References: Sheep Learning Laboratory Kit; 4-H Sheep Resource Handbook

Prepared By: Jodi Black, State Extension Associate, 4-H/Animal Sciences; Andrea Auker, Animal Sciences Student

# Livestock

## Swine Breeds

Read the descriptions and fill in the blanks with the breed names.

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_
4. \_\_\_\_\_
5. \_\_\_\_\_
6. \_\_\_\_\_
7. \_\_\_\_\_
8. \_\_\_\_\_

### Fill in the Blanks

#### In this activity you will:

- learn the breeds of swine, where the breeds originated from, and what they look like.

### Clues

1. This breed originated in England. It is black with white feet, tail, and face. It is known for having sound skeletons, dish-faced snouts, and short erect ears.
2. This breed was developed in Pennsylvania, is white, has medium sized droopy ears, and is a maternal breed.
3. Developed in America from a cross between red hogs from New York and red hogs from New Jersey, these hogs are light red to dark red and droopy eared. They are quick, efficient growers and are good mothers.
4. This breed, developed in England, is black with a white belt around the shoulders and both front legs. They are erect-eared and heavily muscled.
5. Originally from Denmark, this is a long bodied breed with large floppy ears and strong maternal traits.
6. This breed, developed in Ohio, is black with six white points (four white legs, tail, and nose). It is lean, droopy eared, and heavily muscled.
7. This breed was developed in Indiana. It is medium in size with black and white spots, and droopy eared. It is a fast gainer and an aggressive breeder.
8. This breed came from England. It is white colored, erect eared, and has a long, large frame. It is known as the mother breed because they produce large litters and are heavy milkers.

References: Swine Learning Laboratory Kit; 4-H Swine Resource Handbook  
Prepared By: Jodi Black, State Extension Associate, 4-H/Animal Sciences; Andrea Auken, Animal Sciences Student

# Livestock

## Swine Breeds

Read the descriptions and fill in the blanks with the breed names.

1. B e r k s h i r e
2. C h e s t e r   W h i t e
3. D u r o c
4. H a m p s h i r e
5. L a n d r a c e
6. P o l a n d   C h i n a
7. S p o t t e d
8. Y o r k s h i r e

### Fill in the Blanks—Key

#### In this activity you will:

- learn the breeds of swine, where the breeds originated from, and what they look like.

### Clues

1. This breed originated in England. It is black with white feet, tail, and face. It is known for having sound skeletons, dish-faced snouts, and short erect ears.
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3. Developed in America from a cross between red hogs from New York and red hogs from New Jersey, these hogs are light red to dark red and droopy eared. They are quick, efficient growers and are good mothers.
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5. Originally from Denmark, this is a long bodied breed with large floppy ears and strong maternal traits.
6. This breed, developed in Ohio, is black with six white points (four white legs, tail, and nose). It is lean, droopy eared, and heavily muscled.
7. This breed was developed in Indiana. It is medium in size with black and white spots, and droopy eared. It is a fast gainer and an aggressive breeder.
8. This breed came from England. It is white colored, erect eared, and has a long, large frame. It is known as the mother breed because they produce large litters and are heavy milkers.

References: Swine Learning Laboratory Kit; 4-H Swine Resource Handbook

Prepared By: Jodi Black, State Extension Associate, 4-H/Animal Sciences; Andrea Aufer, Animal Sciences Student

# Livestock

## Beef Parts

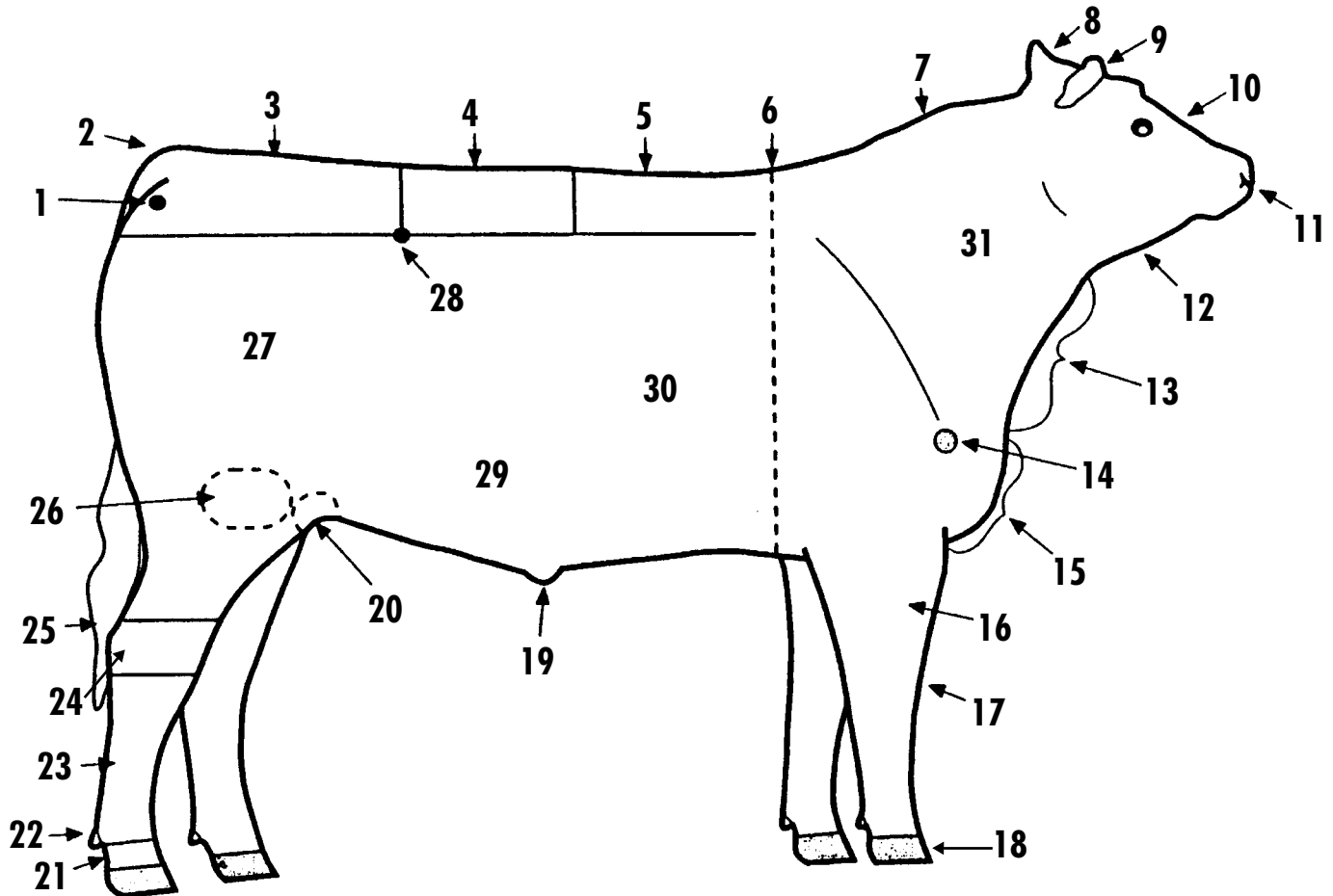
Activity level: Beginners or members ages 9 to 11

Write in the number that corresponds to the correct part of the animal.

### Identification

In this activity you will:

- learn the parts of a steer.



- |                         |               |                    |                    |
|-------------------------|---------------|--------------------|--------------------|
| _____ throat            | _____ crest   | _____ knee         | _____ cannon       |
| _____ neck              | _____ face    | _____ rib          | _____ stifle joint |
| _____ point of shoulder | _____ pin     | _____ sheath/navel | _____ forearm      |
| _____ loin              | _____ muzzle  | _____ rear flank   | _____ switch       |
| _____ hoof              | _____ dewlap  | _____ ear          | _____ tail head    |
| _____ heart girth       | _____ rump    | _____ hook         | _____ hindquarter  |
| _____ pastern           | _____ brisket | _____ dewclaw      | _____ belly        |
| _____ poll              | _____ back    | _____ hock         |                    |

References: Ohio 4-H Beef, Sheep, and Swine Selection and Evaluation Book #103R; Beef Learning Laboratory Kit  
Prepared By: Jodi Black, State Extension Associate, 4-H/Animal Sciences; Andrea Auker, Animal Sciences Student

# Livestock

## Beef Parts

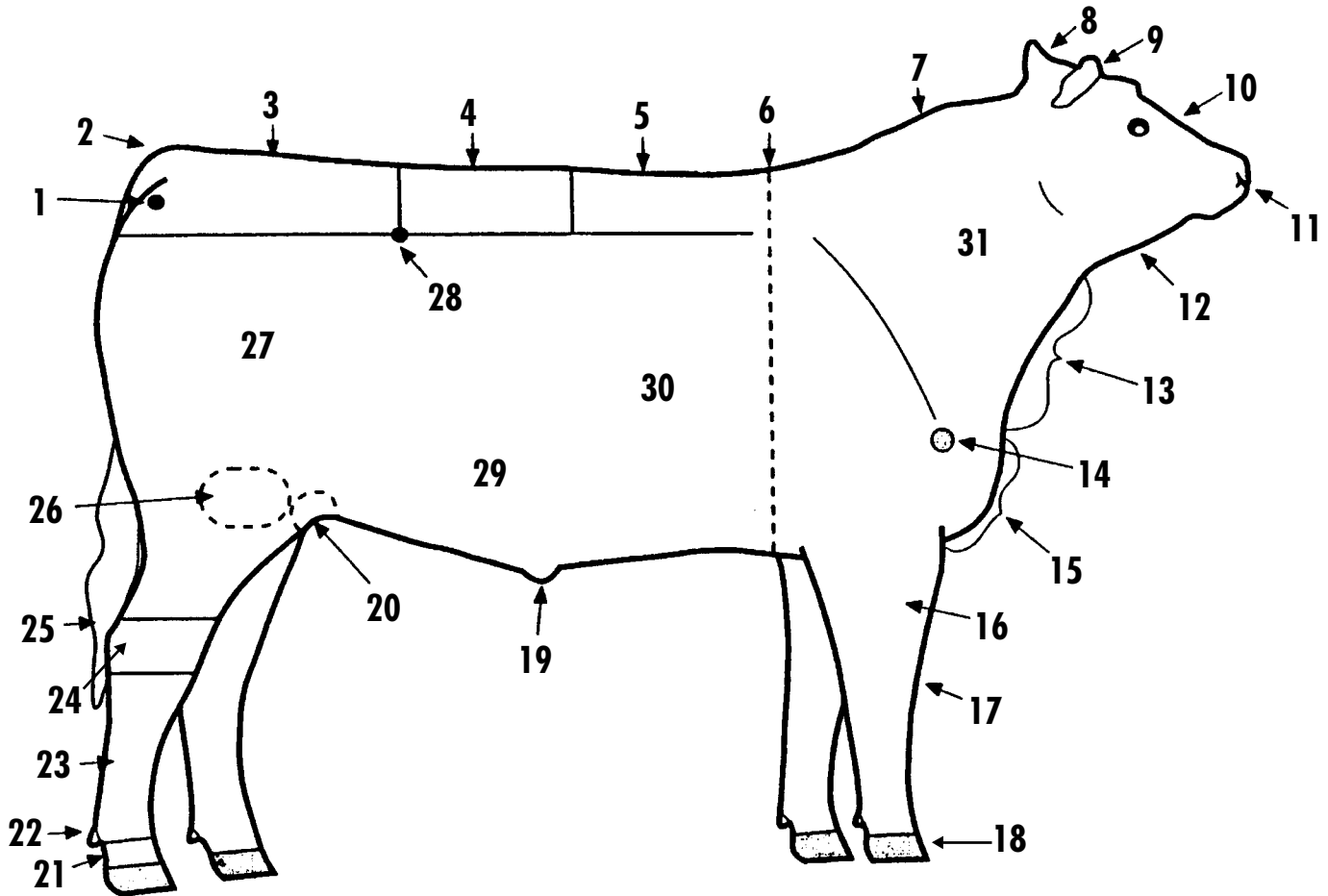
Activity level: Beginners or members ages 9 to 11

Write in the number that corresponds to the correct part of the animal.

### Identification—Key

In this activity you will:

- learn the parts of a steer.



<u>12</u> throat	<u>7</u> crest	<u>7</u> knee	<u>23</u> cannon
<u>3</u> neck	<u>10</u> face	<u>30</u> rib	<u>26</u> stifle joint
<u>14</u> point of shoulder	<u>1</u> pin	<u>19</u> sheath/navel	<u>16</u> forearm
<u>4</u> loin	<u>1</u> muzzle	<u>20</u> rear flank	<u>25</u> switch
<u>18</u> hoof	<u>13</u> dewlap	<u>9</u> ear	<u>2</u> tail head
<u>6</u> heart girth	<u>3</u> rump	<u>28</u> hook	<u>27</u> hindquarter
<u>21</u> pastern	<u>15</u> brisket	<u>22</u> dewclaw	<u>29</u> belly
<u>8</u> poll	<u>5</u> back	<u>24</u> hock	

References: Ohio 4-H Beef, Sheep, and Swine Selection and Evaluation Book #103R; Beef Learning Laboratory Kit  
Prepared By: Jodi Black, State Extension Associate, 4-H/Animal Sciences; Andrea Auker, Animal Sciences Student

# Livestock

## Beef Parts

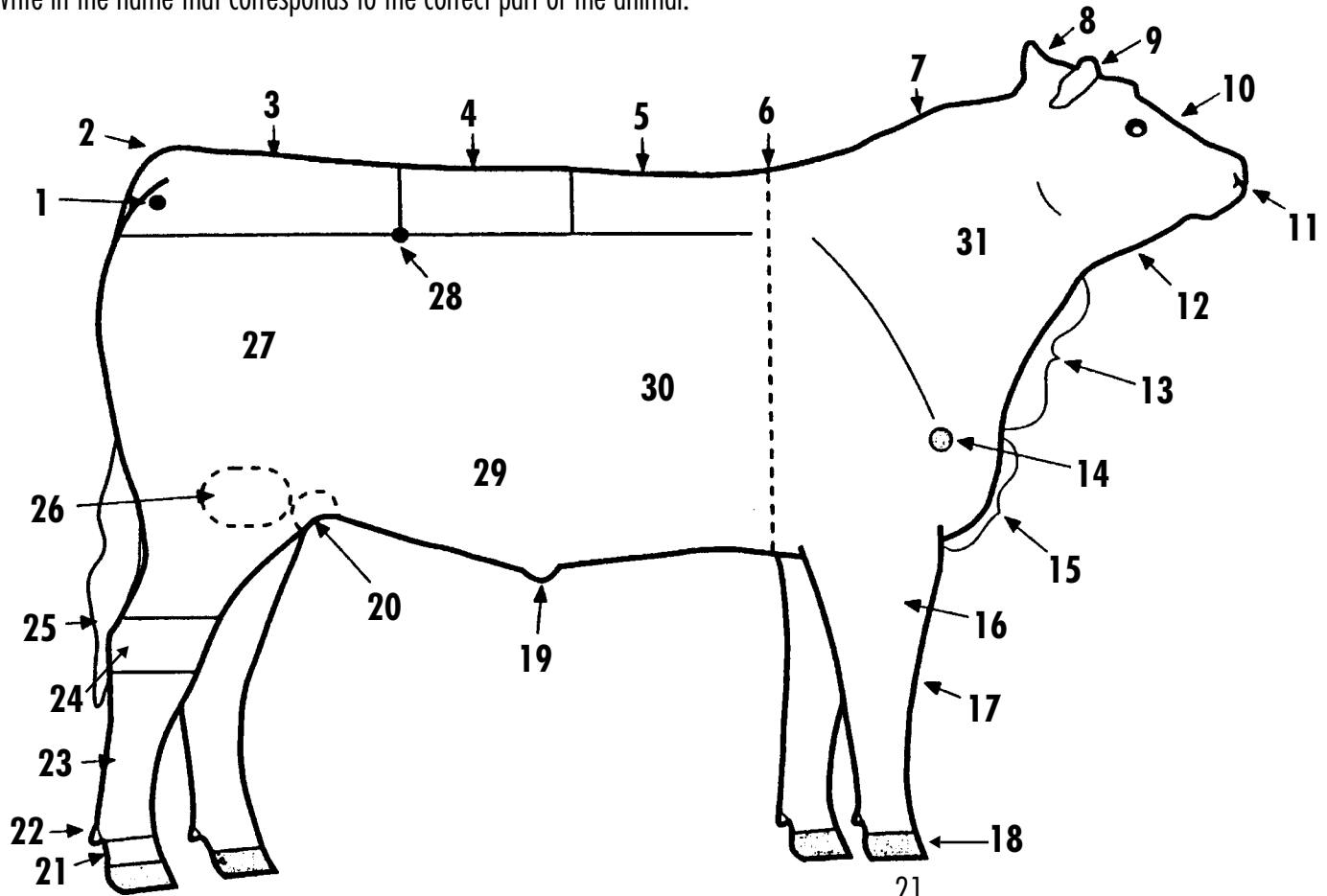
Activity level: Intermediate and advanced members ages 12 to 18

Write in the name that corresponds to the correct part of the animal.

### Identification

In this activity you will:

- learn the parts of a steer.



- |           |           |           |
|-----------|-----------|-----------|
| 1. _____  | 11. _____ | 21. _____ |
| 2. _____  | 12. _____ | 22. _____ |
| 3. _____  | 13. _____ | 23. _____ |
| 4. _____  | 14. _____ | 24. _____ |
| 5. _____  | 15. _____ | 25. _____ |
| 6. _____  | 16. _____ | 26. _____ |
| 7. _____  | 17. _____ | 27. _____ |
| 8. _____  | 18. _____ | 28. _____ |
| 9. _____  | 19. _____ | 29. _____ |
| 10. _____ | 20. _____ | 30. _____ |
|           |           | 31. _____ |

References: Ohio 4-H Beef, Sheep, and Swine Selection and Evaluation Book #103R; Beef Learning Laboratory Kit  
 Prepared By: Jodi Black, State Extension Associate, 4-H/Animal Sciences; Andrea Aufer, Animal Sciences Student

# Livestock

## Beef Parts

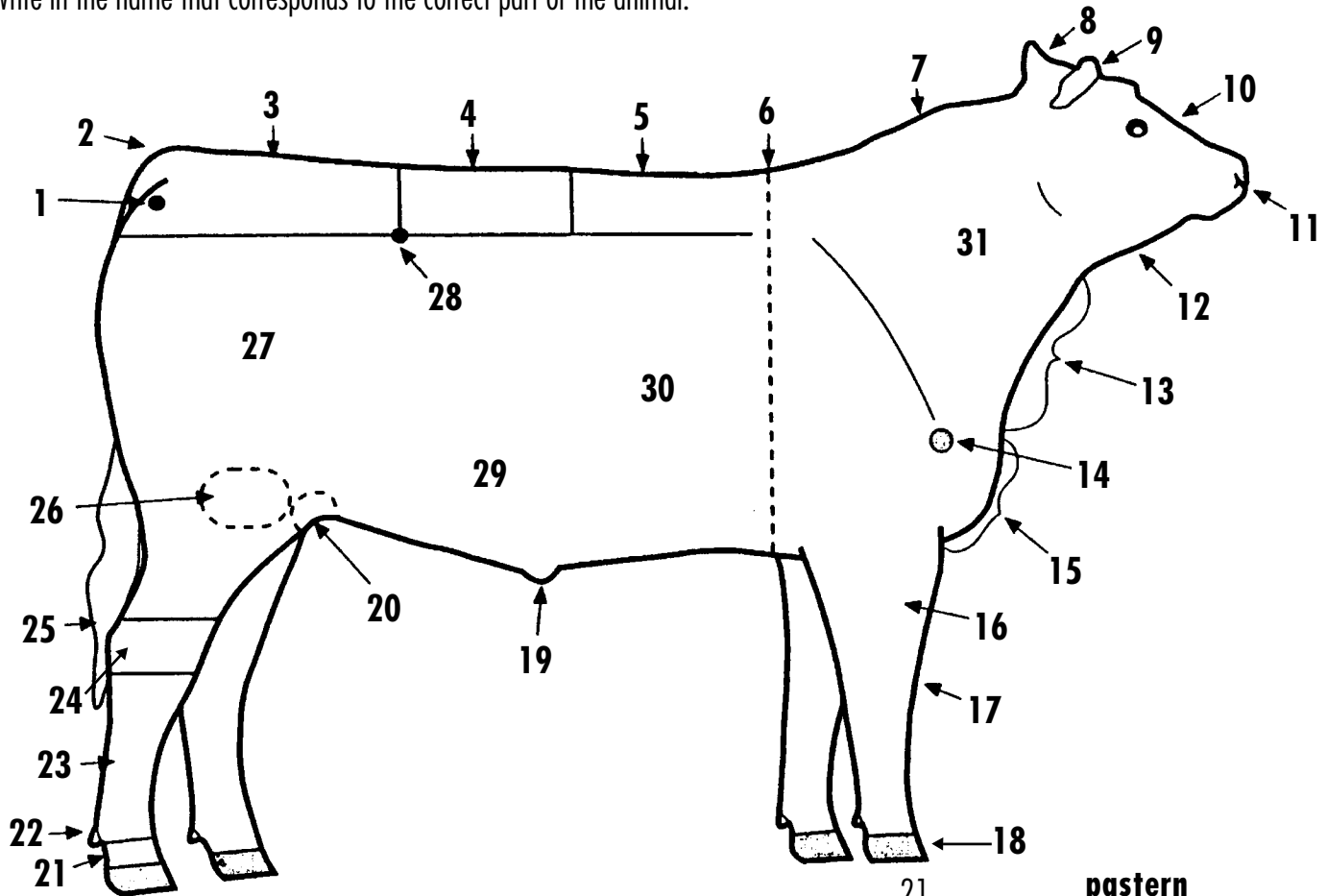
Activity level: Intermediate and advanced members ages 12 to 18

Write in the name that corresponds to the correct part of the animal.

### Identification—Key

In this activity you will:

- learn the parts of a steer.



1. \_\_\_\_\_ **pin** \_\_\_\_\_
2. \_\_\_\_\_ **tail head** \_\_\_\_\_
3. \_\_\_\_\_ **rump** \_\_\_\_\_
4. \_\_\_\_\_ **loin** \_\_\_\_\_
5. \_\_\_\_\_ **back** \_\_\_\_\_
6. \_\_\_\_\_ **heart girth** \_\_\_\_\_
7. \_\_\_\_\_ **crest** \_\_\_\_\_
8. \_\_\_\_\_ **poll** \_\_\_\_\_
9. \_\_\_\_\_ **ear** \_\_\_\_\_
10. \_\_\_\_\_ **face** \_\_\_\_\_

11. \_\_\_\_\_ **muzzle** \_\_\_\_\_
12. \_\_\_\_\_ **throat** \_\_\_\_\_
13. \_\_\_\_\_ **dewlap** \_\_\_\_\_
14. \_\_\_\_\_ **point of shoulder** \_\_\_\_\_
15. \_\_\_\_\_ **brisket** \_\_\_\_\_
16. \_\_\_\_\_ **forearm** \_\_\_\_\_
17. \_\_\_\_\_ **knee** \_\_\_\_\_
18. \_\_\_\_\_ **hoof** \_\_\_\_\_
19. \_\_\_\_\_ **sheath/navel** \_\_\_\_\_
20. \_\_\_\_\_ **rear flank** \_\_\_\_\_

21. \_\_\_\_\_ **pastern** \_\_\_\_\_
22. \_\_\_\_\_ **dewclaw** \_\_\_\_\_
23. \_\_\_\_\_ **cannon** \_\_\_\_\_
24. \_\_\_\_\_ **hock** \_\_\_\_\_
25. \_\_\_\_\_ **switch** \_\_\_\_\_
26. \_\_\_\_\_ **stifle joint** \_\_\_\_\_
27. \_\_\_\_\_ **hindquarter** \_\_\_\_\_
28. \_\_\_\_\_ **hook** \_\_\_\_\_
29. \_\_\_\_\_ **belly** \_\_\_\_\_
30. \_\_\_\_\_ **rib** \_\_\_\_\_
31. \_\_\_\_\_ **neck** \_\_\_\_\_

References: Ohio 4-H Beef, Sheep, and Swine Selection and Evaluation Book #103R; Beef Learning Laboratory Kit  
Prepared By: Jodi Black, State Extension Associate, 4-H/Animal Sciences; Andrea Aufer, Animal Sciences Student

# Livestock

## Dairy Cow Parts

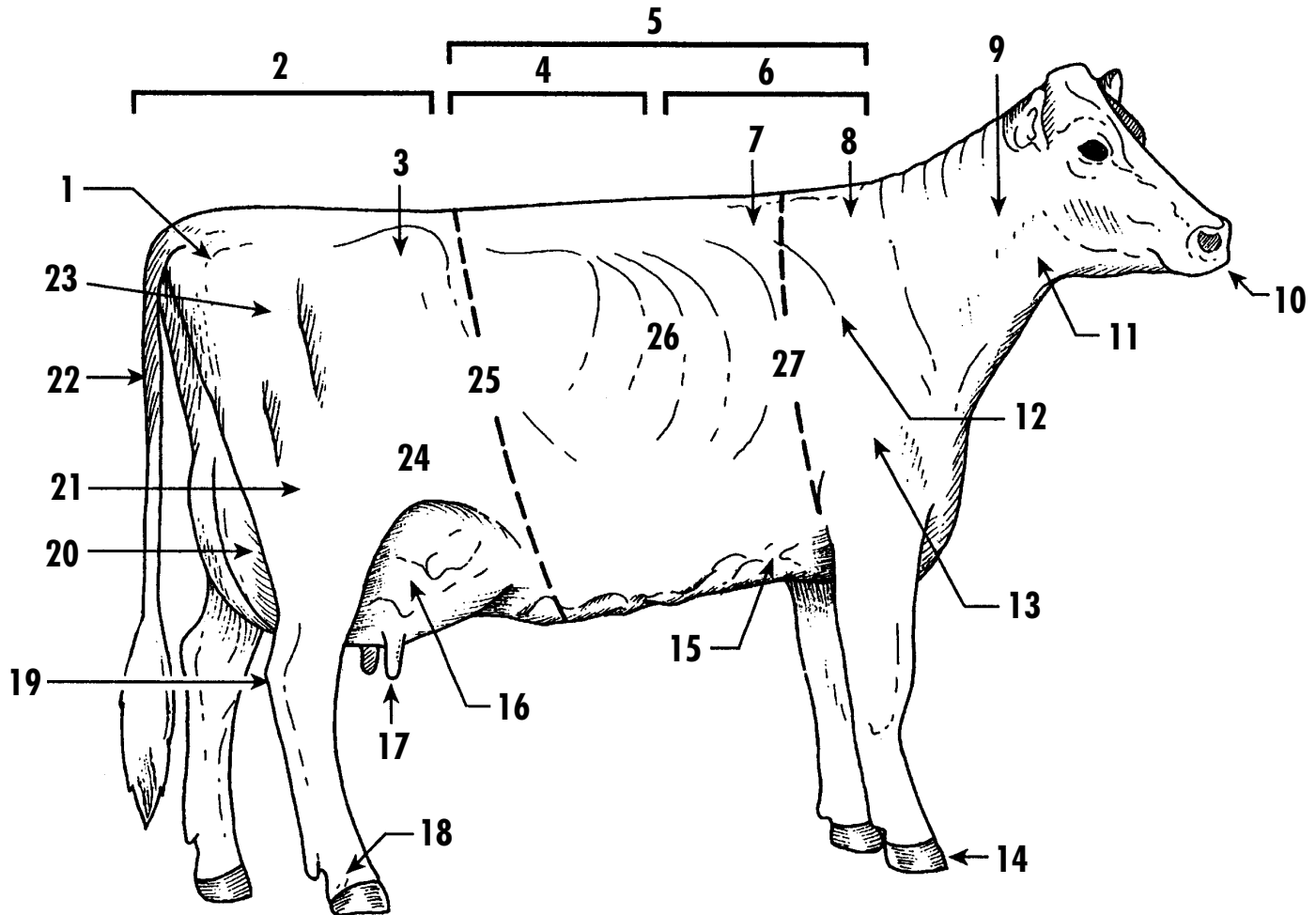
Activity level: Beginners or members ages 9 to 11

Write in the number that corresponds to the correct part of the animal.

### Identification

In this activity you will:

- learn the parts of a dairy cow.



- |                |                         |                   |              |
|----------------|-------------------------|-------------------|--------------|
| _____ pin bone | _____ withers           | _____ rump        | _____ tail   |
| _____ pastern  | _____ hock              | _____ fore udder  | _____ hip    |
| _____ back     | _____ rear udder        | _____ crops       | _____ stifle |
| _____ loin     | _____ heart girth       | _____ chest floor | _____ throat |
| _____ chine    | _____ shoulder blade    | _____ neck        | _____ ribs   |
| _____ thurl    | _____ point of shoulder | _____ muzzle      | _____ barrel |
| _____ teat     | _____ hoof              | _____ thigh       |              |

Reference: *The Dairy Livestock Learning Laboratory Kit*  
Prepared By: *Andrea Auker, Animal Sciences Student*

# Livestock

## Dairy Cow Parts

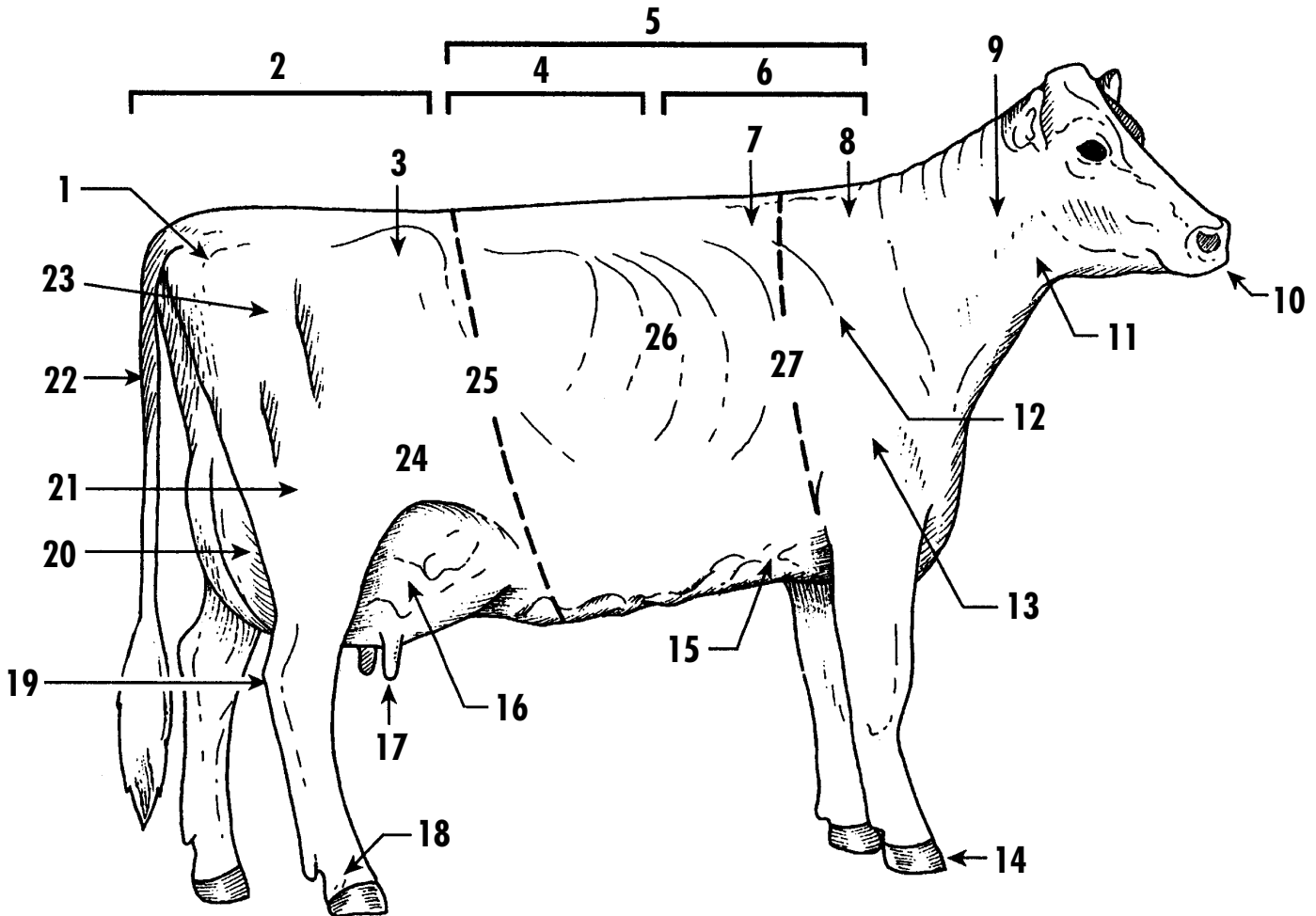
Activity level: Beginners or members ages 9 to 11

Write in the number that corresponds to the correct part of the animal.

### Identification—Key

In this activity you will:

- learn the parts of a dairy cow.



<u>1</u> pin bone	<u>8</u> withers	<u>2</u> rump	<u>22</u> tail
<u>18</u> pastern	<u>19</u> hock	<u>16</u> fore udder	<u>3</u> hip
<u>5</u> back	<u>20</u> rear udder	<u>7</u> crops	<u>24</u> stifle
<u>4</u> loin	<u>27</u> heart girth	<u>15</u> chest floor	<u>1</u> throat
<u>6</u> chine	<u>12</u> shoulder blade	<u>9</u> neck	<u>26</u> ribs
<u>23</u> thurl	<u>13</u> point of shoulder	<u>10</u> muzzle	<u>25</u> barrel
<u>7</u> teat	<u>14</u> hoof	<u>21</u> thigh	

Reference: *The Dairy Livestock Learning Laboratory Kit*  
Prepared By: Andrea Auker, Animal Sciences Student

# Livestock

## Dairy Cow Parts

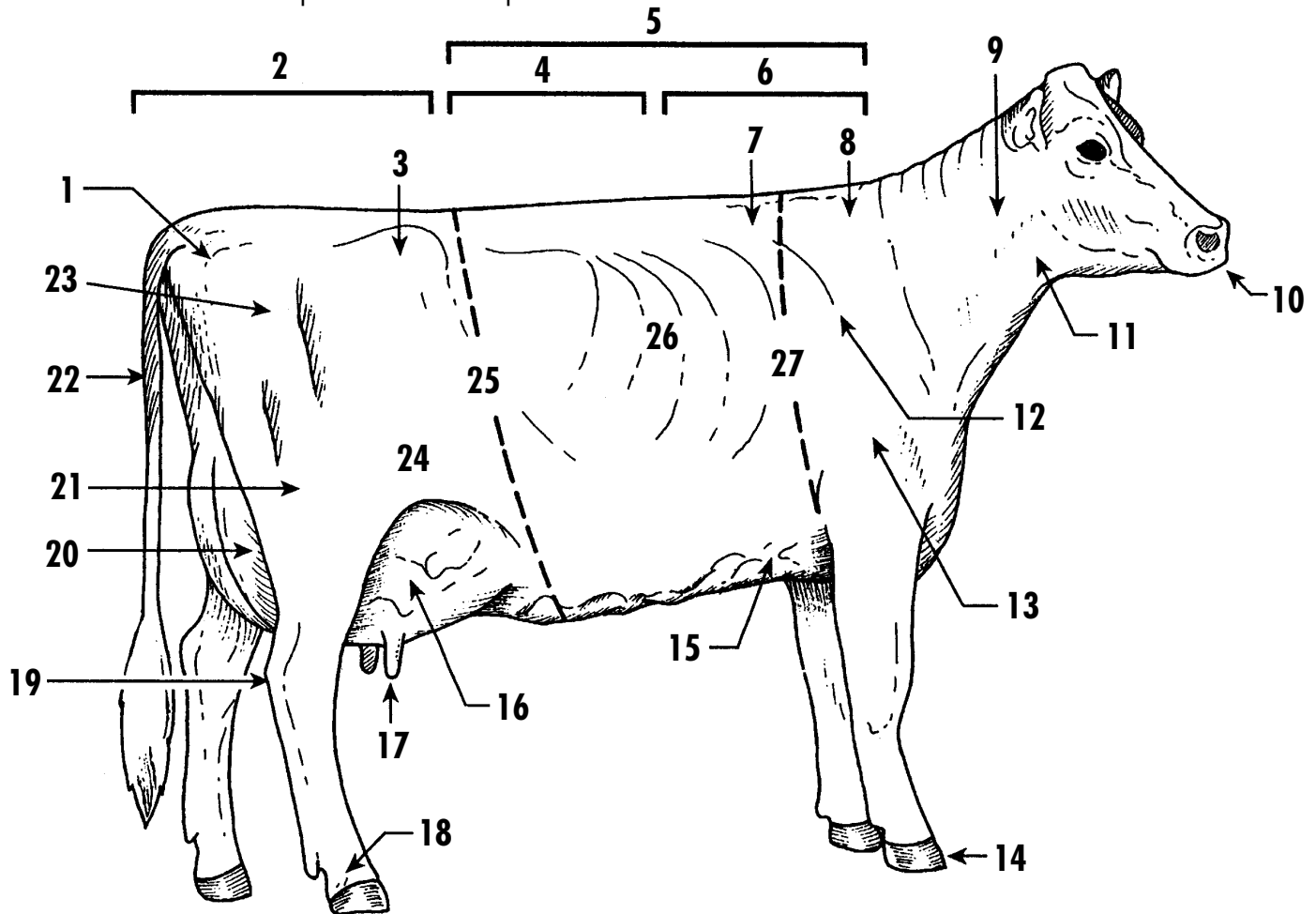
Activity level: Intermediate and advanced members ages 12 to 18

Write in the name that corresponds to the correct part of the animal.

### Identification

In this activity you will:

- learn the parts of a dairy cow.



- |          |           |           |
|----------|-----------|-----------|
| 1. _____ | 10. _____ | 19. _____ |
| 2. _____ | 11. _____ | 20. _____ |
| 3. _____ | 12. _____ | 21. _____ |
| 4. _____ | 13. _____ | 22. _____ |
| 5. _____ | 14. _____ | 23. _____ |
| 6. _____ | 15. _____ | 24. _____ |
| 7. _____ | 16. _____ | 25. _____ |
| 8. _____ | 17. _____ | 26. _____ |
| 9. _____ | 18. _____ | 27. _____ |

Reference: The Dairy Livestock Learning Laboratory Kit  
Prepared By: Andrea Auker, Animal Sciences Student

# Livestock

## Dairy Cow Parts

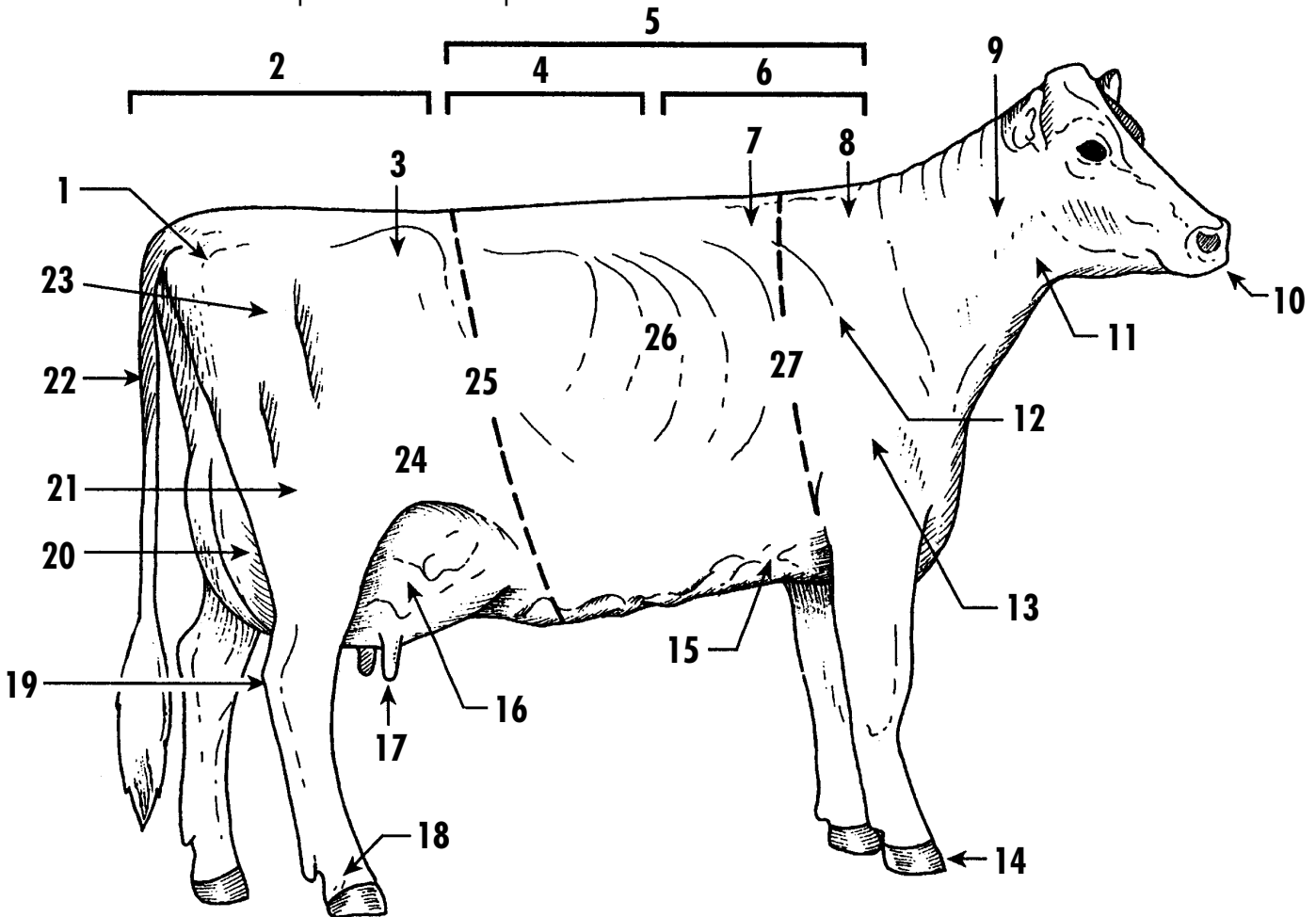
Activity level: Intermediate and advanced members ages 12 to 18

Write in the name that corresponds to the correct part of the animal.

### Identification—Key

In this activity you will:

- learn the parts of a dairy cow.



- |                                |                                 |                                 |
|--------------------------------|---------------------------------|---------------------------------|
| 1. <u>                    </u> | 10. <u>                    </u> | 19. <u>                    </u> |
| 2. <u>                    </u> | 11. <u>                    </u> | 20. <u>                    </u> |
| 3. <u>                    </u> | 12. <u>                    </u> | 21. <u>                    </u> |
| 4. <u>                    </u> | 13. <u>                    </u> | 22. <u>                    </u> |
| 5. <u>                    </u> | 14. <u>                    </u> | 23. <u>                    </u> |
| 6. <u>                    </u> | 15. <u>                    </u> | 24. <u>                    </u> |
| 7. <u>                    </u> | 16. <u>                    </u> | 25. <u>                    </u> |
| 8. <u>                    </u> | 17. <u>                    </u> | 26. <u>                    </u> |
| 9. <u>                    </u> | 18. <u>                    </u> | 27. <u>                    </u> |

Reference: *The Dairy Livestock Learning Laboratory Kit*  
Prepared By: *Andrea Auker, Animal Sciences Student*

# Livestock

## Goat Parts

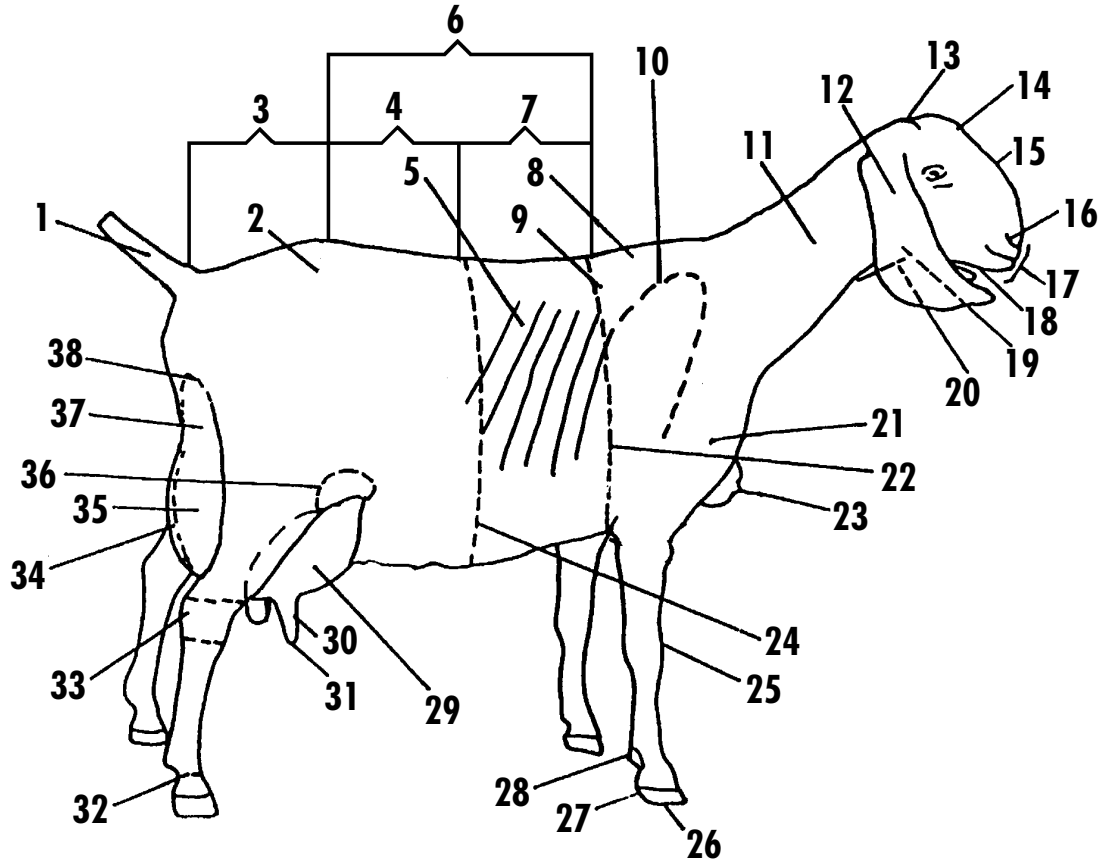
Activity level: Beginners or members ages 9 to 11

Write in the number that corresponds to the correct part of the animal.

### Identification

In this activity you will:

- learn the parts of a goat.



- |                         |                    |                      |                                  |
|-------------------------|--------------------|----------------------|----------------------------------|
| _____ rib               | _____ heart girth  | _____ muzzle         | _____ rear udder                 |
| _____ ear               | _____ pastern      | _____ escutcheon     | _____ nostril                    |
| _____ point of shoulder | _____ forehead     | _____ fore udder     | _____ tail                       |
| _____ throat            | _____ crop         | _____ neck           | _____ teat                       |
| _____ withers           | _____ sole         | _____ bridge of nose | _____ rear udder attachment      |
| _____ heel              | _____ rump         | _____ chine          | _____ knee                       |
| _____ jaw               | _____ hock         | _____ barrel         | _____ dewlap                     |
| _____ brisket           | _____ stifle joint | _____ poll           | _____ shoulder blade             |
| _____ hip               | _____ loin         | _____ back           | _____ medial suspensory ligament |
| _____ orifice           | _____ dewclaw      |                      |                                  |

References: Goat Resource 4-H Handbook; Goat Livestock Learning Laboratory Kit

Prepared By: Jodi Black, State Extension Associate, 4-H/Animal Sciences; Andrea Aufer, Animal Sciences Student

# Livestock

## Goat Parts

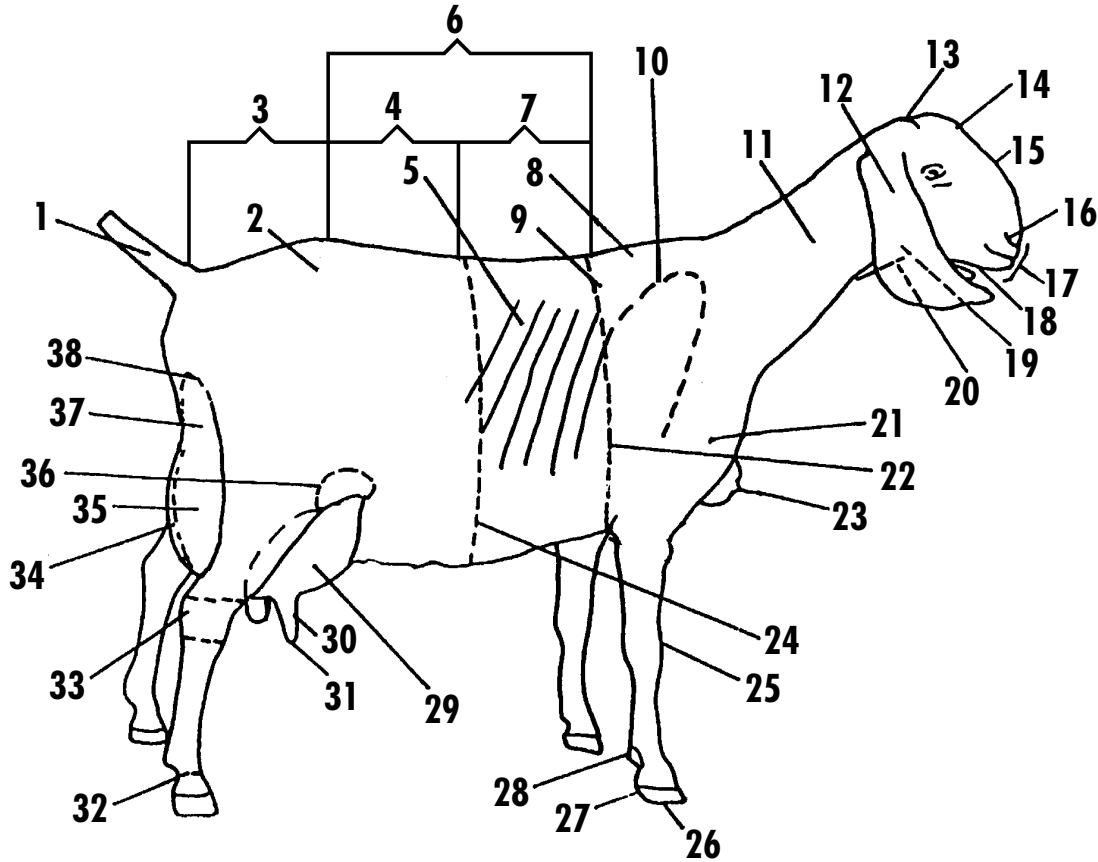
Activity level: Beginners or members ages 9 to 11

Write in the number that corresponds to the correct part of the animal.

### Identification—Key

In this activity you will:

- learn the parts of a goat.



<u>5</u> rib	<u>22</u> heart girth	<u>7</u> muzzle	<u>35</u> rear udder
<u>12</u> ear	<u>32</u> pastern	<u>38</u> escutcheon	<u>16</u> nostril
<u>21</u> point of shoulder	<u>14</u> forehead	<u>29</u> fore udder	<u>1</u> tail
<u>19</u> throat	<u>9</u> crop	<u>1</u> neck	<u>30</u> teat
<u>8</u> withers	<u>26</u> sole	<u>15</u> bridge of nose	<u>37</u> rear udder attachment
<u>27</u> heel	<u>3</u> rump	<u>7</u> chine	<u>35</u> knee
<u>18</u> jaw	<u>33</u> hock	<u>24</u> barrel	<u>20</u> dewlap
<u>23</u> brisket	<u>36</u> stifle joint	<u>13</u> poll	<u>10</u> shoulder blade
<u>2</u> hip	<u>4</u> loin	<u>6</u> back	<u>34</u> medial suspensory ligament
<u>31</u> orifice	<u>28</u> dewclaw		

References: Goat Resource 4-H Handbook; Goat Livestock Learning Laboratory Kit  
Prepared By: Jodi Black, State Extension Associate, 4-H/Animal Sciences; Andrea Auker, Animal Sciences Student

# Livestock

## Goat Parts

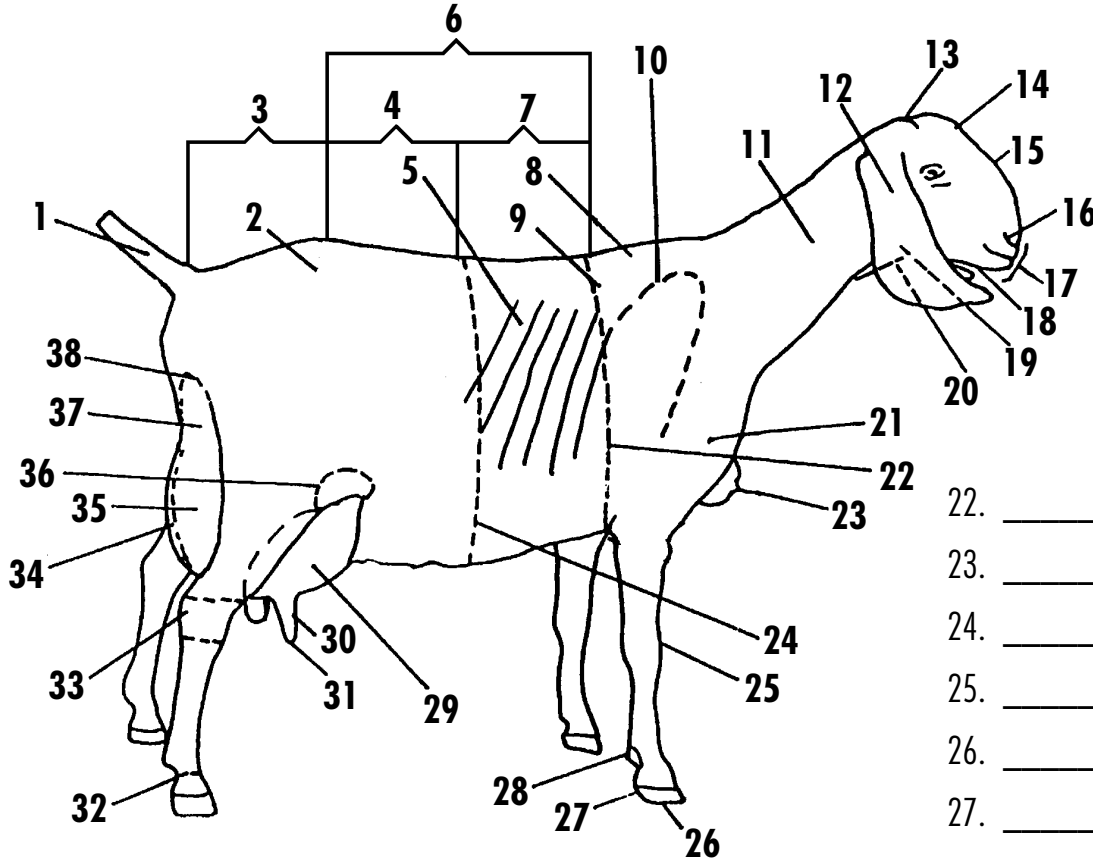
### Identification

In this activity you will:

- learn the parts of a goat.

Activity level: Intermediate and advanced members ages 12 to 18

Write in the name that corresponds to the correct part of the animal.



- |           |           |           |
|-----------|-----------|-----------|
| 1. _____  | 12. _____ | 22. _____ |
| 2. _____  | 13. _____ | 23. _____ |
| 3. _____  | 14. _____ | 24. _____ |
| 4. _____  | 15. _____ | 25. _____ |
| 5. _____  | 16. _____ | 26. _____ |
| 6. _____  | 17. _____ | 27. _____ |
| 7. _____  | 18. _____ | 28. _____ |
| 8. _____  | 19. _____ | 29. _____ |
| 9. _____  | 20. _____ | 30. _____ |
| 10. _____ | 21. _____ | 31. _____ |
| 11. _____ |           | 32. _____ |
|           |           | 33. _____ |
|           |           | 34. _____ |
|           |           | 35. _____ |
|           |           | 36. _____ |
|           |           | 37. _____ |
|           |           | 38. _____ |

References: Goat Resource 4-H Handbook; Goat Livestock Learning Laboratory Kit

Prepared By: Jodi Black, State Extension Associate, 4-H/Animal Sciences; Andrea Aufer, Animal Sciences Student

# Livestock

## Goat Parts

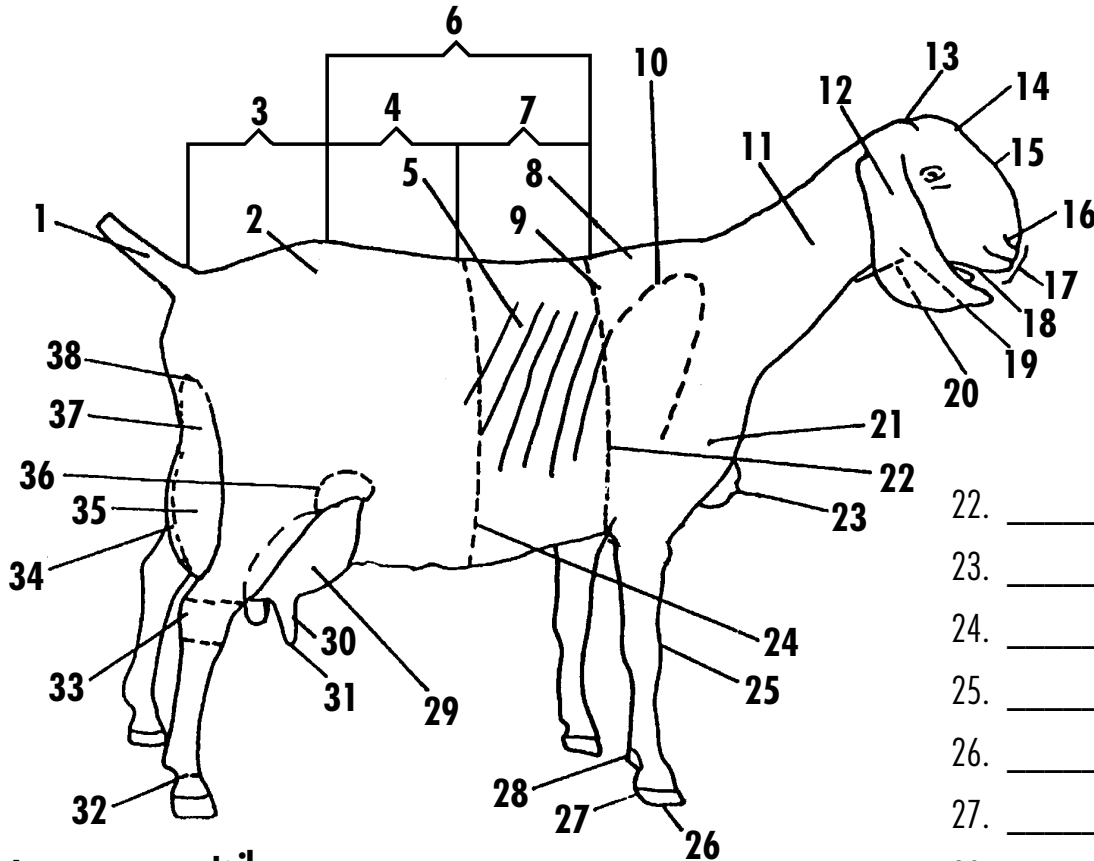
Activity level: Intermediate and advanced members ages 12 to 18

Write in the name that corresponds to the correct part of the animal.

### Identification—Key

In this activity you will:

- learn the parts of a goat.



- |                           |                                       |
|---------------------------|---------------------------------------|
| 1. <u>tail</u>            | 22. <u>heart girth</u>                |
| 2. <u>hip</u>             | 23. <u>brisket</u>                    |
| 3. <u>rump</u>            | 24. <u>barrel</u>                     |
| 4. <u>loin</u>            | 25. <u>knee</u>                       |
| 5. <u>rib</u>             | 26. <u>sole</u>                       |
| 6. <u>back</u>            | 27. <u>heel</u>                       |
| 7. <u>chine</u>           | 28. <u>dewclaw</u>                    |
| 8. <u>withers</u>         | 29. <u>fore udder</u>                 |
| 9. <u>crop</u>            | 30. <u>teat</u>                       |
| 10. <u>shoulder blade</u> | 31. <u>orifice</u>                    |
| 11. <u>neck</u>           | 32. <u>pastern</u>                    |
|                           | 33. <u>hock</u>                       |
|                           | 34. <u>medial suspensory ligament</u> |
|                           | 35. <u>rear udder</u>                 |
|                           | 36. <u>stifle joint</u>               |
|                           | 37. <u>rear udder attachment</u>      |
|                           | 38. <u>escutcheon</u>                 |

References: Goat Resource 4-H Handbook; Goat Livestock Learning Laboratory Kit

Prepared By: Jodi Black, State Extension Associate, 4-H/Animal Sciences; Andrea Auker, Animal Sciences Student

# Livestock

## Sheep Parts

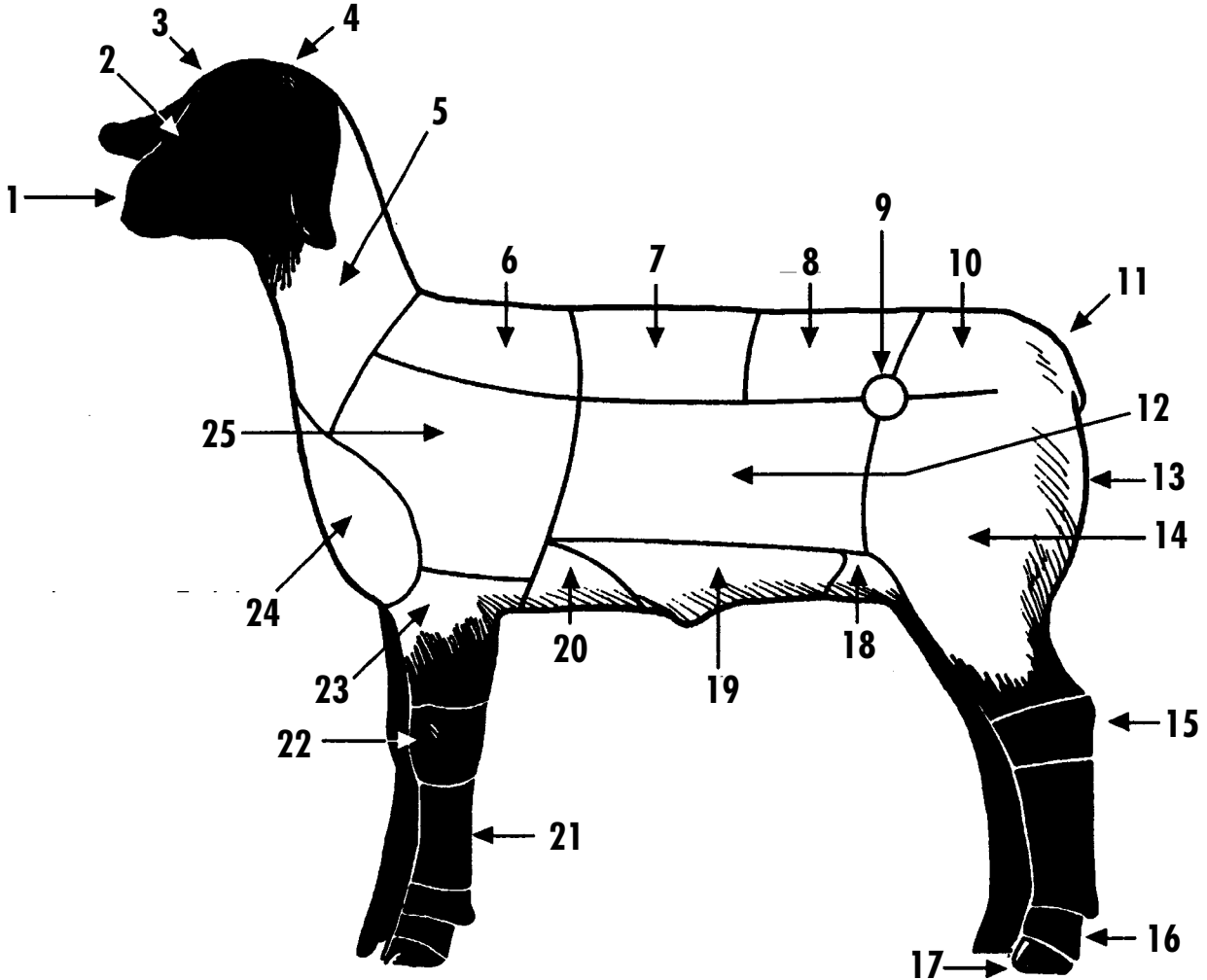
Activity level: Beginners or members ages 9 to 11

Write in the number that corresponds to the correct part of the animal.

### Identification

In this activity you will:

- learn the parts of a sheep.



- \_\_\_\_\_ muzzle
- \_\_\_\_\_ forehead
- \_\_\_\_\_ twist
- \_\_\_\_\_ belly
- \_\_\_\_\_ neck
- \_\_\_\_\_ top of shoulder
- \_\_\_\_\_ face

- \_\_\_\_\_ loin
- \_\_\_\_\_ knee
- \_\_\_\_\_ rump
- \_\_\_\_\_ poll
- \_\_\_\_\_ middle
- \_\_\_\_\_ back/rack

- \_\_\_\_\_ hip
- \_\_\_\_\_ hock
- \_\_\_\_\_ pastern
- \_\_\_\_\_ rear flank
- \_\_\_\_\_ hoof
- \_\_\_\_\_ dock

- \_\_\_\_\_ cannon
- \_\_\_\_\_ forehead
- \_\_\_\_\_ fore flank
- \_\_\_\_\_ breast/brisket
- \_\_\_\_\_ shoulder
- \_\_\_\_\_ leg

References: Sheep Breeding and Market Lamb 4-H Resource Handbook; Sheep Livestock Learning Laboratory Kit  
Prepared By: Jodi Black, State Extension Associate, 4-H/Animal Sciences; Andrea Auker, Animal Sciences Student

# Livestock

## Sheep Parts

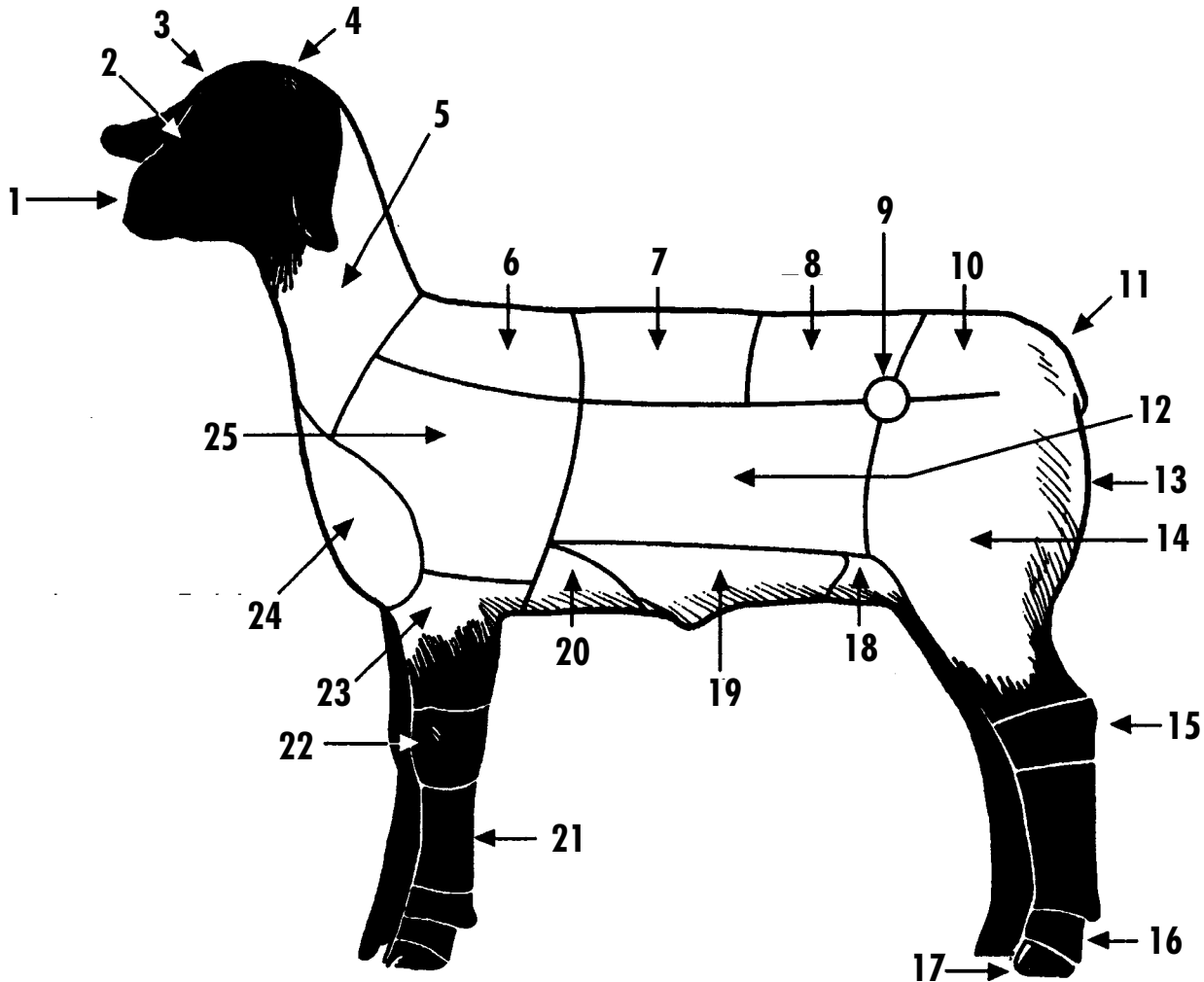
Activity level: Beginners or members ages 9 to 11

Write in the number that corresponds to the correct part of the animal.

### Identification—Key

In this activity you will:

- learn the parts of a sheep.



<u>1</u>	muzzle	<u>8</u>	loin	<u>9</u>	hip	<u>21</u>	cannon
<u>23</u>	forearm	<u>22</u>	knee	<u>5</u>	hock	<u>3</u>	forehead
<u>13</u>	twist	<u>10</u>	rump	<u>16</u>	pastern	<u>20</u>	fore flank
<u>19</u>	belly	<u>4</u>	poll	<u>18</u>	rear flank	<u>24</u>	breast/brisket
<u>5</u>	neck	<u>12</u>	middle	<u>17</u>	hoof	<u>25</u>	shoulder
<u>6</u>	top of shoulder	<u>7</u>	back/rack	<u>1</u>	dock	<u>14</u>	leg
<u>2</u>	face						

References: *Sheep Breeding and Market Lamb 4-H Resource Handbook*; *Sheep Livestock Learning Laboratory Kit*  
 Prepared By: Jodi Black, State Extension Associate, 4-H/Animal Sciences; Andrea Aufer, Animal Sciences Student

# Livestock

## Sheep Parts

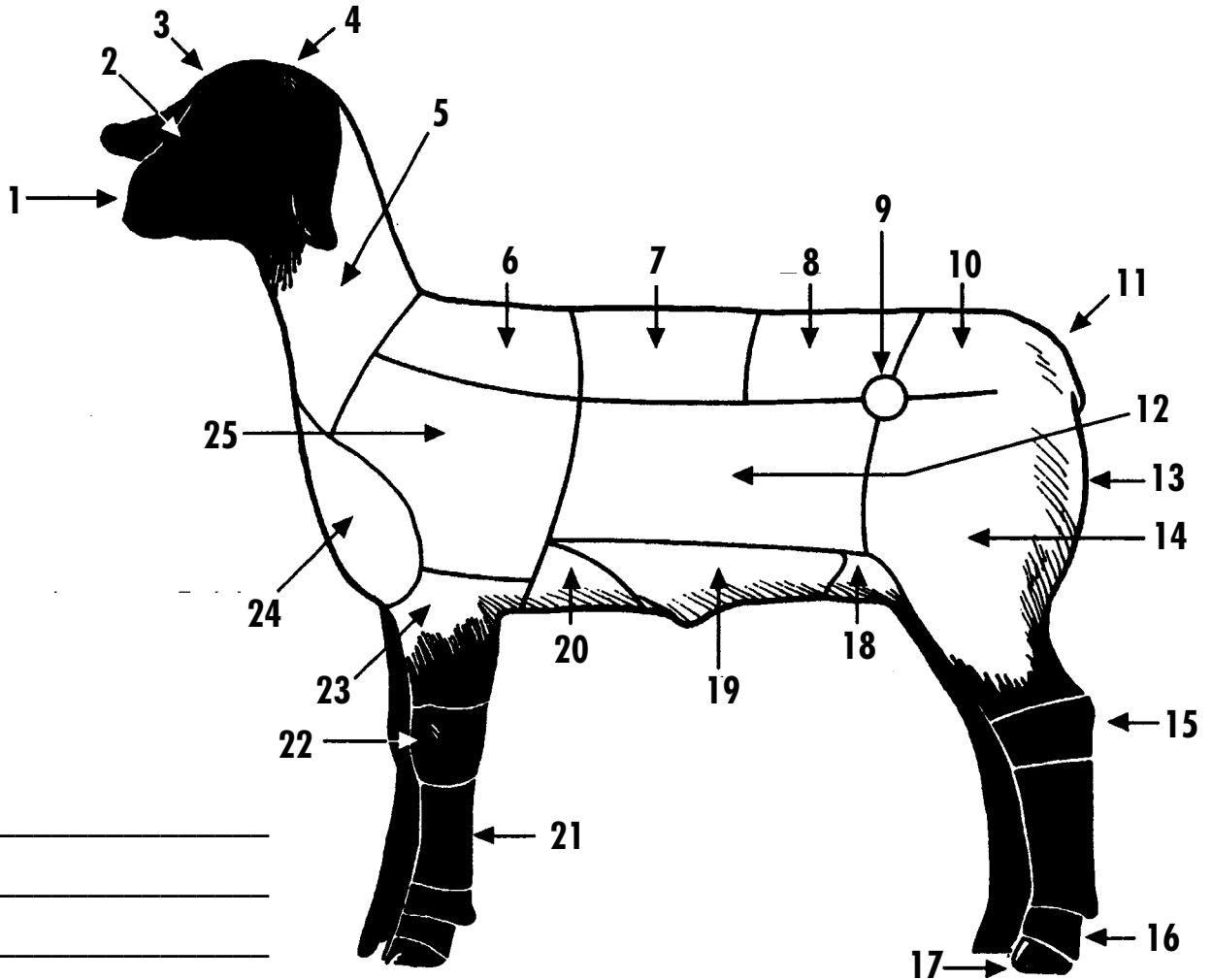
Activity level: Intermediate and advanced members ages 12 to 18

Write in the name that corresponds to the correct part of the animal below.

### Identification

In this activity you will:

- learn the parts of a sheep.



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. \_\_\_\_\_

References: Sheep Breeding and Market Lamb 4-H Resource Handbook; Sheep Livestock Learning Laboratory Kit  
 Prepared By: Jodi Black, State Extension Associate, 4-H/Animal Sciences; Andrea Auker, Animal Sciences Student

# Livestock

## Sheep Parts

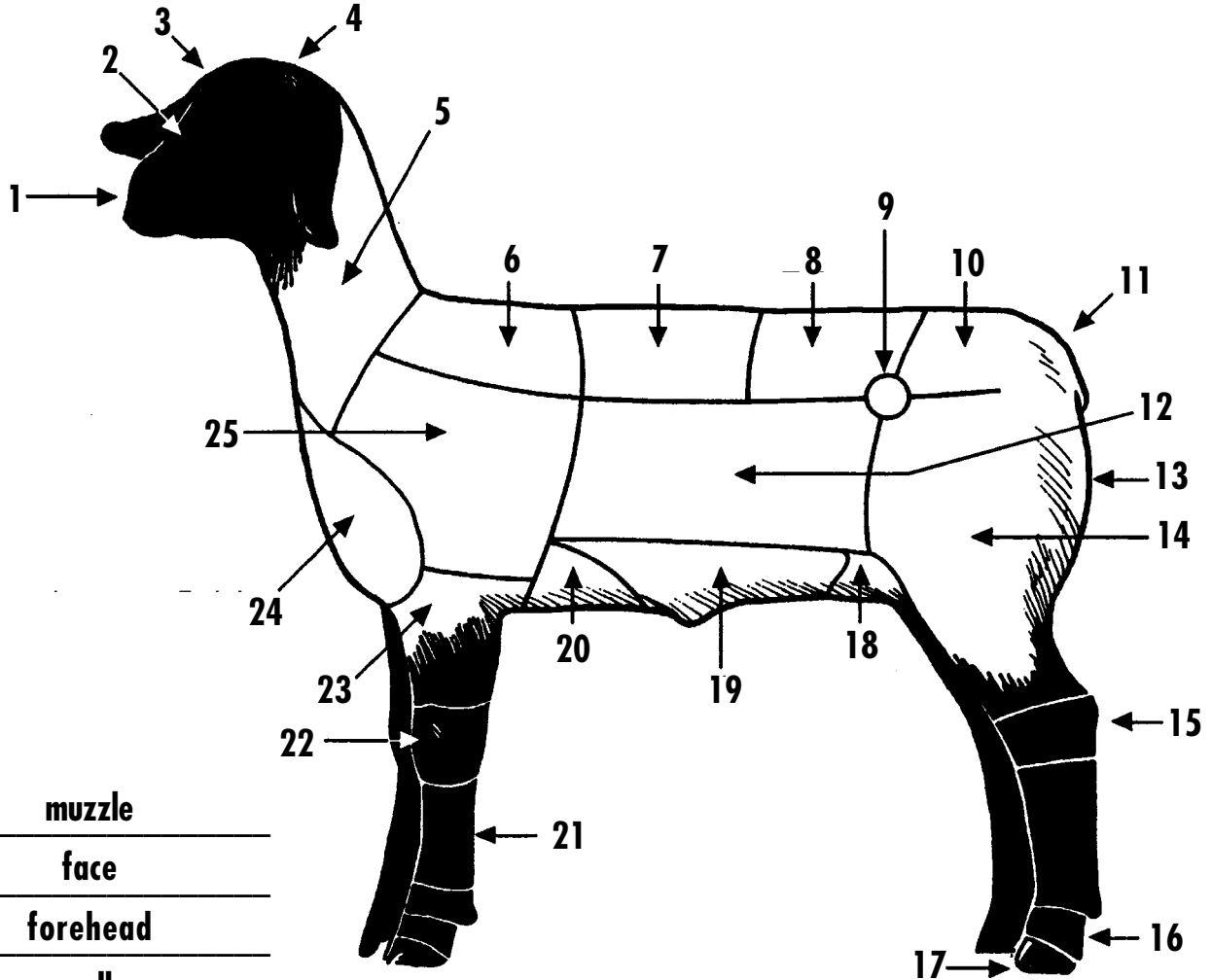
Activity level: Intermediate and advanced members ages 12 to 18

Write in the name that corresponds to the correct part of the animal below.

### Identification—Key

In this activity you will:

- learn the parts of a sheep.



1. \_\_\_\_\_ muzzle
2. \_\_\_\_\_ face
3. \_\_\_\_\_ forehead
4. \_\_\_\_\_ poll
5. \_\_\_\_\_ neck
6. \_\_\_\_\_ top of shoulder
7. \_\_\_\_\_ back or rack
8. \_\_\_\_\_ loin
9. \_\_\_\_\_ hip
10. \_\_\_\_\_ rump
11. \_\_\_\_\_ dock

12. \_\_\_\_\_ middle
13. \_\_\_\_\_ twist
14. \_\_\_\_\_ leg
15. \_\_\_\_\_ hock
16. \_\_\_\_\_ pastern
17. \_\_\_\_\_ hoof
18. \_\_\_\_\_ rear flank

19. \_\_\_\_\_ belly
20. \_\_\_\_\_ fore flank
21. \_\_\_\_\_ cannon
22. \_\_\_\_\_ knee
23. \_\_\_\_\_ forearm
24. \_\_\_\_\_ breast or brisket
25. \_\_\_\_\_ shoulder

References: Sheep Breeding and Market Lamb 4-H Resource Handbook; Sheep Livestock Learning Laboratory Kit  
 Prepared By: Jodi Black, State Extension Associate, 4-H/Animal Sciences; Andrea Auker, Animal Sciences Student

# Livestock

## Pig Parts

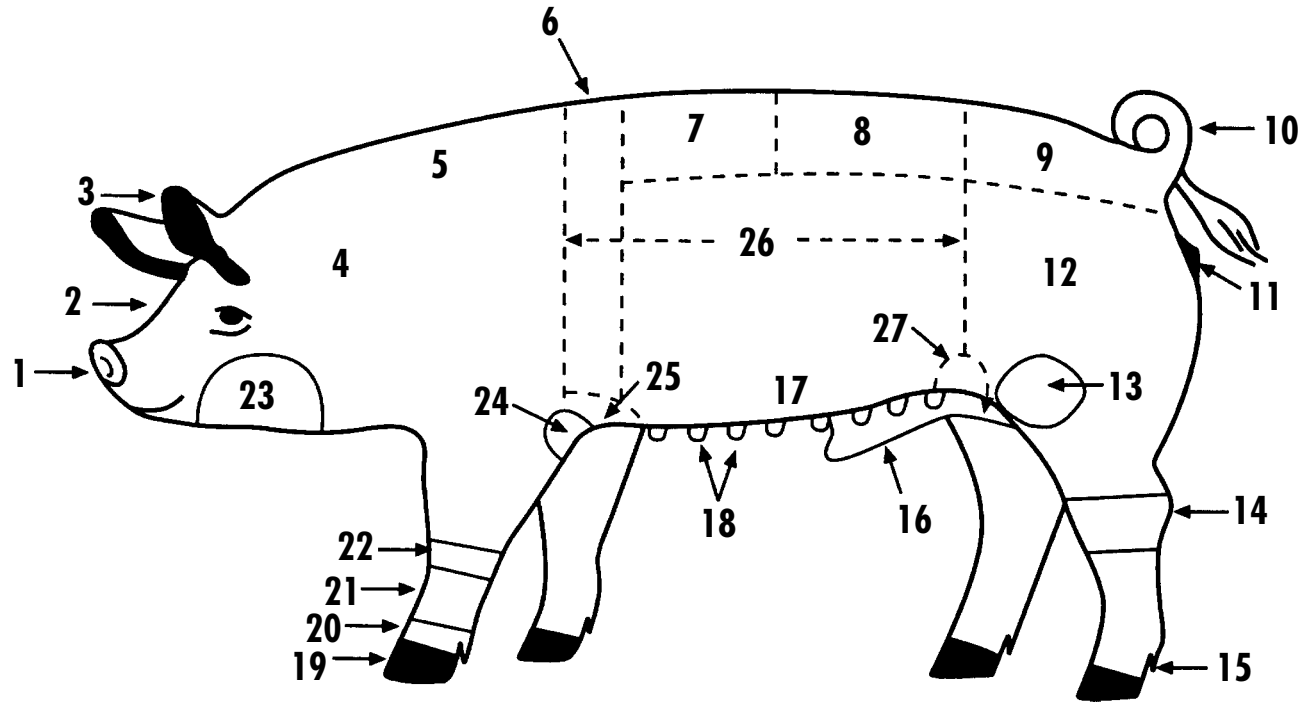
Activity level: Beginners or members ages 9 to 11

Write in the number that corresponds to the correct part of the animal.

### Identification

In this activity you will:

- learn the parts of a pig.



- |                    |             |                |                  |
|--------------------|-------------|----------------|------------------|
| _____ vulva        | _____ head  | _____ shoulder | _____ knee       |
| _____ rear flank   | _____ foot  | _____ side     | _____ jowl       |
| _____ stifle joint | _____ tail  | _____ back     | _____ fore flank |
| _____ neck         | _____ snout | _____ teats    | _____ loin       |
| _____ dewclaw      | _____ ham   | _____ rump     | _____ sheath     |
| _____ forerib      | _____ ear   | _____ pastern  | _____ elbow      |
| _____ belly        | _____ hock  | _____ cannon   |                  |

References: Market Hog 4-H Handbook #135R; Beef, Sheep, and Swine Selection and Evaluation 4-H Book #103R; Swine Livestock Learning Laboratory Kit

Prepared By: Jodi Black, State Extension Associate, 4-H/Animal Sciences; Andrea Auker, Animal Sciences Student

# Livestock

## Pig Parts

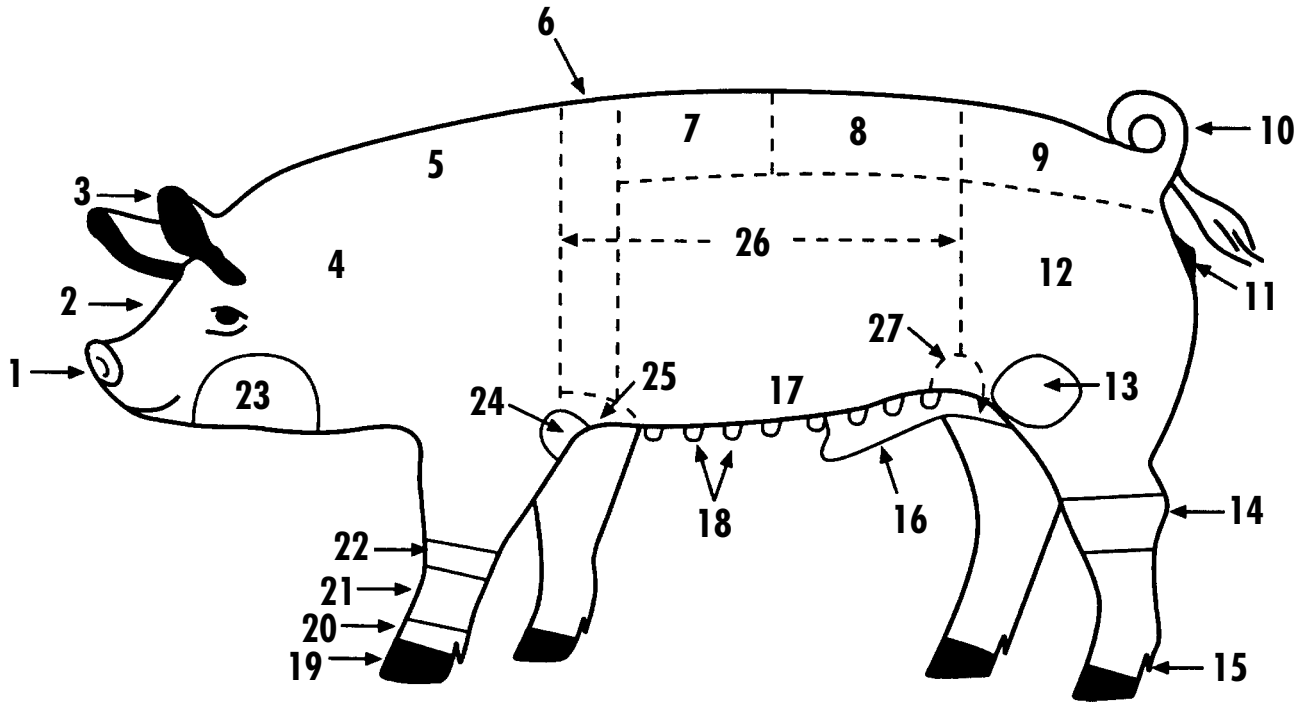
Activity level: Beginners or members ages 9 to 11

Write in the number that corresponds to the correct part of the animal.

### Identification—Key

In this activity you will:

- learn the parts of a pig.



<u>1</u>	vulva	<u>2</u>	head	<u>5</u>	shoulder	<u>22</u>	knee
<u>27</u>	rear flank	<u>19</u>	foot	<u>26</u>	side	<u>23</u>	jowl
<u>3</u>	stifle joint	<u>10</u>	tail	<u>7</u>	back	<u>25</u>	fore flank
<u>4</u>	neck	<u>1</u>	snout	<u>18</u>	teats	<u>8</u>	loin
<u>5</u>	dewclaw	<u>12</u>	ham	<u>9</u>	rump	<u>16</u>	sheath
<u>6</u>	forerib	<u>3</u>	ear	<u>20</u>	pastern	<u>24</u>	elbow
<u>7</u>	belly	<u>14</u>	hock	<u>21</u>	cannon		

References: Market Hog 4-H Handbook #135R; Beef, Sheep, and Swine Selection and Evaluation 4-H Book #103R; Swine Livestock Learning Laboratory Kit  
Prepared By: Jodi Black, State Extension Associate, 4-H/Animal Sciences; Andrea Auker, Animal Sciences Student

# Livestock

## Pig Parts

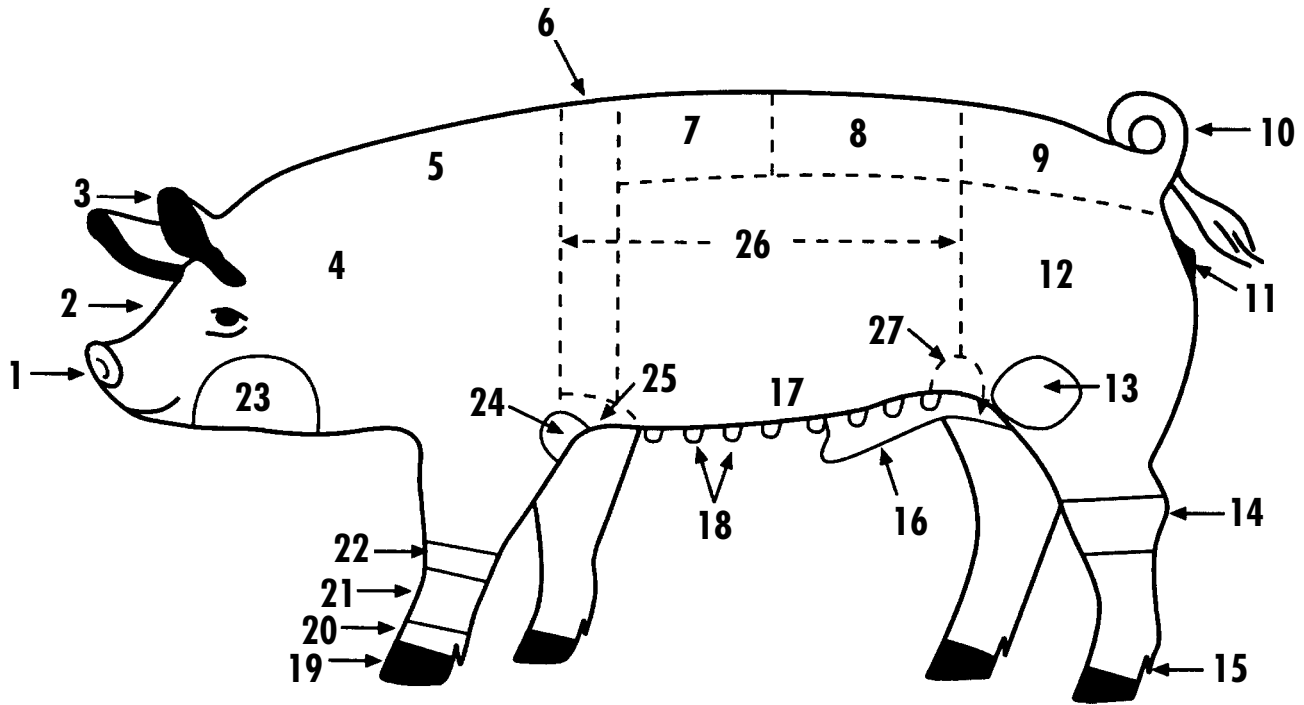
Activity level: Intermediate and advanced members ages 12 to 18

Write in the name that corresponds to the correct part of the animal.

### Identification

In this activity you will:

- learn the parts of a pig.



- |          |           |           |
|----------|-----------|-----------|
| 1. _____ | 10. _____ | 19. _____ |
| 2. _____ | 11. _____ | 20. _____ |
| 3. _____ | 12. _____ | 21. _____ |
| 4. _____ | 13. _____ | 22. _____ |
| 5. _____ | 14. _____ | 23. _____ |
| 6. _____ | 15. _____ | 24. _____ |
| 7. _____ | 16. _____ | 25. _____ |
| 8. _____ | 17. _____ | 26. _____ |
| 9. _____ | 18. _____ | 27. _____ |

References: Market Hog 4-H Handbook #135R; Beef, Sheep, and Swine Selection and Evaluation 4-H Book #103R; Swine Livestock Learning Laboratory Kit  
Prepared By: Jodi Black, State Extension Associate, 4-H/Animal Sciences; Andrea Aufer, Animal Sciences Student

# Livestock

## Pig Parts

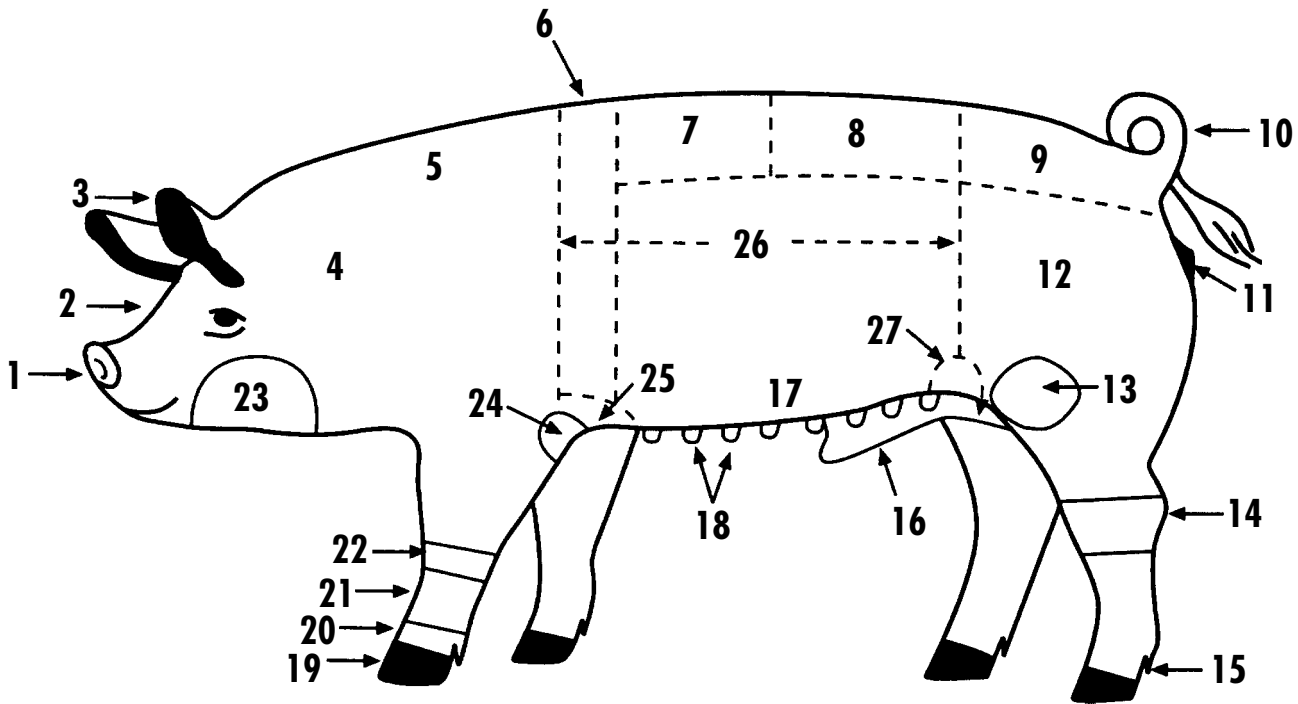
Activity level: Intermediate and advanced members ages 12 to 18

Write in the name that corresponds to the correct part of the animal.

### Identification—Key

In this activity you will:

- learn the parts of a pig.



- |          |                     |           |                        |           |                    |
|----------|---------------------|-----------|------------------------|-----------|--------------------|
| 1. _____ | <b>snout</b>        | 10. _____ | <b>tail</b>            | 19. _____ | <b>foot (toes)</b> |
| 2. _____ | <b>head</b>         | 11. _____ | <b>vulva (Guilt)</b>   | 20. _____ | <b>pastern</b>     |
| 3. _____ | <b>ear</b>          | 12. _____ | <b>ham</b>             | 21. _____ | <b>cannon</b>      |
| 4. _____ | <b>neck</b>         | 13. _____ | <b>stifle joint</b>    | 22. _____ | <b>knee</b>        |
| 5. _____ | <b>shoulder</b>     | 14. _____ | <b>hock</b>            | 23. _____ | <b>jowl</b>        |
| 6. _____ | <b>forerib area</b> | 15. _____ | <b>dewclaw</b>         | 24. _____ | <b>elbow</b>       |
| 7. _____ | <b>back</b>         | 16. _____ | <b>sheath (Barrow)</b> | 25. _____ | <b>fore flank</b>  |
| 8. _____ | <b>loin</b>         | 17. _____ | <b>belly</b>           | 26. _____ | <b>side</b>        |
| 9. _____ | <b>rump</b>         | 18. _____ | <b>teats</b>           | 27. _____ | <b>rear flank</b>  |

References: Market Hog 4-H Handbook #135R; Beef, Sheep, and Swine Selection and Evaluation 4-H Book #103R; Swine Livestock Learning Laboratory Kit  
Prepared By: Jodi Black, State Extension Associate, 4-H/Animal Sciences; Andrea Auker, Animal Sciences Student

# Livestock

## Beef Feet and Leg Structure

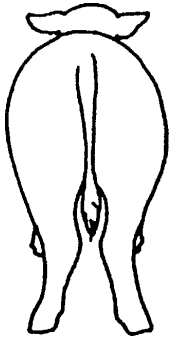
On the blanks, write the letter of the term that corresponds to the diagram below.

- |                               |                  |
|-------------------------------|------------------|
| A. Knock kneed or splayfooted | F. Correct       |
| B. Bowlegged or pigeon toed   | G. Buck kneed    |
| C. Correct                    | H. Calf kneed    |
| D. Cow hocked or splayfooted  | I. Sickle hocked |
| E. Bowlegged or pigeon toed   | J. Postlegged    |

### Identification

**In this activity you will:**

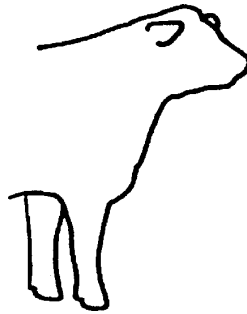
- identify the various feet and leg structure diagrams.



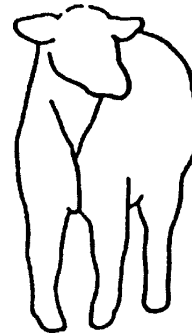
\_\_\_\_\_



\_\_\_\_\_



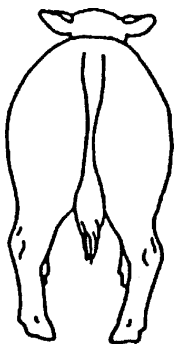
\_\_\_\_\_



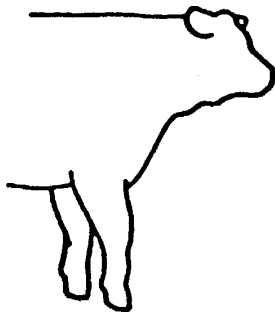
\_\_\_\_\_



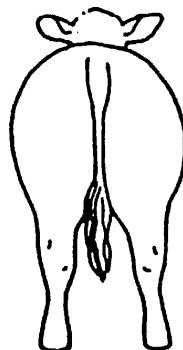
\_\_\_\_\_



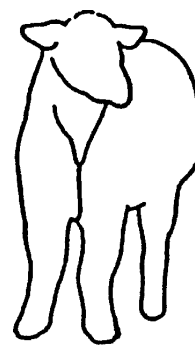
\_\_\_\_\_



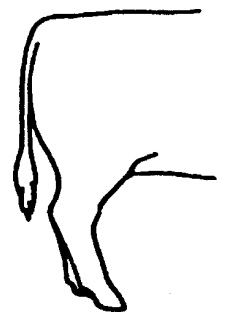
\_\_\_\_\_



\_\_\_\_\_



\_\_\_\_\_



\_\_\_\_\_

References: Beef Resource 4-H Handbook; Beef Livestock Learning Laboratory Kit; Beef, Sheep and Swine Selection and Evaluation 4-H #103R

Prepared By: Jodi Black, State Extension Associate, 4-H/Animal Sciences; Andrea Auker, Animal Sciences Student

# Livestock

## Beef Feet and Leg Structure

On the blanks, write the letter of the term that corresponds to the diagram below.

- |                               |                  |
|-------------------------------|------------------|
| A. Knock kneed or splayfooted | F. Correct       |
| B. Bowlegged or pigeon toed   | G. Buck kneed    |
| C. Correct                    | H. Calf kneed    |
| D. Cow hocked or splayfooted  | I. Sickle hocked |
| E. Bowlegged or pigeon toed   | J. Postlegged    |

### Identification—Key

#### In this activity you will:

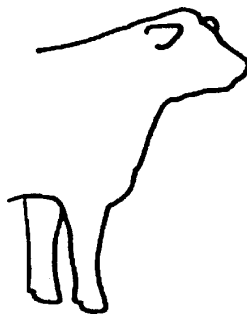
- identify the various feet and leg structure diagrams.



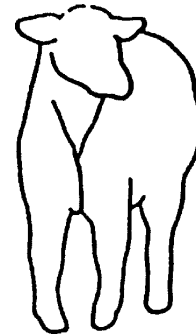
D



H



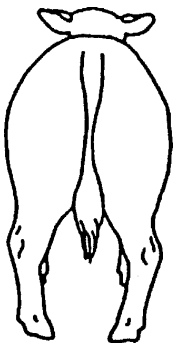
C or F



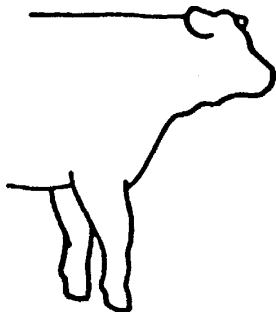
B or E



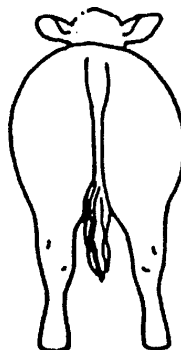
J



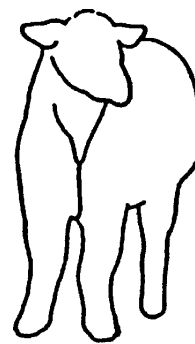
B or E



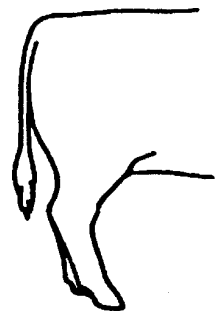
G



C or F



A



I

References: Beef Resource 4-H Handbook; Beef Livestock Learning Laboratory Kit; Beef, Sheep and Swine Selection and Evaluation 4-H #103R

Prepared By: Jodi Black, State Extension Associate, 4-H/Animal Sciences; Andrea Auker, Animal Sciences Student

# Livestock

## Dairy Cattle Feet and Leg Structure

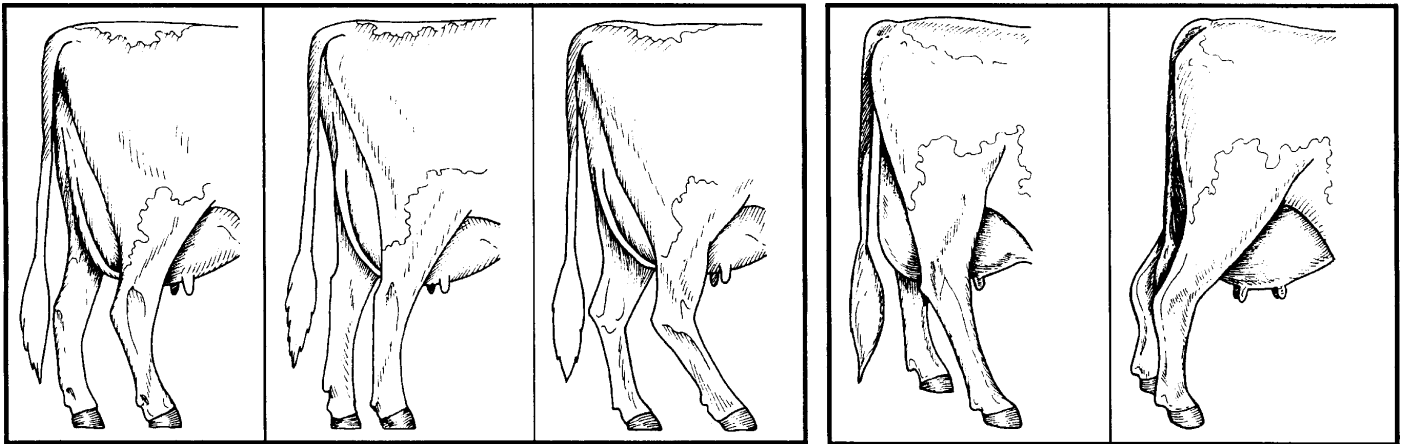
### Identification

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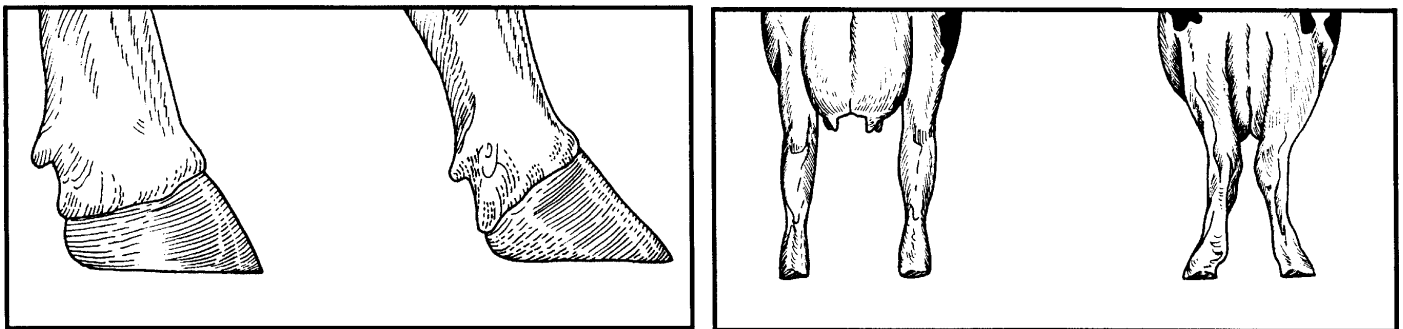
- identify the various feet and leg structure diagrams.

On the blanks, write the letter of the term that corresponds to the diagram below.

- |                               |                             |
|-------------------------------|-----------------------------|
| A. Weak Pastern, Shallow Heel | F. Correct Set              |
| B. Thurls Too Far Back        | G. Correct, Ideal Rear Legs |
| C. Sickie-Hocked              | H. Post Legged              |
| D. Cow-Hocked                 | I. Correct, Thurl Placement |
| E. Correct, Ideal Pastern     |                             |



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Reference: Dairy Livestock Learning Laboratory Kit  
 Prepared By: Andrea Auker, Animal Sciences Student

# Livestock

## Dairy Cattle Feet and Leg Structure

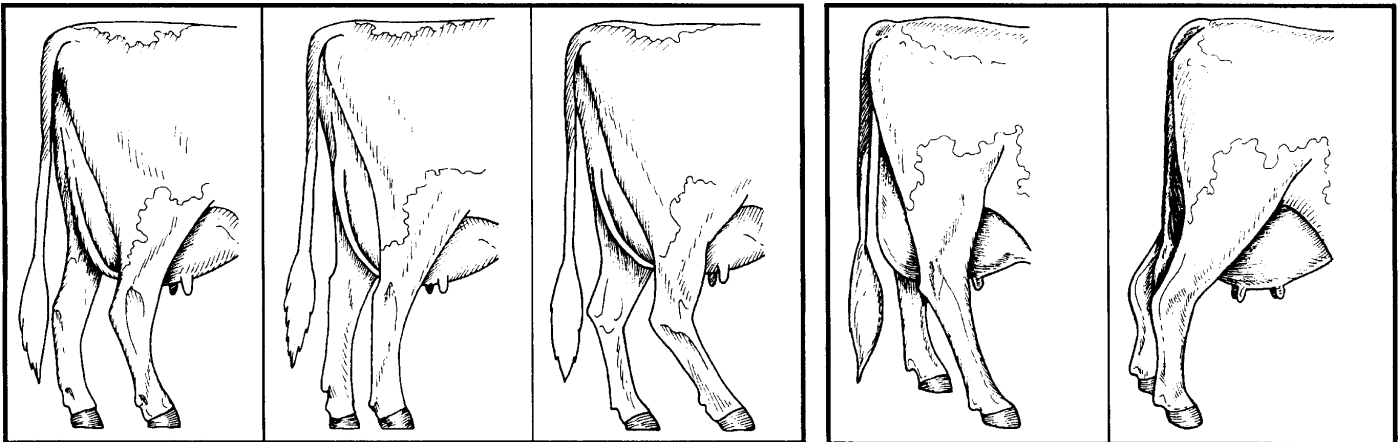
### Identification—Key

In this activity you will:

- identify the various feet and leg structure diagrams.

On the blanks, write the letter of the term that corresponds to the diagram below.

- |                               |                             |
|-------------------------------|-----------------------------|
| A. Weak Pastern, Shallow Heel | F. Correct Set              |
| B. Thurls Too Far Back        | G. Correct, Ideal Rear Legs |
| C. Sickie-Hocked              | H. Post Legged              |
| D. Cow-Hocked                 | I. Correct, Thurl Placement |
| E. Correct, Ideal Pastern     |                             |



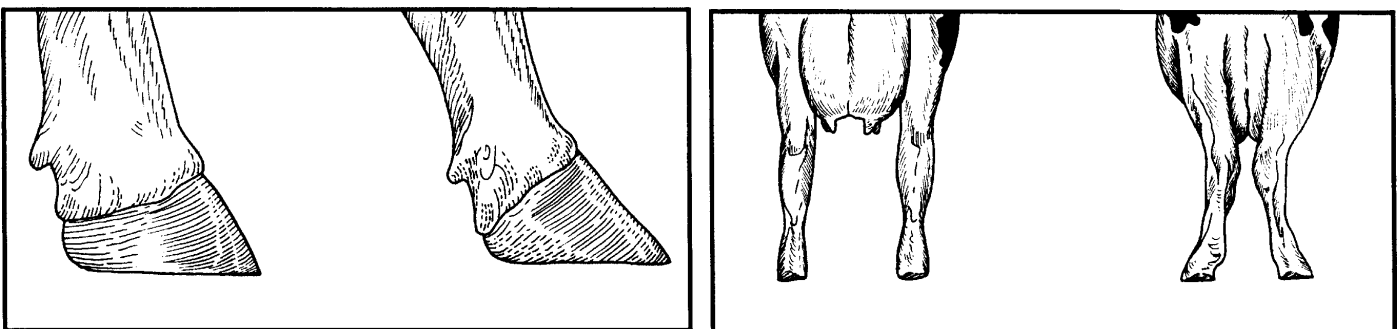
     G

     H

     C

     I

     B



     E

     A

     F

     D

Reference: Dairy Livestock Learning Laboratory Kit  
Prepared By: Andrea Auker, Animal Sciences Student

# Livestock

## Goat Mammary Structure

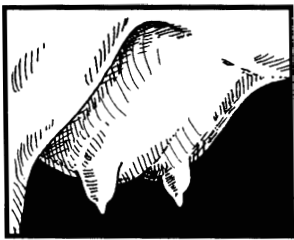
On the blanks, write the letter of the term that corresponds to the diagram below.

- |  |                              |                          |
|--|------------------------------|--------------------------|
| A. Fore Udder Attachments, Broken        | F. Bottle-shaped teats       |                          |
| B. Rear Udder Attachments, Ideal         | G. Spur teat                 |                          |
| C. Medial Suspensory Ligaments, Broken   | H. Teats that point sideways | K. Extremely small teats |
| D. Medial Suspensory Ligaments, Ideal    | I. Pencil-shaped teats       | L. Ideal teats           |
| E. Medial Suspensory Ligaments, Weakened | J. Uneven teats              |                          |

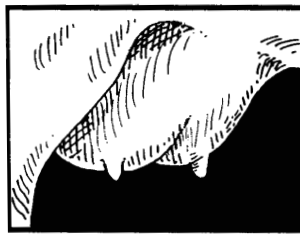
### Identification

**In this activity you will:**

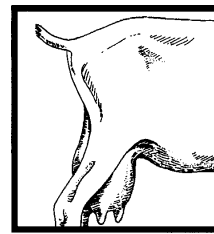
- identify the various udder structure diagrams.



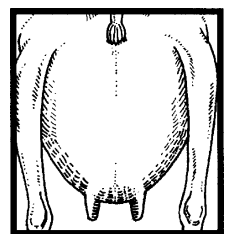
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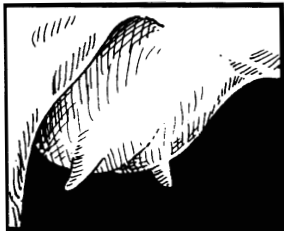
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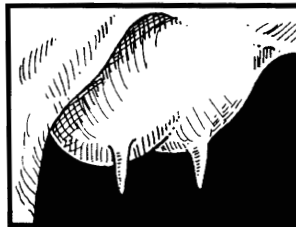
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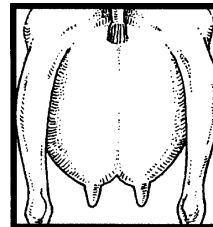
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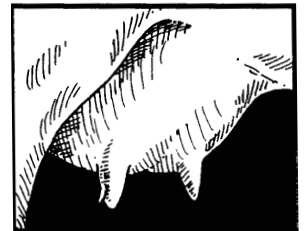
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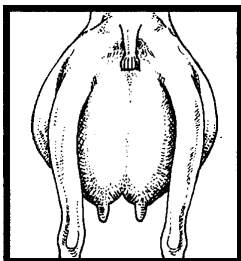
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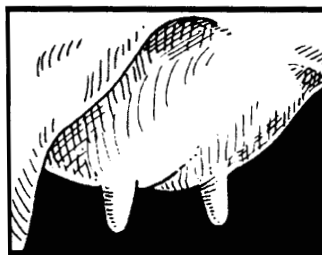
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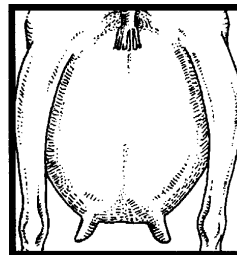
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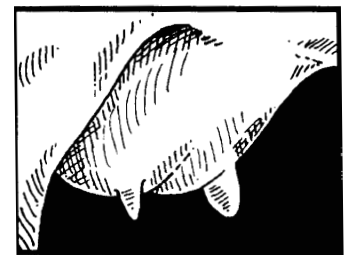
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References: 4-H Goat Handbook; Goat Learning Laboratory Kit  
Prepared By: Andrea Auker, Animal Sciences Student

# Livestock

## Goat Mammary Structure

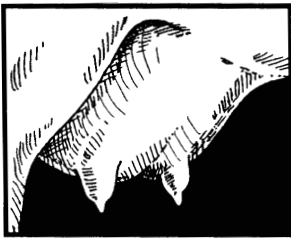
On the blanks, write the letter of the term that corresponds to the diagram below.

- |  |                              |                          |
|--|------------------------------|--------------------------|
| A. Fore Udder Attachments, Broken        | F. Bottle-shaped teats       |                          |
| B. Rear Udder Attachments, Ideal         | G. Spur teat                 |                          |
| C. Medial Suspensory Ligaments, Broken   | H. Teats that point sideways | K. Extremely small teats |
| D. Medial Suspensory Ligaments, Ideal    | I. Pencil-shaped teats       | L. Ideal teats           |
| E. Medial Suspensory Ligaments, Weakened | J. Uneven teats              |                          |

### Identification—Key

In this activity you will:

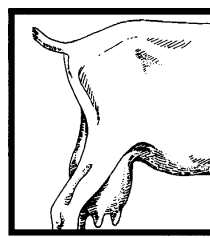
- identify the various udder structure diagrams.



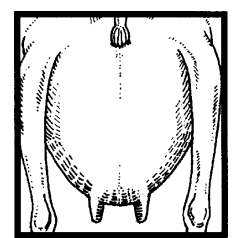
          
F



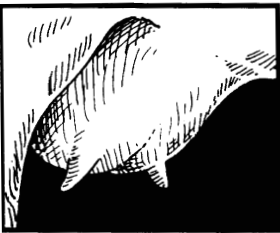
          
K



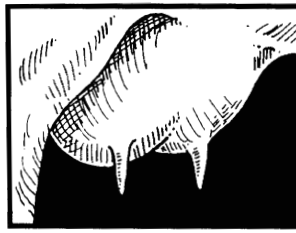
          
A



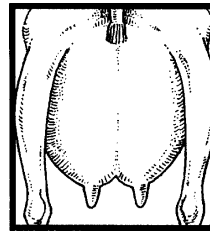
          
E



          
H



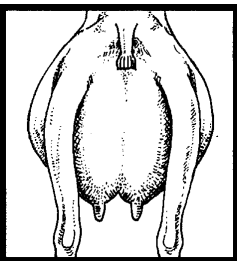
          
I



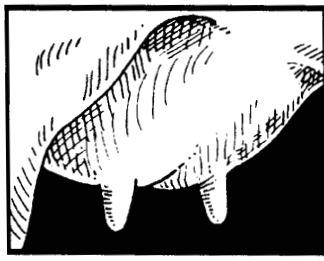
          
D



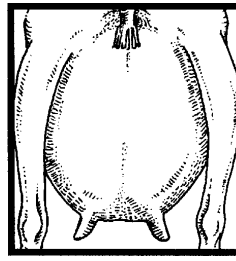
          
G



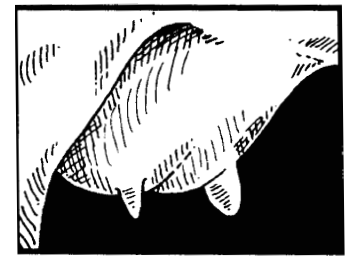
          
B



          
L



          
C



          
J

References: 4-H Goat Handbook; Goat Learning Laboratory Kit  
Prepared By: Andrea Auker, Animal Sciences Student

# Livestock

## Identification

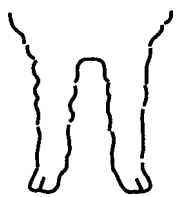
### Sheep Feet and Leg Structure

**In this activity you will:**

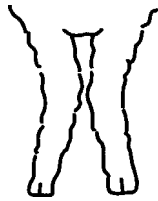
- identify the various feet and leg structure diagrams.

On the blanks, write the letter of the term that corresponds to the diagram below.

- |  |                                     |                                     |
|--|-------------------------------------|-------------------------------------|
| A. Side View Rear Legs, Sickle-Hocked  | F. Rear View, Correct               |                                     |
| B. Side View Front Legs, Correct       | G. Side View Front Legs, Buck-Kneed | J. Rear View, Cow-Hocked            |
| C. Side View Front Legs, Calf-Kneed    | H. Front View, Knock-Kneed          | K. Side View Rear Legs, Post-Legged |
| D. Front View, Pigeon-Toed             | I. Front View, Splay-footed         | L. Front View, Bowlegged            |
| E. Side View Front Legs, Weak Pasterns |                                     |                                     |



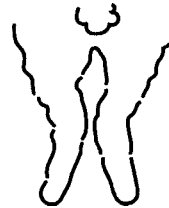
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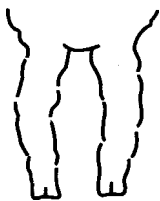
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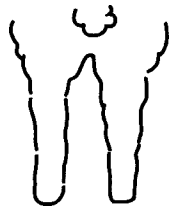
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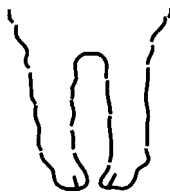
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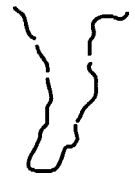
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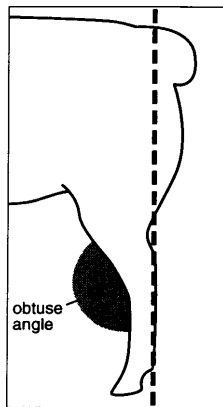
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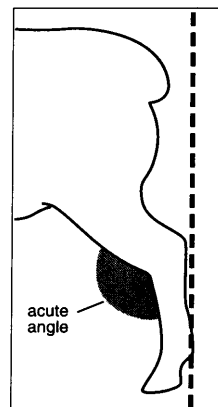


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obtuse angle

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acute angle

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References: Sheep Resource 4-H Handbook; Sheep Livestock Learning Laboratory Kit; Beef, Sheep and Swine Selection and Evaluation 4-H #103R  
Prepared By: Jodi Black, State Extension Associate, 4-H/Animal Sciences; Andrea Auker, Animal Sciences Student

# Livestock

## Sheep Feet and Leg Structure

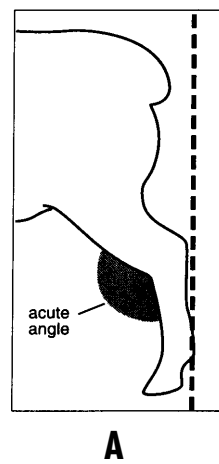
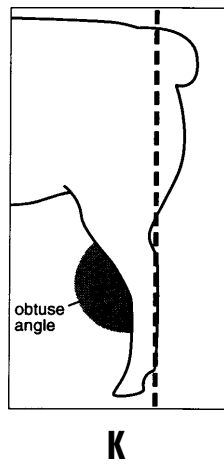
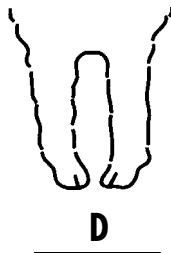
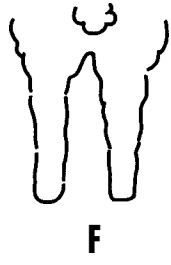
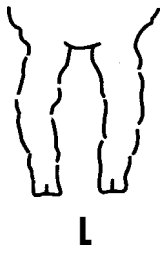
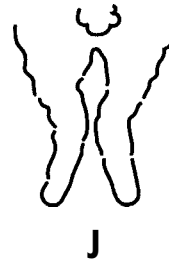
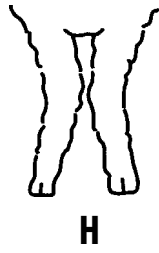
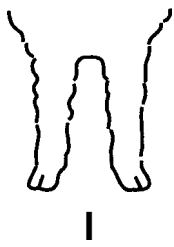
On the blanks, write the letter of the term that corresponds to the diagram below.

- |  |                                     |
|--|-------------------------------------|
| A. Side View Rear Legs, Sickle-Hocked  | F. Rear View, Correct               |
| B. Side View Front Legs, Correct       | G. Side View Front Legs, Buck-Kneed |
| C. Side View Front Legs, Calf-Kneed    | H. Front View, Knock-Kneed          |
| D. Front View, Pigeon-Toed             | I. Front View, Splay-footed         |
| E. Side View Front Legs, Weak Pasterns | J. Rear View, Cow-Hocked            |
|  | K. Side View Rear Legs, Post-Legged |
|  | L. Front View, Bowlegged            |

### Identification—Key

In this activity you will:

- identify the various feet and leg structure diagrams.



References: Sheep Resource 4-H Handbook; Sheep Livestock Learning Laboratory Kit; Beef, Sheep and Swine Selection and Evaluation 4-H #103R  
 Prepared By: Jodi Black, State Extension Associate, 4-H/Animal Sciences; Andrea Auker, Animal Sciences Student

# Livestock

## Swine Feet and Leg Structure

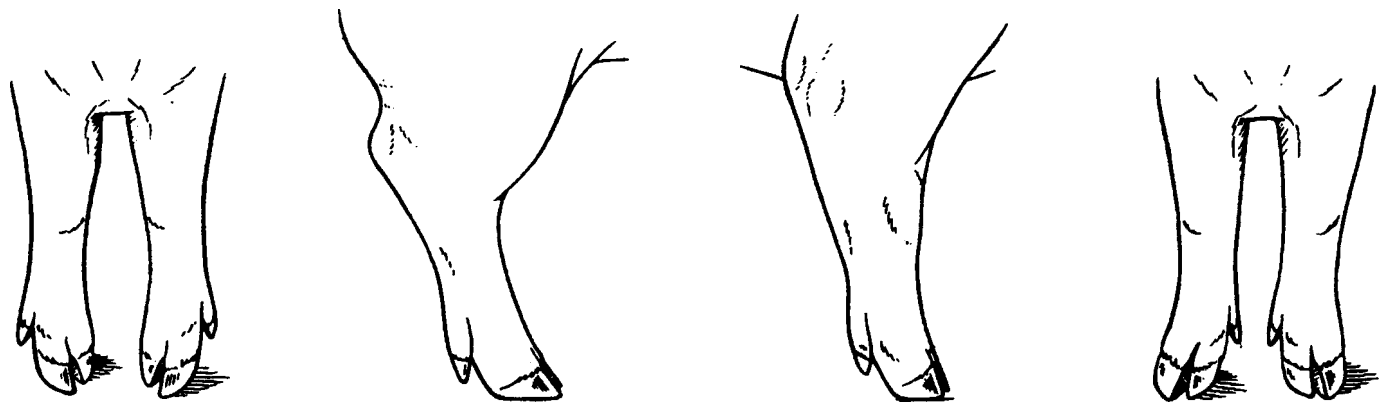
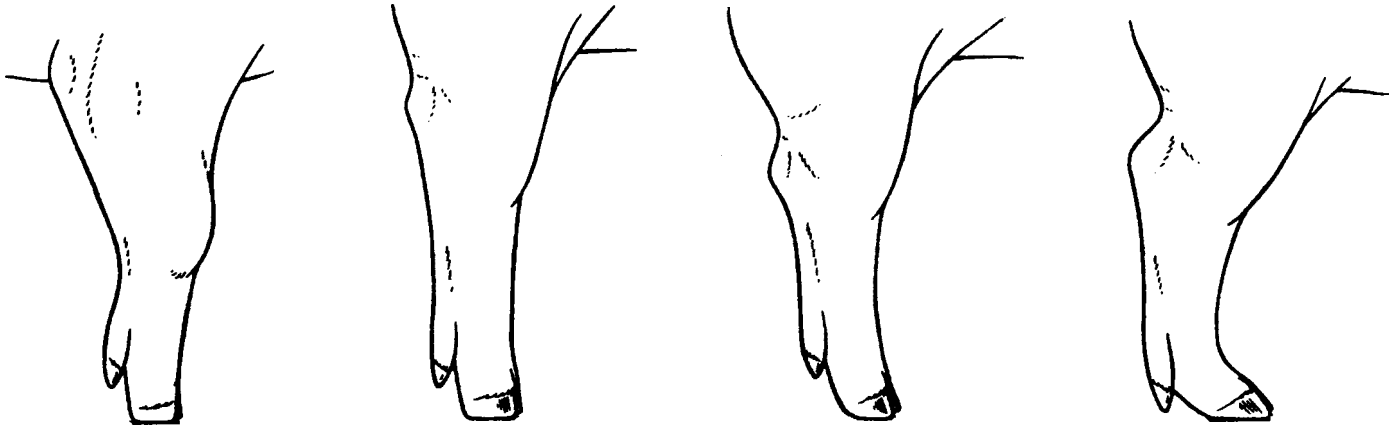
On the blanks, write the letter of the term that corresponds to the diagram below.

- |                  |                 |                |
|------------------|-----------------|----------------|
| A. Normal        | D. Weak pastern | G. Splayfooted |
| B. Sickie-hocked | E. Normal       | H. Pigeon-toed |
| C. Post-legged   | F. Buck-kneed   |                |

### Identification

**In this activity you will:**

- identify the various feet and leg structure diagrams.



Reference: National Pork Producers Council, "Producers to Evaluate Market Hogs"  
Prepared By: Jodi Black, State Extension Associate, 4-H/Animal Sciences; Andrea Auker, Animal Sciences Student

# Livestock

## Swine Feet and Leg Structure

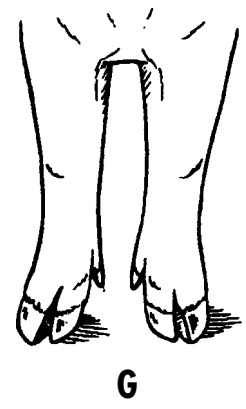
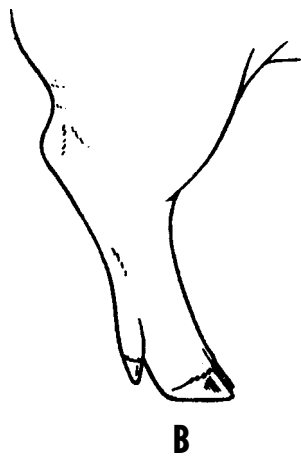
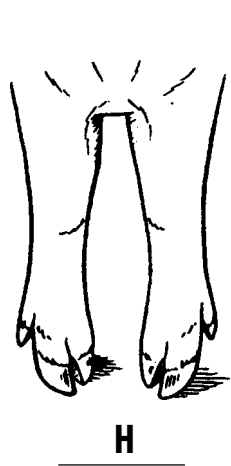
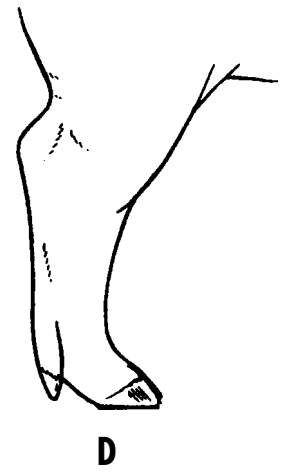
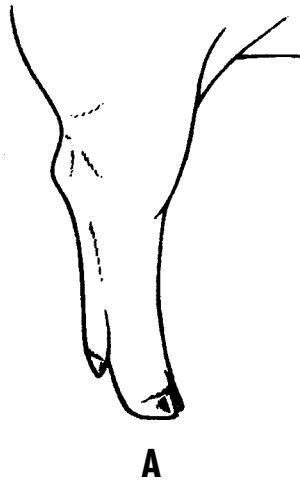
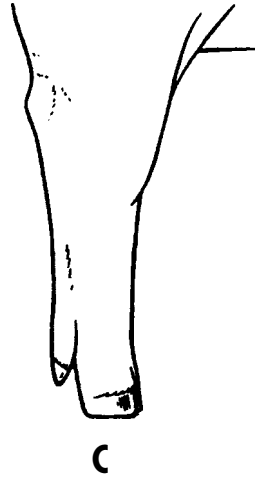
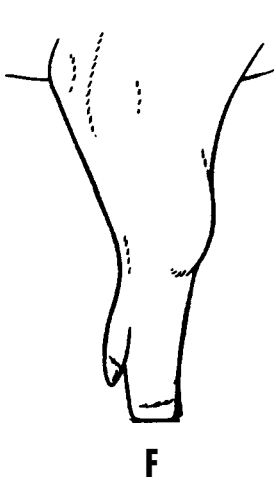
On the blanks, write the letter of the term that corresponds to the diagram below.

- |                  |                 |                |
|------------------|-----------------|----------------|
| A. Normal        | D. Weak pastern | G. Splayfooted |
| B. Sickie-hocked | E. Normal       | H. Pigeon-toed |
| C. Post-legged   | F. Buck-kneed   |                |

### Identification—Key

In this activity you will:

- identify the various feet and leg structure diagrams.



Reference: National Pork Producers Council, "Producers to Evaluate Market Hogs"

Prepared By: Jodi Black, State Extension Associate, 4-H/Animal Sciences; Andrea Aufer, Animal Sciences Student

# Livestock

## Beef Quality Assurance

Read the situation statement and label of the medication and complete the treatment record.

### Situation Statement

“Curly,” the hereford steer (#351) you are planning to take to the fair next month, is lame in the left front leg. Today your veterinarian has diagnosed the steer’s problem as foot rot and has given it an initial treatment at the time of the examination. The veterinarian has left additional prescribed medication with you to continue the treatment. The directions on the medication tell you to give the steer 1 cc per 50 pounds body weight once daily for 4 days, beginning tomorrow, and to give it by intramuscular injection. Your steer weighs 1,000 pounds. Remember, your veterinarian treated the steer today, April 3, around 4:00 p.m. and you will treat it 4 more days as directed. The hold time on this product is 14 days.

### Bottle Label

Emily Edwards, DVM 100 Quality Avenue Hometown, OH 43200 614-555-5050	
Owner: <b>Jennifer Wilson</b>	Date: <b>April 3</b>
Animal ID: <b>Hereford #351</b>	Indications: <b>Foot rot</b>
Directions: <b>1 cc per 50 pounds body weight IM once daily for four days.</b>	
Precaution: <b>Avoid injection into muscle of high carcass value.</b>	
<b>Warning:</b> Use of this drug must be discontinued for <b>14</b> days before slaughter or market for food.	
Product/Active Ingredient(s): <b>Hydrocillin</b>	
Expiration Date: <b>September 30</b>	

## Decision-Making

### In this activity you will:

- learn about Quality Assurance by practicing how to record animal medication information on the treatment record.

April						
				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	

### Treatment Record

Treatment Date	Animal ID • Name • Species • ID Number • Description	Condition Being Treated	Estimated Weight	Treatment Given (Medication dispensed, amount, and route)	Instructed Meat/Milk/Egg Withdrawal	Results	Date Withdrawal Complete	If this is an extra label or Rx drug, list the name, address, and phone number of the licensed veterinarian who prescribed or directed the treatment.

Teaching References: *Caring for Animals Discussion Guide* and video, and the *4-H Beef Resource Handbook*. The *Beef Learning Laboratory Kit* contains a medicine bottle, syringe, and skeletal poster which are helpful but not necessary for this exercise.

Lesson plan by: Dr. Bill Shulaw, OSU Extension Veterinarian

# Livestock

## Beef Quality Assurance

Read the situation statement and label of the medication and complete the treatment record.

### Situation Statement

“Curly,” the hereford steer (#351) you are planning to take to the fair next month, is lame in the left front leg. Today your veterinarian has diagnosed the steer’s problem as foot rot and has given it an initial treatment at the time of the examination. The veterinarian has left additional prescribed medication with you to continue the treatment. The directions on the medication tell you to give the steer 1 cc per 50 pounds body weight once daily for 4 days, beginning tomorrow, and to give it by intramuscular injection. Your steer weighs 1,000 pounds. Remember, your veterinarian treated the steer today, April 3, around 4:00 p.m. and you will treat it 4 more days as directed. The hold time on this product is 14 days.

### Bottle Label

Emily Edwards, DVM  
100 Quality Avenue  
Hometown, OH 43200  
614-555-5050

Owner: **Jennifer Wilson**      Date: **April 3**  
Animal ID: **Hereford #351**      Indications: **Foot rot**  
Directions: **1 cc per 50 pounds body weight IM once daily for four days.**  
Precaution: **Avoid injection into muscle of high carcass value.**  
**Warning:** Use of this drug must be discontinued for **14 days** before slaughter or market for food.  
Product/Active Ingredient(s): **Hydrocillin**  
Expiration Date: **September 30**

## Decision-Making—Key

### In this activity you will:

- learn about Quality Assurance by practicing how to record animal medication information on the treatment record.

April						
				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	

### Treatment Record

X = This information was not supplied in the situation, therefore you do not need to complete this box.

Treatment Date	Animal ID • Name • Species • ID Number • Description	Condition Being Treated	Estimated Weight	Treatment Given (Medication dispensed, amount, and route)	Instructed Meat/Milk/Egg Withdrawal	Results	Date Withdrawal Complete	If this is an extra label or Rx drug, list the name, address, and phone number of the licensed veterinarian who prescribed or directed the treatment.
4-3	Steer #351	Foot rot	1,000 lb	Hydrocillin 20 cc IM	14 days Meat	X	4-17	Emily Edwards, DVM 100 Quality Avenue Hometown, OH 43200 614-555-5050
4-4	Steer #351	Foot rot	1,000 lb	Hydrocillin 20 cc IM	14 days Meat	X	4-18	
4-5	Steer #351	Foot rot	1,000 lb	Hydrocillin 20 cc IM	14 days Meat	X	4-19	
4-6	Steer #351	Foot rot	1,000 lb	Hydrocillin 20 cc IM	14 days Meat	X	4-20	
4-7	Steer #351	Foot rot	1,000 lb	Hydrocillin 20 cc IM	14 days Meat	X	4-21	

Teaching References: *Caring for Animals Discussion Guide and video, and the 4-H Beef Resource Handbook. The Beef Learning Laboratory Kit contains a medicine bottle, syringe, and skeletal poster which are helpful but not necessary for this exercise.*

Lesson plan by: Dr. Bill Shulaw, OSU Extension Veterinarian

# Livestock

## Dairy Cattle Quality Assurance

Read the situation statement and label of the medication and complete the treatment record.

### Situation Statement

Today is February 5. At the afternoon milking today, you notice the right front quarter on cow #28, a 1,200 pound Holstein, has abnormal milk. You saw several flakes and thick milk on the strip plate while preparing the cow for milking. You decide she has mastitis. The udder feels normal as is the cow's temperature and appetite. At the end of the milking, you medicate the right front quarter using an over-the-counter (OTC) intramammary infusion product called SUPER-MAST™. The time of the treatment is 6:00 p.m. The label of the product is seen below. You mark the cow as treated by attaching a red leg band to the rear leg. Fill out the treatment record for today's treatment.

### Bottle Label

**SUPER-MAST™**  
**Hydrocillin**  
**Lactating Cow Intramammary Infusion**

Each 10 ml single dose disposable syringe contains 50 mg hydrocillin in a base suitable for the treatment of bovine mastitis during the lactating period.

**Indications:** For the intramammary treatment of bovine mastitis caused by susceptible bacteria.

**Administration:** After milking, clean and disinfect the teat end with an alcohol swab. Remove the protective covering from the tip and insert the tip into the teat orifice. Express the contents of the tube into the quarter with gentle pressure. Withdraw the syringe and massage the medication up into the affected quarter. Milk out the quarter at the next routine milking.

**Storage:** Store between 45 and 75 degrees F.

**WARNING:** Milk that has been taken from animal during treatment and for 72 hours (3 days) after the last treatment must be discarded. Treated animal should not be slaughtered for food purposes for 10 days following the last treatment.

Net contents: 10 ml  
SKILLATHON ANIMAL HEALTH COMPANY  
Veterinary use only—not for human use

## Decision-Making

### In this activity you will:

- learn about Quality Assurance by practicing how to record animal medication information on the treatment record.

February						
	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						

### Treatment Record

Treatment Date	Animal ID • Name • Species • ID Number • Description	Condition Being Treated	Estimated Weight	Treatment Given (Medication dispensed, amount, and route)	Instructed Meat/Milk/Egg Withdrawal	Results	Date Withdrawal Complete	If this is an extra label or Rx drug, list the name, address, and phone number of the licensed veterinarian who prescribed or directed the treatment.

*Teaching References: Dairy Learning Laboratory Kit, Curriculum Guide and video. The dairy kit contains a medicine bottle, syringe, and skeletal poster which are helpful but not necessary for this exercise.*

*Lesson plan by: Dr. Bill Shulaw, OSU Extension Veterinarian*

# Livestock

## Dairy Cattle Quality Assurance

Read the situation statement and label of the medication and complete the treatment record.

### Situation Statement

Today is February 5. At the afternoon milking today, you notice the right front quarter on cow #28, a 1,200 pound Holstein, has abnormal milk. You saw several flakes and thick milk on the strip plate while preparing the cow for milking. You decide she has mastitis. The udder feels normal as is the cow's temperature and appetite. At the end of the milking, you medicate the right front quarter using an over-the-counter (OTC) intramammary infusion product called SUPER-MAST™. The time of the treatment is 6:00 p.m. The label of the product is seen below. You mark the cow as treated by attaching a red leg band to the rear leg. Fill out the treatment record for today's treatment.

### Bottle Label

#### SUPER-MAST™ Hydrocillin

#### Lactating Cow Intramammary Infusion

Each 10 ml single dose disposable syringe contains 50 mg hydrocillin in a base suitable for the treatment of bovine mastitis during the lactating period.

**Indications:** For the intramammary treatment of bovine mastitis caused by susceptible bacteria.

**Administration:** After milking, clean and disinfect the teat end with an alcohol swab. Remove the protective covering from the tip and insert the tip into the teat orifice. Express the contents of the tube into the quarter with gentle pressure. Withdraw the syringe and massage the medication up into the affected quarter. Milk out the quarter at the next routine milking.

**Storage:** Store between 45 and 75 degrees F.

**WARNING:** Milk that has been taken from animal during treatment and for 72 hours (3 days) after the last treatment must be discarded. Treated animal should not be slaughtered for food purposes for 10 days following the last treatment.

Net contents: 10 ml

SKILLATHON ANIMAL HEALTH COMPANY

Veterinary use only—not for human use

## Decision-Making—Key

### In this activity you will:

- learn about Quality Assurance by practicing how to record animal medication information on the treatment record.

February						
	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						

Treatment Record								X = This information was not supplied in the situation, therefore you do not need to complete this box.
Treatment Date	Animal ID • Name • Species • ID Number • Description	Condition Being Treated	Estimated Weight	Treatment Given (Medication dispensed, amount, and route)	Instructed Meat/Milk/Egg Withdrawal	Results	Date Withdrawal Complete	If this is an extra label or Rx drug, list the name, address, and phone number of the licensed veterinarian who prescribed or directed the treatment.
2/5 6 p.m.	#28 Holstein cow	mastitis	1,200 lb	Super-Mast 10 ml intramammary in right front quarter	Milk—3 days Meat—10 days	X	Milk—2/8 6 p.m. Meat—2/15 6 p.m.	X

Teaching References: Dairy Learning Laboratory Kit, Curriculum Guide and video. The dairy kit contains a medicine bottle, syringe, and skeletal poster which are helpful but not necessary for this exercise.

Lesson plan by: Dr. Bill Shulaw, OSU Extension Veterinarian

# Livestock

## Goat Quality Assurance

Read the situation statement and label of the medication and complete the treatment record.

### Situation Statement

The market goat you have been planning to take to the fair is lame. Today your veterinarian diagnosed the goat's problem as foot rot and gave it an initial treatment at the time of the examination. The veterinarian left additional medication with you to continue the treatment. The directions on the medication tell you to give the goat 2 cc's per 100 pounds body weight once daily for 3 days, beginning tomorrow, and to give it by intramuscular injection. Your goat weighs 50 pounds. Remember, your veterinarian treated the goat today, June 8, and you will treat the goat 3 more days as directed.

### Bottle Label

Susan Q. Veterinarian, DVM 100 Quality Drive Anywhere, OH 43210 614-555-0000	
Owner: <b>Keith Young</b>	Date: <b>June 8</b>
Animal ID: <b>Goat 101-Saanen</b>	Indications: <b>Foot rot</b>
Directions: <b>Give 2 cc per 100 pounds body weight once daily intramuscularly for 3 days.</b>	
Precaution: <b>Avoid muscle of high carcass value.</b>	
<b>Warning:</b> Use of this drug must be discontinued for <b>30</b> days before slaughter or market for food.	
Product/Active Ingredient(s): <b>Hydrocillin</b>	

## Decision-Making

### In this activity you will:

- learn about Quality Assurance by practicing how to record animal medication information on the treatment record.

June						
		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			

July						
				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

### Treatment Record

Treatment Date	Animal ID • Name • Species • ID Number • Description	Condition Being Treated	Estimated Weight	Treatment Given (Medication dispensed, amount, and route)	Instructed Meat/Milk/Egg Withdrawal	Results	Date Withdrawal Complete	If this is an extra label or Rx drug, list the name, address, and phone number of the licensed veterinarian who prescribed or directed the treatment.

Teaching References: *Caring for Animals Discussion Guide and video; the 4-H Goat Handbook; and the Goat Learning Laboratory Kit, which contains a medicine bottle, syringe, and skeletal poster which are helpful but not necessary for this exercise.*

Lesson plan by: Dr. Gary Bowman, OSU Extension Veterinarian

# Livestock

## Goat Quality Assurance

Read the situation statement and label of the medication and complete the treatment record.

### Situation Statement

The market goat you have been planning to take to the fair is lame. Today your veterinarian diagnosed the goat's problem as foot rot and gave it an initial treatment at the time of the examination. The veterinarian left additional medication with you to continue the treatment. The directions on the medication tell you to give the goat 2 cc's per 100 pounds body weight once daily for 3 days, beginning tomorrow, and to give it by intramuscular injection. Your goat weighs 50 pounds. Remember, your veterinarian treated the goat today, June 8, and you will treat the goat 3 more days as directed.

### Bottle Label

Susan Q. Veterinarian, DVM  
 100 Quality Drive  
 Anywhere, OH 43210  
 614-555-0000

Owner: **Keith Young**      Date: **June 8**  
 Animal ID: **Goat 101-Saanen**      Indications: **Foot rot**  
 Directions: **Give 2 cc per 100 pounds body weight once daily intramuscularly for 3 days.**  
 Precaution: **Avoid muscle of high carcass value.**  
**Warning:** Use of this drug must be discontinued for **30** days before slaughter or market for food.  
 Product/Active Ingredient(s): **Hydrocillin**

## Decision-Making—Key

### In this activity you will:

- learn about Quality Assurance by practicing how to record animal medication information on the treatment record.

June						
		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			

July						
				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

<b>Treatment Record</b>								<b>X = This information was not supplied in the situation, therefore you do not need to complete this box.</b>
Treatment Date	Animal ID • Name • Species • ID Number • Description	Condition Being Treated	Estimated Weight	Treatment Given (Medication dispensed, amount, and route)	Instructed Meat/Milk/Egg Withdrawal	Results	Date Withdrawal Complete	If this is an extra label or Rx drug, list the name, address, and phone number of the licensed veterinarian who prescribed or directed the treatment.
6-9	Goat 101-Saanen	foot rot	50 lb	Hydrocillin 1 cc IM	30 days meat	X	7/9	Susan Q. Veterinarian, DVM 100 Quality Drive Anywhere, OH 43210 614-555-0000
6-10	Goat 101-Saanen	foot rot	50 lb	Hydrocillin 1 cc IM	30 days meat	X	7/10	
6-11	Goat 101-Saanen	foot rot	50 lb	Hydrocillin 1 cc IM	30 days meat	X	7/11	

Teaching References: *Caring for Animals Discussion Guide and video; the 4-H Goat Handbook; and the Goat Learning Laboratory Kit, which contains a medicine bottle, syringe, and skeletal poster which are helpful but not necessary for this exercise.*

Lesson plan by: Dr. Gary Bowman, OSU Extension Veterinarian

# Livestock

## Sheep Quality Assurance

Read the situation statement and label of the medication and complete the treatment record.

### Situation Statement

Today is May 15. Your name is Lynn Monroe. Your Suffolk market lamb “Elmo” (ear tag #3159) you are planning to take to the county fair July 2–7 is lame on the left front leg. When you examine it, you find the foot smells bad and the hoof wall is separating from the sole. These findings lead you to believe the lamb has foot rot. The veterinarian who regularly cares for your animals is Angela Adams, DVM. She examined the animal and gave you (prescribed) the bottle of medication listed below and instructed you to give the treatment today at 3:00 p.m. Your lamb weighs about 100 pounds.

### Bottle Label

Angela Adams, DVM 100 Quality Avenue Hometown, OH 43200 614-555-5050	
Owner: <b>Lynn Monroe</b>	Date: <b>May 15</b>
Animal ID: <b>Lamb #3159</b>	Indications: <b>Foot rot</b>
Directions: <b>Give 5 ml (cc) intramuscularly on May 15, at 3 p.m.</b>	
Precaution: <b>Avoid the muscle tissues of high carcass value.</b>	
<b>Warning:</b> Use of this drug must be discontinued for <b>10</b> days before slaughter or market for food.	
Product/Active Ingredient(s): <b>Biomycin</b>	
Expiration Date: <b>August 15</b>	

## Decision-Making

### In this activity you will:

- learn about Quality Assurance by practicing how to record animal medication information on the treatment record.

May						
						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					

### Treatment Record

Treatment Date and Time	Animal ID • Name • Species • ID Number • Description	Condition Being Treated	Estimated Weight	Treatment Given (Medication dispensed, amount, and route)	Instructed Meat/Milk/Egg Withdrawal	Results	Date and Time Withdrawal Complete	If this is an extra label or Rx drug, list the name, address, and phone number of the licensed veterinarian who prescribed or directed the treatment.

Teaching References: *Caring for Animals Discussion Guide and video, the 4-H Market Lamb Resource Handbook #250R, and the 4-H Sheep Breeding Handbook #194R. The Sheep Learning Laboratory Kit contains a medicine bottle, syringe, and skeletal poster which are helpful but not necessary for this exercise.*

Lesson plan by: Dr. Bill Shulaw, OSU Extension Veterinarian

# Livestock

## Sheep Quality Assurance

Read the situation statement and label of the medication and complete the treatment record.

### Situation Statement

Today is May 15. Your name is Lynn Monroe. Your Suffolk market lamb “Elmo” (ear tag #3159) you are planning to take to the county fair July 2–7 is lame on the left front leg. When you examine it, you find the foot smells bad and the hoof wall is separating from the sole. These findings lead you to believe the lamb has foot rot. The veterinarian who regularly cares for your animals is Angela Adams, DVM. She examined the animal and gave you (prescribed) the bottle of medication listed below and instructed you to give the treatment today at 3:00 p.m. Your lamb weighs about 100 pounds.

### Bottle Label

Angela Adams, DVM  
100 Quality Avenue  
Hometown, OH 43200  
614-555-5050

Owner: **Lynn Monroe**      Date: **May 15**  
Animal ID: **Lamb #3159**      Indications: **Foot rot**  
Directions: **Give 5 ml (cc) intramuscularly on May 15, at 3 p.m.**

Precaution: **Avoid the muscle tissues of high carcass value.**

**Warning:** Use of this drug must be discontinued for **10** days before slaughter or market for food.

Product/Active Ingredient(s): **Biomycin**

Expiration Date: **August 15**

## Decision-Making—Key

### In this activity you will:

- learn about Quality Assurance by practicing how to record animal medication information on the treatment record.

May						
						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					

### Treatment Record

X = This information was not supplied in the situation, therefore you do not need to complete this box.

Treatment Date and Time	Animal ID • Name • Species • ID Number • Description	Condition Being Treated	Estimated Weight	Treatment Given (Medication dispensed, amount, and route)	Instructed Meat/Milk/Egg Withdrawal	Results	Date and Time Withdrawal Complete	If this is an extra label or Rx drug, list the name, address, and phone number of the licensed veterinarian who prescribed or directed the treatment.
5-15 3:00 p.m.	Elmo Mkt lamb #3159 Suffolk	Foot rot	100 lb	Biomycin 5 ml IM	10 days Meat	X	5-25 3:00 p.m.	Angela Adams, DVM 100 Quality Avenue Hometown, OH 43200 614-555-5050

Teaching References: *Caring for Animals Discussion Guide and video, the 4-H Market Lamb Resource Handbook #250R, and the 4-H Sheep Breeding Handbook #194R. The Sheep Learning Laboratory Kit contains a medicine bottle, syringe, and skeletal poster which are helpful but not necessary for this exercise.*

Lesson plan by: Dr. Bill Shulaw, OSU Extension Veterinarian

# Livestock

## Swine Quality Assurance

Read the situation statement and label of the medication and complete the treatment record.

### Situation Statement

Today is July 11, and your name is Jenny Jones. The market hog "Spot" (a 200-pound blue-butt barrow with ear notch 36-7) you have been raising since April started having difficulty breathing yesterday. This morning the hog failed to eat its feed and was reluctant to move unless forced to do so. At your request, Dr. Bruce E. Losis, the local veterinarian, examined your hog and diagnosed its problem as pneumonia. He administered medications at the time of the examination. He has left more medicine for you to give tomorrow, July 12 at 2:00 p.m.

## Decision-Making

### In this activity you will:

- learn about Quality Assurance by practicing how to record animal medication information on the treatment record.

### Bottle Label

Bruce E. Losis, DVM 100 Quality Avenue Hometown, OH 43200 614-555-5050	
Owner: <b>Jenny Jones</b>	Date: <b>July 11</b>
Animal ID: <b>Hog 36-7</b>	Indications: <b>Pneumonia</b>
Directions: <b>Give 15 ml (cc) subcutaneously on July 12.</b>	
Precaution: <b>Use care in injections to avoid infections.</b>	
<b>Warning:</b> Use of this drug must be discontinued for <b>7</b> days before slaughter or market for food.	
Product/Active Ingredient(s): <b>Biomycin</b>	
Expiration Date: <b>August 1</b>	

July						
				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

### Treatment Record

Treatment Date and Time	Animal ID • Name • Species • ID Number • Description	Condition Being Treated	Estimated Weight	Treatment Given (Medication dispensed, amount, and route)	Instructed Meat/Milk/Egg Withdrawal	Results	Date Withdrawal Complete	If this is an extra label or Rx drug, list the name, address, and phone number of the licensed veterinarian who prescribed or directed the treatment.

Teaching References: *Caring for Animals Discussion Guide and video, and the 4-H Market Hog Handbook #135R. The Swine Learning Laboratory Kit contains a medicine bottle, syringe, and skeletal poster which are helpful but not necessary for this exercise.*

Lesson plan by: Dr. Gary Bowman, OSU Extension Veterinarian

# Livestock

## Swine Quality Assurance

Read the situation statement and label of the medication and complete the treatment record.

### Situation Statement

Today is July 11, and your name is Jenny Jones. The market hog "Spot" (a 200-pound blue-butt barrow with ear notch 36-7) you have been raising since April started having difficulty breathing yesterday. This morning the hog failed to eat its feed and was reluctant to move unless forced to do so. At your request, Dr. Bruce E. Losis, the local veterinarian, examined your hog and diagnosed its problem as pneumonia. He administered medications at the time of the examination. He has left more medicine for you to give tomorrow, July 12.

### Decision-Making—Key

#### In this activity you will:

- learn about Quality Assurance by practicing how to record animal medication information on the treatment record.

### Bottle Label

Bruce E. Losis, DVM  
100 Quality Avenue  
Hometown, OH 43200  
614-555-5050

Owner: **Jenny Jones**      Date: **July 11**  
Animal ID: **Hog 36-7**      Indications: **Pneumonia**  
Directions: **Give 15 ml (cc) subcutaneously on July 12.**  
Precaution: **Use care in injection to avoid infections.**  
**Warning:** Use of this drug must be discontinued for **7** days before slaughter or market for food.  
Product/Active Ingredient(s): **Biomycin**  
Expiration Date: **August 1**

July						
				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

### Treatment Record

X = This information was not supplied in the situation, therefore you do not need to complete this box.

Treatment Date and Time	Animal ID • Name • Species • ID Number • Description	Condition Being Treated	Estimated Weight	Treatment Given (Medication dispensed, amount, and route)	Instructed Meat/Milk/Egg Withdrawal	Results	Date Withdrawal Complete	If this is an extra label or Rx drug, list the name, address, and phone number of the licensed veterinarian who prescribed or directed the treatment.
7-12 2:00 p.m.	"Spot" Market Hog 36-7 Blue-Butt barrow	Pneumonia	200 lb	Biomycin 15 ml SQ	7 days Meat	X	7-19 2:00 p.m.	Bruce E. Losis, DVM 100 Quality Avenue Hometown, OH 43200 614-555-5050

Teaching References: *Caring for Animals Discussion Guide* and video, and the *4-H Market Hog Handbook #135R*. The *Swine Learning Laboratory Kit* contains a medicine bottle, syringe, and skeletal poster which are helpful but not necessary for this exercise.

Lesson plan by: Dr. Gary Bowman, OSU Extension Veterinarian

# Livestock

## Poultry Quality Assurance

Read the situation statement and label of the medication and complete the treatment record.

### Situation Statement

Today is May 12. You notice several of the flock of 20 White Leghorn pullets you purchased 3 weeks ago have a discharge today from their nostrils, watery eyes, and are coughing. These are the only chickens you have. The flock did not eat nearly as much feed the past day as usual. Because you could tell your chickens are sick, you take two to the local veterinarian for diagnosis and treatment of the illness. The veterinarian diagnoses the condition as a respiratory infection called air sacculitis and tells you that, while he does not carry the needed medication, Superbiotic™, it is available as an over-the-counter (OTC) drug at the nearby farm supply center. He tells you to medicate the chickens' drinking water starting today, continue for a total of 4 days, and replace the medicated water with clear water on the morning of May 16. Complete the treatment record for May 15.

### Packet Label

**Superbiotic**  
(10% Hydrocycline Tartrate)

A broad spectrum antibiotic for oral administration in the treatment and prevention of respiratory diseases of poultry caused by susceptible bacteria.

**Directions:** Mix the contents of this packet in 10 gallons of drinking water. This medicated drinking water should be the sole source of drinking water during the period of medication which must not exceed 14 days.

**WARNING:** Discontinue use in poultry **5** days before slaughter.

Store below 77 degrees F. Keep packet dry.  
Net Contents: 25 grams  
Distributed by USA Animal Health, Inc.

May						
						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					

### Treatment Record

Treatment Date and Time	Animal ID • Name • Species • ID Number • Description	Condition Being Treated	Estimated Weight	Treatment Given (Medication dispensed, amount, and route)	Instructed Meat/Milk/Egg Withdrawal	Results	Date and Time Withdrawal Complete	If this is an extra label or Rx drug, list the name, address, and phone number of the licensed veterinarian who prescribed or directed the treatment.

References: *Caring for Animals Discussion Guide* and video. *The Poultry Learning Laboratory Kit* contains items which are helpful but not necessary for this exercise.  
Prepared by Drs. Gary Bowman and Teresa Morishita, Ohio State University Extension Veterinarians

## Decision-Making

### In this activity you will:

- learn about Quality Assurance by practicing how to record animal medication information on the treatment record.

# Livestock

## Poultry Quality Assurance

Read the situation statement and label of the medication and complete the treatment record.

### Situation Statement

Today is May 12. You notice several of the flock of 20 White Leghorn pullets you purchased 3 weeks ago have a discharge today from their nostrils, watery eyes, and are coughing. These are the only chickens you have. The flock did not eat nearly as much feed the past day as usual. Because you could tell your chickens are sick, you take two to the local veterinarian for diagnosis and treatment of the illness. The veterinarian diagnoses the condition as a respiratory infection called air sacculitis and tells you that, while he does not carry the needed medication, Superbiotic™, it is available as an over-the-counter (OTC) drug at the nearby farm supply center. He tells you to medicate the chickens' drinking water starting today, continue for a total of 4 days, and replace the medicated water with clear water on the morning of May 16. Complete the treatment record for May 15.

### Packet Label

#### Superbiotic

(10% Hydrocycline Tartrate)

A broad spectrum antibiotic for oral administration in the treatment and prevention of respiratory diseases of poultry caused by susceptible bacteria.

**Directions:** Mix the contents of this packet in 10 gallons of drinking water. This medicated drinking water should be the sole source of drinking water during the period of medication which must not exceed 14 days.

**WARNING:** Discontinue use in poultry 5 days before slaughter.

Store below 77 degrees F. Keep packet dry.

Net Contents: 25 grams

Distributed by USA Animal Health, Inc.

## Decision-Making—Key

### In this activity you will:

- learn about Quality Assurance by practicing how to record animal medication information on the treatment record.

May						
						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					

### Treatment Record

X = This information was not supplied in the situation, therefore you do not need to complete this box.

Treatment Date and Time	Animal ID • Name • Species • ID Number • Description	Condition Being Treated	Estimated Weight	Treatment Given (Medication dispensed, amount, and route)	Instructed Meat/Milk/Egg Withdrawal	Results	Date and Time Withdrawal Complete	If this is an extra label or Rx drug, list the name, address, and phone number of the licensed veterinarian who prescribed or directed the treatment.
5-15	20 White Leghorn Pullets	Air Sacculitis	X	Superbiotic 1 packet/10 gallons of drinking water	5 days	X	5-20	No extra label or Rx drug was given.

References: Caring for Animals Discussion Guide and video. The Poultry Learning Laboratory Kit contains items which are helpful but not necessary for this exercise.

Prepared by Drs. Gary Bowman and Teresa Morishita, Ohio State University Extension Veterinarians

# Livestock

## Beef: How to Read a Feed Tag

Use the feed tag below to answer the following questions.

### Decision-Making

In this activity you will:

- learn how to read a feed tag.

#### MGA HEIFER SUPPLEMENT MEDICATED

SUPPLEMENT FOR GROWING/FINISHING BEEF HEIFERS

FOR INCREASED RATE OF WEIGHT GAIN, IMPROVED FEED EFFICIENCY AND SUPPRESSION OF ESTRUS (HEAT) IN HEIFERS FED FOR SLAUGHTER.

##### ACTIVE DRUG INGREDIENT

MELENGESTROL ACETATE ..... 0.00022%  
(EQUIVALENT TO 1.0 MG/LB.)

##### GUARANTEED ANALYSIS

CRUDE PROTEIN ..... MIN 10.00%  
CRUDE FAT ..... MIN 2.00%  
CRUDE FIBER ..... MAX 25.00%  
CALCIUM ..... MIN 5.50%  
CALCIUM ..... MAX 6.50%  
SALT ..... MIN 4.50%  
SALT ..... MAX 5.50%  
POTASSIUM ..... MIN 0.60%  
SELENIUM ..... MIN 13.00 PPM  
VITAMIN A ..... MIN 100,000.0 IU/LB

##### INGREDIENTS

PROCESSED GRAIN BY-PRODUCTS, ROUGHAGE PRODUCTS, GROUND LIMESTONE, SLAT, POTASSIUM SULFATE, MAGNESIUM SULFATE, SODIUM SELENITE, VITAMIN A ACETATE, VITAMIN D-3 SUPPLEMENT, VITAMIN E SUPPLEMENT, ZINC SULFATE, ZINC OXIDE, COPPER SULFATE, MANGANOUS OXIDE, CALCIUM IODATE, COBALT CARBONATE FERROUS SULFATE.

##### FEEDING DIRECTIONS

Each pound of supplement will provide 1.0 mg. of melengestrol acetate. Thoroughly mix and feed at the rate of 0.5 pound per head per day to provide 0.5 mg. of melengestrol acetate per head per day. Feed continuously throughout period heifers are being grown and finished for slaughter. This supplement should be fed in controlled amounts with roughage and other feed ingredients.

##### NOTE

NOT EFFECTIVE FOR SPAYED HEIFERS AND STEERS.

MANUFACTURED BY:  
SKILLATHON FEED

NET WEIGHT 50 POUNDS (22.7 KILOGRAMS)  
OR AS SHOWN ON SHIPPING DOCUMENT

1. What is the main ingredient in this feed?
2. What is the active drug ingredient in this ration?
3. For how many days prior to slaughter should this feed be removed?
4. What is the crude fat level of this diet?
5. What is the crude protein level for this diet?

Adapted from materials created by Dan Frobose, Agr. & Nat. Res. Agent, Wood County  
Prepared By: Jodi Black, State Extension Associate, 4-H/Animal Sciences

# Livestock

## Beef: How to Read a Feed Tag

Use the feed tag below to answer the following questions.

### Decision-Making—Key

In this activity you will:

- learn how to read a feed tag.

#### MGA HEIFER SUPPLEMENT MEDICATED

SUPPLEMENT FOR GROWING/FINISHING BEEF HEIFERS

FOR INCREASED RATE OF WEIGHT GAIN, IMPROVED FEED EFFICIENCY AND SUPPRESSION OF ESTRUS (HEAT) IN HEIFERS FED FOR SLAUGHTER.

##### ACTIVE DRUG INGREDIENT

MELENGESTROL ACETATE ..... 0.00022%  
(EQUIVALENT TO 1.0 MG/LB.)

##### GUARANTEED ANALYSIS

CRUDE PROTEIN .....	MIN 10.00%
CRUDE FAT .....	MIN 2.00%
CRUDE FIBER .....	MAX 25.00%
CALCIUM .....	MIN 5.50%
CALCIUM .....	MAX 6.50%
SALT .....	MIN 4.50%
SALT .....	MAX 5.50%
POTASSIUM .....	MIN 0.60%
SELENIUM .....	MIN 13.00 PPM
VITAMIN A .....	MIN 100,000.0 IU/LB

##### INGREDIENTS

PROCESSED GRAIN BY-PRODUCTS, ROUGHAGE PRODUCTS, GROUND LIMESTONE, SLAT, POTASSIUM SULFATE, MAGNESIUM SULFATE, SODIUM SELENITE, VITAMIN A ACETATE, VITAMIN D-3 SUPPLEMENT, VITAMIN E SUPPLEMENT, ZINC SULFATE, ZINC OXIDE, COPPER SULFATE, MANGANOUS OXIDE, CALCIUM IODATE, COBALT CARBONATE FERROUS SULFATE.

##### FEEDING DIRECTIONS

Each pound of supplement will provide 1.0 mg. of melengestrol acetate. Thoroughly mix and feed at the rate of 0.5 pound per head per day to provide 0.5 mg. of melengestrol acetate per head per day. Feed continuously throughout period heifers are being grown and finished for slaughter. This supplement should be fed in controlled amounts with roughage and other feed ingredients.

##### NOTE

NOT EFFECTIVE FOR SPAYED HEIFERS AND STEERS.

MANUFACTURED BY:  
SKILLATHON FEED

NET WEIGHT 50 POUNDS (22.7 KILOGRAMS)  
OR AS SHOWN ON SHIPPING DOCUMENT

1. What is the main ingredient in this feed?  
**processed grain by-products**
2. What is the active drug ingredient in this ration?  
**melengestrol acetate**
3. For how many days prior to slaughter should this feed be removed?  
**None required**
4. What is the crude fat level of this diet?  
**2%**
5. What is the crude protein level for this diet?  
**10%**

Adapted from materials created by Dan Frobose, Agr. & Nat. Res. Agent, Wood County  
Prepared By: Jodi Black, State Extension Associate, 4-H/Animal Sciences

# Livestock

## Dairy: How to Read a Feed Tag

Use the feed tag below to answer the following questions.

### Decision-Making

In this activity you will:

- learn how to read a feed tag.

#### DAIRY CONCENTRATE

CONCENTRATE FOR LACTATING DAIRY CATTLE

##### GUARANTEED ANALYSIS

CRUDE PROTEIN .....	MIN 18.00%
CRUDE FAT .....	MIN 2.50%
CRUDE FIBER .....	MAX 7.00
ACID DETERGENT FIBER .....	MAX 9.00%
CALCIUM .....	MIN 0.50%
CALCIUM .....	MAX 1.00%
PHOSPHORUS .....	MIN 0.60%
SELENIUM .....	MIN 0.70 PPM
VITAMIN A .....	MIN 7,000.00 IU/LB

##### INGREDIENT USAGE

PROCESSED GRAIN BY-PRODUCTS, GRAIN PRODUCTS, PLANT PROTEIN PRODUCTS, ROUGHAGE PRODUCTS, GROUND LIMESTONE, SALT, LIGNIN SULFONATE, SODIUM SELENITE, POTASSIUM SULFATE, MAGNESIUM SULFATE, CALCIUM PHOSPHATE, MAGNESIUM OXIDE, VITAMIN A ACETATE, VITAMIN D-3 SUPPLEMENT, VITAMIN E SUPPLEMENT, ZINC SULFATE, ZINC OXIDE, COPPER SULFATE, MANGANOUS OXIDE, CALCIUM IODATE, COBALT CARBONATE, FERROUS SULFATE.

##### FEEDING DIRECTIONS

FEED DAIRY CONCENTRATE AS THE CONCENTRATE PORTION OF THE DAIRY RATION. THIS CONCENTRATE IS INTENDED FOR USE WHEN THE ROUGHAGE PORTION OF THE DIET CONSISTS OF 60% OR MORE CORN SILAGE (ON A DRY MATTER BASIS). THIS FEED CONTAINS IN ADDITION TO OTHER NUTRIENTS, 0.7 PPM SELENIUM. INTAKE OF SELENIUM SHOULD NOT EXCEED 0.3 PPM ON A COMPLETE FEED BASIS, THEREFORE, THIS CONCENTRATE SHOULD NOT EXCEED 42.8% OF THE TOTAL RATION. PROVIDE CLEAN, FRESH WATER FREE CHOICE AT ALL TIMES. SALT MAY BE FED FOR FREE CHOICE CONSUMPTION.

DAIRY CONCENTRATE FEEDS ARE FORMULATED TO REGULATE THE AMOUNT OF BOTH SOLUBLE AND INSOLUBLE PROTEIN AND TO REGULATE THE AMOUNT OF NON-STRUCTURAL CARBOHYDRATES.

DAIRY CONCENTRATE FEEDS ARE FORMULATED TO REGULATE THE AMOUNT OF RUMINALLY AVAILABLE PROTEIN.

PATENT NO. X,XXX,XXX  
PATENT NOS. X,XXX,XXX & X,XXX,XXX

MANUFACTURED BY:  
SKILLATHON FEEDS

NET WEIGHT 50 POUNDS (22.7 KILOGRAMS)  
OR AS SHOWN ON SHIPPING DOCUMENT

1. What is the main ingredient in this feed?
2. What is the minimum crude protein level?
3. Is this a medicated feed?
4. Is there a withdrawal time for this ration?
5. What is the minimum crude fat level of this diet?
6. Is ground limestone included in the ingredients of this diet?
7. What is the range for calcium content?

*Adapted from materials created by Dan Frobose, Agr. & Nat. Res. Agent, Wood County*

*Prepared By: Jodi Black, State Extension Associate, 4-H/Animal Sciences; Maurice Eastridge, State Extension Specialist, Animal Sciences*

# Livestock

## Dairy: How to Read a Feed Tag

Use the feed tag below to answer the following questions.

### Decision-Making—Key

In this activity you will:

- learn how to read a feed tag.

#### DAIRY CONCENTRATE

CONCENTRATE FOR LACTATING DAIRY CATTLE

##### GUARANTEED ANALYSIS

CRUDE PROTEIN .....	MIN 18.00%
CRUDE FAT .....	MIN 2.50%
CRUDE FIBER .....	MAX 7.00
ACID DETERGENT FIBER .....	MAX 9.00%
CALCIUM .....	MIN 0.50%
CALCIUM .....	MAX 1.00%
PHOSPHORUS .....	MIN 0.60%
SELENIUM .....	MIN 0.70 PPM
VITAMIN A .....	MIN 7,000.00 IU/LB

##### INGREDIENT USAGE

PROCESSED GRAIN BY-PRODUCTS, GRAIN PRODUCTS, PLANT PROTEIN PRODUCTS, ROUGHAGE PRODUCTS, GROUND LIMESTONE, SALT, LIGNIN SULFONATE, SODIUM SELENITE, POTASSIUM SULFATE, MAGNESIUM SULFATE, CALCIUM PHOSPHATE, MAGNESIUM OXIDE, VITAMIN A ACETATE, VITAMIN D-3 SUPPLEMENT, VITAMIN E SUPPLEMENT, ZINC SULFATE, ZINC OXIDE, COPPER SULFATE, MANGANOUS OXIDE, CALCIUM IODATE, COBALT CARBONATE, FERROUS SULFATE.

##### FEEDING DIRECTIONS

FEED DAIRY CONCENTRATE AS THE CONCENTRATE PORTION OF THE DAIRY RATION. THIS CONCENTRATE IS INTENDED FOR USE WHEN THE ROUGHAGE PORTION OF THE DIET CONSISTS OF 60% OR MORE CORN SILAGE (ON A DRY MATTER BASIS). THIS FEED CONTAINS IN ADDITION TO OTHER NUTRIENTS, 0.7 PPM SELENIUM. INTAKE OF SELENIUM SHOULD NOT EXCEED 0.3 PPM ON A COMPLETE FEED BASIS, THEREFORE, THIS CONCENTRATE SHOULD NOT EXCEED 42.8% OF THE TOTAL RATION. PROVIDE CLEAN, FRESH WATER FREE CHOICE AT ALL TIMES. SALT MAY BE FED FOR FREE CHOICE CONSUMPTION.

DAIRY CONCENTRATE FEEDS ARE FORMULATED TO REGULATE THE AMOUNT OF BOTH SOLUBLE AND INSOLUBLE PROTEIN AND TO REGULATE THE AMOUNT OF NON-STRUCTURAL CARBOHYDRATES.

DAIRY CONCENTRATE FEEDS ARE FORMULATED TO REGULATE THE AMOUNT OF RUMINALLY AVAILABLE PROTEIN.

PATENT NO. X,XXX,XXX  
PATENT NOS. X,XXX,XXX & X,XXX,XXX

MANUFACTURED BY:  
SKILLATHON FEEDS

NET WEIGHT 50 POUNDS (22.7 KILOGRAMS)  
OR AS SHOWN ON SHIPPING DOCUMENT

1. What is the main ingredient in this feed?  
**processed grain by-products**
2. What is the minimum crude protein level?  
**18%**
3. Is this a medicated feed?  
**no**
4. Is there a withdrawal time for this ration?  
**none required or "no"**
5. What is the minimum crude fat level of this diet?  
**25%**
6. Is ground limestone included in the ingredients of this diet?  
**yes**
7. What is the range for calcium content?  
**0.5%–1.0%**

*Adapted from materials created by Dan Frobose, Agr. & Nat. Res. Agent, Wood County*

*Prepared By: Jodi Black, State Extension Associate, 4-H/Animal Sciences; Maurice Estridge, State Extension Specialist, Animal Sciences*

# Livestock

## Goat: How to Read a Feed Tag

Use the feed tag below to answer the following questions.

### Decision-Making

In this activity you will:

- learn how to read a feed tag.

NET WEIGHT 50 POUNDS

#### SKILLATHON GOAT RATION

Feed for Goats Older Than Four Months of Age

CAUTION: Use Only As Directed

#### GUARANTEED ANALYSIS

Crude Protein not less than .....	17.0000%
Crude Fat not less than .....	2.5000%
Crude Fiber not more than .....	9.0000%
Calcium (Ca) not less than .....	0.8000%
Calcium (Ca) not more than .....	1.3000%
Phosphorus (P) not less than .....	0.6000%
Salt (NaCl) not less than .....	0.7500%
Salt (NaCl) not more than .....	1.2500%
Copper (Cu) not less than .....	18.0000 PPM
Copper (Cu) not more than .....	23.0000 PPM
Selenium (Se) not less than .....	0.6000 PPM
Vitamin A not less than .....	4000.0000 IU/LB

#### INGREDIENTS

Grain products, processed grain by-products, molasses products, calcium carbonate, salt, dicalcium phosphate, soybean oil, sodium selenite, propionic acid (a preservative), tetrasodium pyrophosphate, vitamin E supplement, vitamin A supplement, vitamin D<sub>3</sub> supplement, ferrous carbonate, manganese oxide, zinc oxide, cobalt carbonate, calcium iodate, sodium molybdate.

#### DIRECTIONS

This goat ration can be fed to dry does, growing does, bucks, and as a milking ration. Feed one pound for every three pounds of milk produced. Use free-choice for young kids. Feed with good quality roughage to all goats after four months of age.

#### IMPORTANT

1. When making a ration change, allow 3-5 days for animals to adjust to the new ration.
2. Do not let fine material accumulate in feeders.
3. Provide adequate bunk space for each animal. Bunks should be well protected and well managed to prevent feed from becoming wet and molding.
4. Provide a source of fresh, clean water at all times.
5. Feed salt free-choice.
6. Consult your veterinarian for a recommended health program for your local area. This includes internal and external parasite control.
7. This product contains copper and should not be fed to sheep.

#### CAUTION

Store in a dry area away from insects. Do not feed moldy or insect-infested feed to animals as it may cause illness, abortion or death.

MANUFACTURED BY:  
SKILLATHON FEED

1. What is the main ingredient in this feed?
2. Is this a medicated feed?
3. What is the minimum crude protein level?
4. What is the minimum crude fat level of this diet?
5. Is calcium carbonate included in the ingredients of this diet?
6. Can this feed be given to lactating does?

Prepared by Drs. Gary Bowman and Bill Shulaw, Extension Specialists, Veterinary Medicine, and Jodi Black, State 4-H Animal Sciences Extension Associate

# Livestock

## Goat: How to Read a Feed Tag

Use the feed tag below to answer the following questions.

### Decision-Making—Key

In this activity you will:

- learn how to read a feed tag.

NET WEIGHT 50 POUNDS

### SKILLATHON GOAT RATION

Feed for Goats Older Than Four Months of Age

CAUTION: Use Only As Directed

#### GUARANTEED ANALYSIS

Crude Protein not less than .....	17.0000%
Crude Fat not less than .....	2.5000%
Crude Fiber not more than .....	9.0000%
Calcium (Ca) not less than .....	0.8000%
Calcium (Ca) not more than .....	1.3000%
Phosphorus (P) not less than .....	0.6000%
Salt (NaCl) not less than .....	0.7500%
Salt (NaCl) not more than .....	1.2500%
Copper (Cu) not less than .....	18.0000 PPM
Copper (Cu) not more than .....	23.0000 PPM
Selenium (Se) not less than .....	0.6000 PPM
Vitamin A not less than .....	4000.0000 IU/LB

#### INGREDIENTS

Grain products, processed grain by-products, molasses products, calcium carbonate, salt, dicalcium phosphate, soybean oil, sodium selenite, propionic acid (a preservative), tetrasodium pyrophosphate, vitamin E supplement, vitamin A supplement, vitamin D<sub>3</sub> supplement, ferrous carbonate, manganous oxide, zinc oxide, cobalt carbonate, calcium iodate, sodium molybdate.

#### DIRECTIONS

This goat ration can be fed to dry does, growing does, bucks, and as a milking ration. Feed one pound for every three pounds of milk produced. Use free-choice for young kids. Feed with good quality roughage to all goats after four months of age.

#### IMPORTANT

1. When making a ration change, allow 3-5 days for animals to adjust to the new ration.
2. Do not let fine material accumulate in feeders.
3. Provide adequate bunk space for each animal. Bunks should be well protected and well managed to prevent feed from becoming wet and molding.
4. Provide a source of fresh, clean water at all times.
5. Feed salt free-choice.
6. Consult your veterinarian for a recommended health program for your local area. This includes internal and external parasite control.
7. This product contains copper and should not be fed to sheep.

#### CAUTION

Store in a dry area away from insects. Do not feed moldy or insect-infested feed to animals as it may cause illness, abortion or death.

MANUFACTURED BY:  
SKILLATHON FEED

1. What is the main ingredient in this feed?  
**grain products**

2. Is this a medicated feed?  
**no**

3. What is the minimum crude protein level?  
**17%**

4. What is the minimum crude fat level of this diet?  
**2.5%**

5. Is calcium carbonate included in the ingredients of this diet?  
**yes**

6. Can this feed be given to lactating does?  
**yes**

Prepared by Drs. Gary Bowman and Bill Shulaw, Extension Specialists, Veterinary Medicine, and Jodi Black, State 4-H Animal Sciences Extension Associate

# Livestock

## Lamb: How to Read a Feed Tag

Use the feed tag below to answer the following questions.

### Decision-Making

In this activity you will:

- learn how to read a feed tag.

#### LAMB STARTER MEDICATED

STARTER FOR GROWING LAMBS

FOR THE PREVENTION OF COCCIDIOSIS CAUSED BY *Eimeria ovina*, *Eimeria crandallis*, *Eimeria ovinoidalis*, *Eimeria ninakohlyakimovae*, *Eimeria parva* AND *Eimeria intricata* IN SHEEP MAINTAINED IN CONFINEMENT.

#### ACTIVE DRUG INGREDIENT

LASALOCID (AS LASALOCID SODIUM) ..... 90 G/TON

#### GUARANTEED ANALYSIS

CRUDE PROTEIN ..... MIN 20.00%  
CRUDE FAT ..... MIN 2.50%  
CRUDE FIBER ..... MAX 10.00%  
CALCIUM ..... MIN 0.75%  
CALCIUM ..... MAX 1.25%  
PHOSPHORUS ..... MIN 0.55%  
SALT ..... MIN 0.40%  
SALT ..... MAX 0.90%  
SELENIUM ..... MIN 0.30 PPM  
VITAMIN A ..... MIN 2,000.00 IU/LB

#### INGREDIENT USAGE

Processed Grain By-Products, Grain Products, Plant Protein Products, Forage Products, Roughage Products, Molasses Products, Ground Limestone, Salt, Lignin Sulfonate, Potassium Sulfate, Magnesium Sulfate, Magnesium Oxide, Sodium Seleniite, Calcium Propionate, Vitamin E Supplement, Vitamin A Acetate, Vitamin D-3 Supplement, Zinc Sulfate, Zinc Oxide, Sodium Molybdate, Manganous Oxide, Calcium Iodate, Cobalt Carbonate, Ferrous Sulfate.

#### FEEDING DIRECTIONS

LAMB STARTER MEDICATED contains 45 mgs. of lasalocid per pound. Feed continuously as the sole ration to growing lambs from 1 to 6 weeks of age at the rate of 0.33-1.55 pounds per head per day to provide not less than 15 mgs. and not more than 70 mgs. of lasalocid per head per day. Provide clean, fresh water at all times.

#### CAUTION

The safety of lasalocid in unapproved species has not been established; do not allow horses or other equines access to lasalocid as ingestion may be fatal; feeding undiluted or mixing errors resulting in excessive concentrations of lasalocid could be fatal to sheep.

MANUFACTURED BY:  
SKILLATHON FEEDS

NET WEIGHT 50 POUNDS (22.7 KILOGRAMS)  
OR AS SHOWN ON SHIPPING DOCUMENT

1. What is the main ingredient in this feed?
2. What is the active drug ingredient?
3. What is the minimum crude protein level?
4. What is the minimum crude fat level of this diet?
5. Is this a medicated feed?
6. At what growth state of development should this ration to be fed?

Adapted from materials created by Dan Frobose, Agr. & Nat. Res. Agent, Wood County  
Prepared By: Jodi Black, State Extension Associate, 4-H/Animal Sciences; Roger High, State Sheep Extension Associate

# Livestock

## Lamb: How to Read a Feed Tag

Use the feed tag below to answer the following questions.

### Decision-Making—Key

In this activity you will:

- learn how to read a feed tag.

#### LAMB STARTER MEDICATED

STARTER FOR GROWING LAMBS

FOR THE PREVENTION OF COCCIDIOSIS CAUSED BY *Eimeria ovina*, *Eimeria crandallis*, *Eimeria ovinoidalis*, *Eimeria ninakohlyakimovae*, *Eimeria parva* AND *Eimeria intricata* IN SHEEP MAINTAINED IN CONFINEMENT.

#### ACTIVE DRUG INGREDIENT

LASALOCID (AS LASALOCID SODIUM) ..... 90 G/TON

#### GUARANTEED ANALYSIS

CRUDE PROTEIN .....	MIN 20.00%
CRUDE FAT .....	MIN 2.50%
CRUDE FIBER .....	MAX 10.00%
CALCIUM .....	MIN 0.75%
CALCIUM .....	MAX 1.25%
PHOSPHORUS .....	MIN 0.55%
SALT .....	MIN 0.40%
SALT .....	MAX 0.90%
SELENIUM .....	MIN 0.30 PPM
VITAMIN A .....	MIN 2,000.00 IU/LB

#### INGREDIENT USAGE

Processed Grain By-Products, Grain Products, Plant Protein Products, Forage Products, Roughage Products, Molasses Products, Ground Limestone, Salt, Lignin Sulfonate, Potassium Sulfate, Magnesium Sulfate, Magnesium Oxide, Sodium Seleniite, Calcium Propionate, Vitamin E Supplement, Vitamin A Acetate, Vitamin D-3 Supplement, Zinc Sulfate, Zinc Oxide, Sodium Molybdate, Manganous Oxide, Calcium Iodate, Cobalt Carbonate, Ferrous Sulfate.

#### FEEDING DIRECTIONS

LAMB STARTER MEDICATED contains 45 mgs. of lasalocid per pound. Feed continuously as the sole ration to growing lambs from 1 to 6 weeks of age at the rate of 0.33-1.55 pounds per head per day to provide not less than 15 mgs. and not more than 70 mgs. of lasalocid per head per day. Provide clean, fresh water at all times.

#### CAUTION

The safety of lasalocid in unapproved species has not been established; do not allow horses or other equines access to lasalocid as ingestion may be fatal; feeding undiluted or mixing errors resulting in excessive concentrations of lasalocid could be fatal to sheep.

MANUFACTURED BY:  
SKILLATHON FEEDS

NET WEIGHT 50 POUNDS (22.7 KILOGRAMS)  
OR AS SHOWN ON SHIPPING DOCUMENT

1. What is the main ingredient in this feed?  
**processed grain by-products**
2. What is the active drug ingredient?  
**lasalocid**
3. What is the minimum crude protein level?  
**20%**
4. What is the minimum crude fat level of this diet?  
**25%**
5. Is this a medicated feed?  
**yes**
6. At what growth state of development should this ration to be fed?  
**1-6 weeks of age**

Adapted from materials created by Dan Frobose, Agr. & Nat. Res. Agent, Wood County

Prepared By: Jodi Black, State Extension Associate, 4-H/Animal Sciences; Roger High, State Sheep Extension Associate

# Livestock

## Pig: How to Read a Feed Tag

Use the feed tag below to answer the following questions.

### Decision-Making

In this activity you will:

- learn how to read a feed tag.

#### PIG GROWER MEDICATED

FOR PIGS FROM 30 POUNDS TO 75 POUNDS

ADMINISTER TO SWINE IN A COMPLETE FEED FOR REDUCTION OF THE INCIDENCE OF CERVICAL ABSCESSSES; TREATMENT OF BACTERIAL SWINE ENTERITIS (SALMONELLOSIS OR NECROTIC ENTERITIS CAUSED BY *Salmonella choleraesuis* AND VIBRIONIC DYSENTERY), MAINTENANCE OF WEIGHT GAINS IN THE PRESENCE OF ATROPHIC RHINITIS.

#### ACTIVE DRUG INGREDIENT

CHLORTETRACYCLINE .....	100 G/TON
SULFATHIAZOLE .....	0.011% (100 G/TON)
PENICILLIN .....	50 G/TON

#### GUARANTEED ANALYSIS

CRUDE PROTEIN .....	MIN 18.00%
LYSINE .....	MIN 1.10%
CRUDE FAT .....	MIN 6.50%
CRUDE FIBER .....	MAX 4.00%
CALCIUM .....	MIN 0.60%
CALCIUM .....	MAX 1.10%
PHOSPHORUS .....	MIN 0.55%
SALT .....	MIN 0.40%
SALT .....	MAX 0.90%
SELENIUM .....	MIN 0.30 PPM
ZINC .....	MIN 140.00 PPM

#### INGREDIENTS

Grain Products, Plant Protein Products, Processed Grain By-Products, Animal Fat, Animal Protein Products, Calcium Phosphate, Lignin Sulfonate, Ground Limestone, Salt, L-Lysine Monohydrochloride, Methionine Supplement, Zinc Oxide, Zinc Sulfate, Ferrous Sulfate, Manganous Oxide, Copper Sulfate, Calcium Iodate, Sodium Selenite, Vitamin A Acetate, Vitamin D-3 Supplement, Vitamin E Supplement, Menadione Dimethylpyrimidinol Bisulphite, Riboflavin Supplement, Niacin, Calcium Pantothenate, Vitamin B-12 Supplement, Thiamine Monohitrate, Folic Acid, Choline Chloride, Pyridoxine Hydrochloride, Biotin, Ethoxyquin (As A Preservative)

#### FEEDING DIRECTIONS

Feed as the only ration to pigs weighing from 30 pounds to 75 pounds bodyweight.

CAUTION: In order to obtain the desired performance results, the animals should be self fed.

WARNING: Withdraw 7 days prior to slaughter; contains high levels of copper; do not feed to sheep.

MANUFACTURED BY:  
SKILLATHON FEED

NET WEIGHT 50 POUNDS (22.7 KILOGRAMS)  
OR AS SHOWN ON SHIPPING DOCUMENT

1. What is the main ingredient in this feed?
2. How many active drug ingredients are in this feed?
3. What is the minimum crude protein level?
4. For how many days prior to slaughter should this feed be removed?
5. What is the minimum crude fat level of this diet?
6. Is ground limestone included in the ingredients of this diet?
7. At what weight range should this ration be fed?
8. What is the range for the calcium content of this feed?

*Adapted from materials created by Dan Frobose, Agr. & Nat. Res. Agent, Wood County*

*Prepared By: Jodi Black, State Extension Associate, 4-H/Animal Sciences; Steven Moeller, State Swine Extension Specialist*

# Livestock

## Pig: How to Read a Feed Tag

Use the feed tag below to answer the following questions.

### Decision-Making—Key

In this activity you will:

- learn how to read a feed tag.

#### PIG GROWER MEDICATED

FOR PIGS FROM 30 POUNDS TO 75 POUNDS

ADMINISTER TO SWINE IN A COMPLETE FEED FOR REDUCTION OF THE INCIDENCE OF CERVICAL ABSCESSSES; TREATMENT OF BACTERIAL SWINE ENTERITIS (SALMONELLOSIS OR NECROTIC ENTERITIS CAUSED BY *Salmonella choleraesuis* AND VIBRIONIC DYSENTERY), MAINTENANCE OF WEIGHT GAINS IN THE PRESENCE OF ATROPHIC RHINITIS.

#### ACTIVE DRUG INGREDIENT

CHLORTETRACYCLINE .....	100 G/TON
SULFATHIAZOLE .....	0.011% (100 G/TON)
PENICILLIN .....	50 G/TON

#### GUARANTEED ANALYSIS

CRUDE PROTEIN .....	MIN 18.00%
LYSINE .....	MIN 1.10%
CRUDE FAT .....	MIN 6.50%
CRUDE FIBER .....	MAX 4.00%
CALCIUM .....	MIN 0.60%
CALCIUM .....	MAX 1.10%
PHOSPHORUS .....	MIN 0.55%
SALT .....	MIN 0.40%
SALT .....	MAX 0.90%
SELENIUM .....	MIN 0.30 PPM
ZINC .....	MIN 140.00 PPM

#### INGREDIENTS

Grain Products, Plant Protein Products, Processed Grain By-Products, Animal Fat, Animal Protein Products, Calcium Phosphate, Lignin Sulfonate, Ground Limestone, Salt, L-Lysine Monohydrochloride, Methionine Supplement, Zinc Oxide, Zinc Sulfate, Ferrous Sulfate, Manganous Oxide, Copper Sulfate, Calcium Iodate, Sodium Selenite, Vitamin A Acetate, Vitamin D-3 Supplement, Vitamin E Supplement, Menadione Dimethylpyrimidinol Bisulphite, Riboflavin Supplement, Niacin, Calcium Pantothenate, Vitamin B-12 Supplement, Thiamine Monohitrate, Folic Acid, Choline Chloride, Pyridoxine Hydrochloride, Biotin, Ethoxyquin (As A Preservative)

#### FEEDING DIRECTIONS

Feed as the only ration to pigs weighing from 30 pounds to 75 pounds bodyweight.

CAUTION: In order to obtain the desired performance results, the animals should be self fed.

WARNING: Withdraw 7 days prior to slaughter; contains high levels of copper; do not feed to sheep.

MANUFACTURED BY:  
SKILLATHON FEED

NET WEIGHT 50 POUNDS (22.7 KILOGRAMS)  
OR AS SHOWN ON SHIPPING DOCUMENT

1. What is the main ingredient in this feed?  
**grain products**
2. How many active drug ingredients are in this feed?  
**3**
3. What is the minimum crude protein level?  
**18%**
4. For how many days prior to slaughter should this feed be removed?  
**7**
5. What is the minimum crude fat level of this diet?  
**6.5%**
6. Is ground limestone included in the ingredients of this diet?  
**yes**
7. At what weight range should this ration be fed?  
**pigs weighing between 30 and 75 pounds**
8. What is the range for the calcium content of this feed?  
**0.60%–1.10%**

Adapted from materials created by Dan Frobose, Agr. & Nat. Res. Agent, Wood County

Prepared By: Jodi Black, State Extension Associate, 4-H/Animal Sciences; Steven Moeller, State Swine Extension Specialist

# Livestock

## Broiler: How to Read a Feed Tag

Use the feed tag below to answer the following questions.

### Decision-Making

In this activity you will:

- learn how to read a feed tag.

#### **BROILER STARTER MEDICATED**

COMPLETE FEED FOR STARTING BROILERS

FOR USE AS AN AID IN THE PREVENTION OF COCCIDIOSIS IN POULTRY FLOCKS; GROWTH PROMOTION AND FEED EFFICIENCY, AND IMPROVING PIGMENTATION.

#### ACTIVE DRUG INGREDIENT

NICARBAZIN 0.0125%  
BACITRACIN METHYLENE DISALICYLATE 50 G/TON  
ROXARSONE 0.005% 45.4 G/TON

#### GUARANTEED ANALYSIS

CRUDE PROTEIN MIN 22.00%  
LYSINE MIN 1.13%  
METHIONINE MIN 0.54%  
CRUDE FAT MIN 3.00%  
CRUDE FIBER MAX 5.00%  
CALCIUM MIN 0.75%  
CALCIUM MAX 1.25%  
PHOSPHORUS MIN 0.60%  
SALT MIN 0.30%  
SALT MAX 0.80%

#### INGREDIENTS

GRAIN PRODUCTS, PLANT PROTEIN PRODUCTS, ANIMAL PROTEIN PRODUCTS, HYDROLYZED ANIMAL AND VEGETABLE FAT, CALCIUM PHOSPHATE, GROUND LIMESTONE, SALT, METHIONINE SUPPLEMENT, PROPIONIC ACID (ADDED TO RETARD MOLD GROWTH), VITAMIN A ACETATE, VITAMIN D-3 SUPPLEMENT, VITAMIN E SUPPLEMENT, MENADIONE DIMETHYLPYRIMIDINOL BISULPHITE, CHOLINE CHLORIDE, RIBOFLAVIN SUPPLEMENT, CALCIUM PANTOTHENATE, NIACIN, VITAMIN B-12 SUPPLEMENT, PYRIDOXINE HYDROCHLORIDE, THIAMINE MONONITRATE, FOLIC ACID, BIOTIN, ZINC OXIDE, MANGANOUS OXIDE, MANGENESE SULFATE, FERROUS SULFATE, COBALT CARBONATE, CALCIUM IODATE, SODIUM SELENITE.

#### FEEDING DIRECTIONS

FOR BROILERS AND FRYER CHICKENS ONLY, FEED CONTINUOUSLY AS THE SOLE RATION.

SEE BACK OF TAG FOR WARNING

MANUFACTURED BY:  
SKILLATHON FEEDS

NET WEIGHT 50 POUNDS (22.7 KILOGRAMS)  
OR AS SHOWN ON SHIPPING DOCUMENT

#### WARNING

DO NOT FEED TO LAYING HENS. WITHDRAW 5 DAYS BEFORE SLAUGHTER. USE AS THE SOLE SOURCE OF ORGANIC ARSENIC. FEED CONTINUOUSLY AS THE SOLE RATION FROM TIME CHICKS ARE PLACED ON LITTER UNTIL PAST THE TIME WHEN COCCIDIOSIS IS ORDINARILY A HAZARD; DO NOT USE AS A TREATMENT FOR COCCIDIOSIS; DO NOT USE IN FLUSHING MASHES.

DO NOT FEED TO CATTLE OR OTHER RUMINANTS.

1. What is the main ingredient in this broiler ration?
2. What is the minimum crude protein level of this broiler starter ration?
3. For how many days prior to slaughter should this feed be removed?
4. How many pounds of ingredients are included in this bag?
5. Should this diet be fed to laying hens?
6. What is the minimum crude fat level of this diet?

Prepared by Drs. Gary Bowman and Bill Shulaw, Extension Specialists, Veterinary Medicine

# Livestock

## Broiler: How to Read a Feed Tag

Use the feed tag below to answer the following questions.

### BROILER STARTER MEDICATED

COMPLETE FEED FOR STARTING BROILERS

FOR USE AS AN AID IN THE PREVENTION OF COCCIDIOSIS IN POULTRY FLOCKS; GROWTH PROMOTION AND FEED EFFICIENCY, AND IMPROVING PIGMENTATION.

#### ACTIVE DRUG INGREDIENT

NICARBAZIN 0.0125%  
BACITRACIN METHYLENE DISALICYLATE 50 G/TON  
ROXARSONE 0.005%) 45.4 G/TON

#### GUARANTEED ANALYSIS

CRUDE PROTEIN MIN 22.00%  
LYSINE MIN 1.13%  
METHIONINE MIN 0.54%  
CRUDE FAT MIN 3.00%  
CRUDE FIBER MAX 5.00%  
CALCIUM MIN 0.75%  
CALCIUM MAX 1.25%  
PHOSPHORUS MIN 0.60%  
SALT MIN 0.30%  
SALT MAX 0.80%

#### INGREDIENTS

GRAIN PRODUCTS, PLANT PROTEIN PRODUCTS, ANIMAL PROTEIN PRODUCTS, HYDROLYZED ANIMAL AND VEGETABLE FAT, CALCIUM PHOSPHATE, GROUND LIMESTONE, SALT, METHIONINE SUPPLEMENT, PROPIONIC ACID (ADDED TO RETARD MOLD GROWTH), VITAMIN A ACETATE, VITAMIN D-3 SUPPLEMENT, VITAMIN E SUPPLEMENT, MENADIONE DIMETHYLPYRIMIDINOL BISULPHITE, CHOLINE CHLORIDE, RIBOFLAVIN SUPPLEMENT, CALCIUM PANTOTHENATE, NIACIN, VITAMIN B-12 SUPPLEMENT, PYRIDOXINE HYDROCHLORIDE, THIAMINE MONONITRATE, FOLIC ACID, BIOTIN, ZINC OXIDE, MANGANOUS OXIDE, MANGENESE SULFATE, FERROUS SULFATE, COBALT CARBONATE, CALCIUM IODATE, SODIUM SELENITE.

#### FEEDING DIRECTIONS

FOR BROILERS AND FRYER CHICKENS ONLY, FEED CONTINUOUSLY AS THE SOLE RATION.

SEE BACK OF TAG FOR WARNING

MANUFACTURED BY:  
SKILLATHON FEEDS

NET WEIGHT 50 POUNDS (22.7 KILOGRAMS)  
OR AS SHOWN ON SHIPPING DOCUMENT

#### WARNING

DO NOT FEED TO LAYING HENS. WITHDRAW 5 DAYS BEFORE SLAUGHTER. USE AS THE SOLE SOURCE OF ORGANIC ARSENIC. FEED CONTINUOUSLY AS THE SOLE RATION FROM TIME CHICKS ARE PLACED ON LITTER UNTIL PAST THE TIME WHEN COCCIDIOSIS IS ORDINARILY A HAZARD; DO NOT USE AS A TREATMENT FOR COCCIDIOSIS; DO NOT USE IN FLUSHING MASHES.

DO NOT FEED TO CATTLE OR OTHER RUMINANTS.

## Decision-Making—Key

### In this activity you will:

- learn how to read a feed tag.

1. What is the main ingredient in this broiler ration?

**grain products**

2. What is the minimum crude protein level of this broiler starter ration?

**22%**

3. For how many days prior to slaughter should this feed be removed?

**5**

4. How many pounds of ingredients are included in this bag?

**50**

5. Should this diet be fed to laying hens?  
**no, because the medication will end up in the eggs**

6. What is the minimum crude fat level of this diet?

**3%**

Prepared by Drs. Gary Bowman and Bill Shulaw, Extension Specialists, Veterinary Medicine

# Livestock

## Turkey: How to Read a Feed Tag

Use the feed tag below to answer the following questions.

### Decision-Making

In this activity you will:

- learn how to read a feed tag.

#### TURKEY PRESTARTER MEDICATED

COMPLETE FEED FOR POULTS

For the prevention of coccidiosis in growing turkeys caused by *Eimeria adenoeides*, *Eimeria meleagrimitis* and *Eimeria gallapavonis*.

#### ACTIVE INGREDIENTS

Halofuginone Hydrobromide ..... 1.90 g/ton

#### GUARANTEED ANALYSIS

CRUDE PROTEIN ..... MIN 26.00%  
LYSINE ..... MIN 1.55%  
METHIONINE ..... MIN 0.60%  
CRUDE FAT ..... MIN 2.00%  
CRUDE FIBER ..... MAX 5.00%  
CALCIUM ..... MIN 1.15%  
CALCIUM ..... MAX 1.65%  
PHOSPHORUS ..... MIN 0.90%  
SALT ..... MIN 0.15%  
SALT ..... MAX 0.65%

#### INGREDIENTS

GRAIN PRODUCTS, PLANT PROTEIN PRODUCTS, ANIMAL PROTEIN PRODUCTS, CALCIUM PHOSPHATE, ANIMAL FAT, GROUND LIMESTONE, METHIONINE SUPPLEMENT, L-LYSINE MONOHYDROCHLORIDE, CALCIUM PROPIONATE, SALT CHOLINE CHLORIDE, ZINC OXIDE, COPPER SULFATE, MANGANOUS OXIDE, MANGANESE SULFATE, FERROUS SULFATE, CALCIUM IODATE, SODIUM SELENITE, VITAMIN A ACETATE, VITAMIN D-3 SUPPLEMENT, VITAMIN E SUPPLEMENT, MENADIONE DIMETHYLPYRIMIDINOL BISULPHITE, NIACIN, CALCIUM PANTOTHENATE, RIBOFLAVIN SUPPLEMENT, VITAMIN B-12 SUPPLEMENT, BIOTIN, FOLIC ACID, THIAMINE MONONITRATE, RYRIDOXINE HYDROCHLORIDE.

#### FEEDING DIRECTIONS

Feed as the only ration to starting poults from 1 day to 21 days of age. Refer to current feeding schedules for feeding according to body weight or consumption.

#### WARNING

Feed continuously as sole ration. Withdraw 7 days before slaughter.

MANUFACTURED BY:  
SKILLATHON FEEDS

1. What is the main ingredient in this feed?
2. What is the active drug ingredient?
3. What is the minimum crude protein level?
4. For how many days prior to slaughter should this feed be removed?
5. What is the minimum crude fat level of this diet?
6. Is ground limestone included in the ingredients of this diet?
7. This ration should be fed to turkey poults of what age?

Prepared by Drs. Gary Bowman and Bill Shulaw, Extension Specialists, Veterinary Medicine

# Livestock

## Turkey: How to Read a Feed Tag

Use the feed tag below to answer the following questions.

### Decision-Making—Key

In this activity you will:

- learn how to read a feed tag.

#### TURKEY PRESTARTER MEDICATED

COMPLETE FEED FOR POULTS

For the prevention of coccidiosis in growing turkeys caused by *Eimeria adenoides*, *Eimeria meleagridis* and *Eimeria gallapavonis*.

#### ACTIVE INGREDIENTS

Halofuginone Hydrobromide ..... 1.90 g/ton

#### GUARANTEED ANALYSIS

CRUDE PROTEIN .....	MIN 26.00%
LYSINE .....	MIN 1.55%
METHIONINE .....	MIN 0.60%
CRUDE FAT .....	MIN 2.00%
CRUDE FIBER .....	MAX 5.00%
CALCIUM .....	MIN 1.15%
CALCIUM .....	MAX 1.65%
PHOSPHORUS .....	MIN 0.90%
SALT .....	MIN 0.15%
SALT .....	MAX 0.65%

#### INGREDIENTS

GRAIN PRODUCTS, PLANT PROTEIN PRODUCTS, ANIMAL PROTEIN PRODUCTS, CALCIUM PHOSPHATE, ANIMAL FAT, GROUND LIMESTONE, METHIONINE SUPPLEMENT, L-LYSINE MONOHYDROCHLORIDE, CALCIUM PROPIONATE, SALT CHOLINE CHLORIDE, ZINC OXIDE, COPPER SULFATE, MANGANOUS OXIDE, MANGANESE SULFATE, FERROUS SULFATE, CALCIUM IODATE, SODIUM SELENITE, VITAMIN A ACETATE, VITAMIN D-3 SUPPLEMENT, VITAMIN E SUPPLEMENT, MENADIONE DIMETHYLPYRIMIDINOL BISULPHITE, NIACIN, CALCIUM PANTOTHENATE, RIBOFLAVIN SUPPLEMENT, VITAMIN B-12 SUPPLEMENT, BIOTIN, FOLIC ACID, THIAMINE MONONITRATE, RYRIDOXINE HYDROCHLORIDE.

#### FEEDING DIRECTIONS

Feed as the only ration to starting poults from 1 day to 21 days of age. Refer to current feeding schedules for feeding according to body weight or consumption.

#### WARNING

Feed continuously as sole ration. Withdraw 7 days before slaughter.

MANUFACTURED BY:  
SKILLATHON FEEDS

1. What is the main ingredient in this feed?  
**grain products**
2. What is the active drug ingredient?  
**halofuginone hydrobromide**
3. What is the minimum crude protein level?  
**26%**
4. For how many days prior to slaughter should this feed be removed?  
**7**
5. What is the minimum crude fat level of this diet?  
**2%**
6. Is ground limestone included in the ingredients of this diet?  
**yes**
7. This ration should be fed to turkey poults of what age?  
**from 1 day to 21 days**

Prepared by Drs. Gary Bowman and Bill Shulaw, Extension Specialists, Veterinary Medicine

# Livestock

## Rabbit: How to Read a Feed Tag

Use the feed tag below to answer the following questions.

### Decision-Making

In this activity you will:

- learn how to read a feed tag.

#### RABBIT PELLETS MEDICATED

For the prevention of coccidiosis caused by *Eimeria stiedae*.

##### ACTIVE INGREDIENT

Lasalocid (as lasalocid sodium) ..... 113 g/ton

##### GUARANTEED ANALYSIS

CRUDE PROTEIN ..... MIN 16.00%  
CRUDE FAT ..... MIN 3.00%  
CRUDE FIBER ..... MIN 13.0%  
CRUDE FIBER ..... MAX 18.00%  
CALCIUM ..... MIN .75%  
CALCIUM ..... MAX 1.25%  
PHOSPHORUS ..... MIN 0.5%  
SALT ..... MIN .30%  
SALT ..... MAX .80%  
VITAMIN A ..... 4,000.0 IU/LB

##### INGREDIENTS

DEHYDRATED ALFALFA MEAL, WHEAT MIDDINGS, DRIED DISTILLERS GRAINS WITH SOLUBLES, CANE MOLASSES, ANIMAL FAT (PRESERVED WITH BHAANDBHT), DICALCIUM PHOSPHATE, CALCIUM CARBONATE, SOYBEAN MEAL, SALT, VITAMIN A ACETATE IN GELATIN, VITAMIN D3 SUPPLEMENT, VITAMIN E SUPPLEMENT, RIBOFLAVIN SUPPLEMENT, D-CALCIUM PANTOTHENATE, NIACIN SUPPLEMENT, VITAMIN B12 SUPPLEMENT, MENADIONE DIMETHYLPYRIMIDINOL BISULFITE(SOURCE OF VITAMIN K ACTIVITY), CHOLINE CHLORIDE, FOLIC ACID, B-BIOTIN, ZINC OXIDE, FERROUS SULFATE, MANGOUS OXIDE, COPPER OXIDE, ETHYLENE DIAMINE DIHYDRIDIDE, COBALT CARBONATE, AND SODIUM SELENITE.

##### USE DIRECTIONS

Feed continuously to young rabbits as sole ration up to 6 1/2 weeks of age.

##### CAUTION

The safety of lasalocid in unapproved species has not been established.

MANUFACTURED BY:  
SKILLATHON FEED

NEW WEIGHT 50 POUNDS (22.7 KILOGRAMS)  
OR AS SHOWN ON SHIPPING DOCUMENT

Net Weight 20 lbs. (9.7 Kg.)

1. What is the main ingredient in this feed?
2. What is the active drug ingredient?
3. What is the minimum crude protein level?
4. Does this feed require withholding before slaughter?
5. What is the minimum crude fat level of this diet?
6. Is calcium carbonate included in the ingredients of this diet?
7. To what age should this ration be fed?

Prepared by Drs. Gary Bowman and Bill Shulaw, Extension Specialists, Veterinary Medicine, and Jodi Black, State 4-H Animal Sciences Extension Associate

# Livestock

## Rabbit: How to Read a Feed Tag

Use the feed tag below to answer the following questions.

### Decision-Making—Key

In this activity you will:

- learn how to read a feed tag.

#### RABBIT PELLETS MEDICATED

For the prevention of coccidiosis caused by *Eimeria stiedae*.

##### ACTIVE INGREDIENT

Lasalocid (as lasalocid sodium) ..... 113 g/ton

##### GUARANTEED ANALYSIS

CRUDE PROTEIN ..... MIN 16.00%  
CRUDE FAT ..... MIN 3.00%  
CRUDE FIBER ..... MIN 13.0%  
CRUDE FIBER ..... MAX 18.00%  
CALCIUM ..... MIN .75%  
CALCIUM ..... MAX 1.25%  
PHOSPHORUS ..... MIN 0.5%  
SALT ..... MIN .30%  
SALT ..... MAX .80%  
VITAMIN A ..... 4,000.0 IU/LB

##### INGREDIENTS

DEHYDRATED ALFALFA MEAL, WHEAT MIDLINGS, DRIED DISTILLERS GRAINS WITH SOLUBLES, CANE MOLASSES, ANIMAL FAT (PRESERVED WITH BHAANDBHT), DICALCIUM PHOSPHATE, CALCIUM CARBONATE, SOYBEAN MEAL, SALT, VITAMIN A ACETATE IN GELATIN, VITAMIN D3 SUPPLEMENT, VITAMIN E SUPPLEMENT, RIBOFLAVIN SUPPLEMENT, D-CALCIUM PANTOTHENATE, NIACIN SUPPLEMENT, VITAMIN B12 SUPPLEMENT, MENADIONE DIMETHYLPYRIMIDINOL BISULFITE(SOURCE OF VITAMIN K ACTIVITY), CHOLINE CHLORIDE, FOLIC ACID, B-BIOTIN, ZINC OXIDE, FERROUS SULFATE, MANGOUS OXIDE, COPPER OXIDE, ETHYLENE DIAMINE DIHYDRIDIDE, COBALT CARBONATE, AND SODIUM SELENITE.

##### USE DIRECTIONS

Feed continuously to young rabbits as sole ration up to 6 1/2 weeks of age.

##### CAUTION

The safety of lasalocid in unapproved species has not been established.

MANUFACTURED BY:  
SKILLATHON FEED

NEW WEIGHT 50 POUNDS (22.7 KILOGRAMS)  
OR AS SHOWN ON SHIPPING DOCUMENT

Net Weight 20 lbs. (9.7 Kg.)

1. What is the main ingredient in this feed?  
**dehydrated alfalfa meal**
2. What is the active drug ingredient?  
**lasalocid**
3. What is the minimum crude protein level?  
**16%**
4. Does this feed require withholding before slaughter?  
**no**
5. What is the minimum crude fat level of this diet?  
**3%**
6. Is calcium carbonate included in the ingredients of this diet?  
**yes**
7. To what age should this ration be fed?  
**up to 6 1/2 weeks of age**

# Livestock

## Beef Word Search

Circle the beef words listed in the puzzle below.

### Wholesale Cuts

round  
loin  
flank  
rib  
plate  
chuck  
shank  
brisket

### Beef Types

steer  
heifer  
cow  
calf

### Grading

prime  
choice  
select  
standard  
commercial  
utility  
cutter  
canner

### Color

black  
white  
gray  
red  
cream  
roan

## Word Search

### In this activity you will:

- learn words and associate them with particular groups.

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

Reference: *Beef Learning Laboratory Kit and the Beef, Sheep and Swine Evaluation and Selection Book*  
Prepared By: Jodi Black, State Extension Associate, 4-H/Animal Sciences; Andrea Aufer, Animal Sciences Student

# Livestock

## Beef Word Search

Circle the beef words listed in the puzzle below.

### Wholesale Cuts

round  
loin  
flank  
rib  
plate  
chuck  
shank  
brisket

### Beef Types

steer  
heifer  
cow  
calf

### Grading

prime  
choice  
select  
standard  
commercial  
utility  
cutter  
canner

### Color

black  
white  
gray  
red  
cream  
roan

## Word Search—Key

### In this activity you will:

- learn words and associate them with particular groups.



Reference: *Beef Learning Laboratory Kit and the Beef, Sheep and Swine Evaluation and Selection Book*  
Prepared By: Jodi Black, State Extension Associate, 4-H/Animal Sciences; Andrea Auker, Animal Sciences Student

# Livestock

## Goat Word Search

Circle the goat words listed in the puzzle below.

### Wholesale Cuts

shoulder

rack

loin

leg

fore shank

breast

### Color

black brown

gray reddish brown

cream fawn

white chocolate

tan lavender

### Goat Types

doe

buck

kids

dairy

meat

harness

## Word Search

### In this activity you will:

- learn words and associate them with particular groups.

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

References: Goat Learning Laboratory Kit and the 4-H Goat Manual  
Prepared By: Jodi Black, State Extension Associate, 4-H/Animal Sciences; Andrea Auker, Animal Sciences Student

# Livestock

## Goat Word Search

Circle the goat words listed in the puzzle below.

### Wholesale Cuts

shoulder  
rack  
loin  
leg  
fore shank  
breast

### Color

black brown  
gray reddish brown  
cream fawn  
white chocolate  
tan lavender

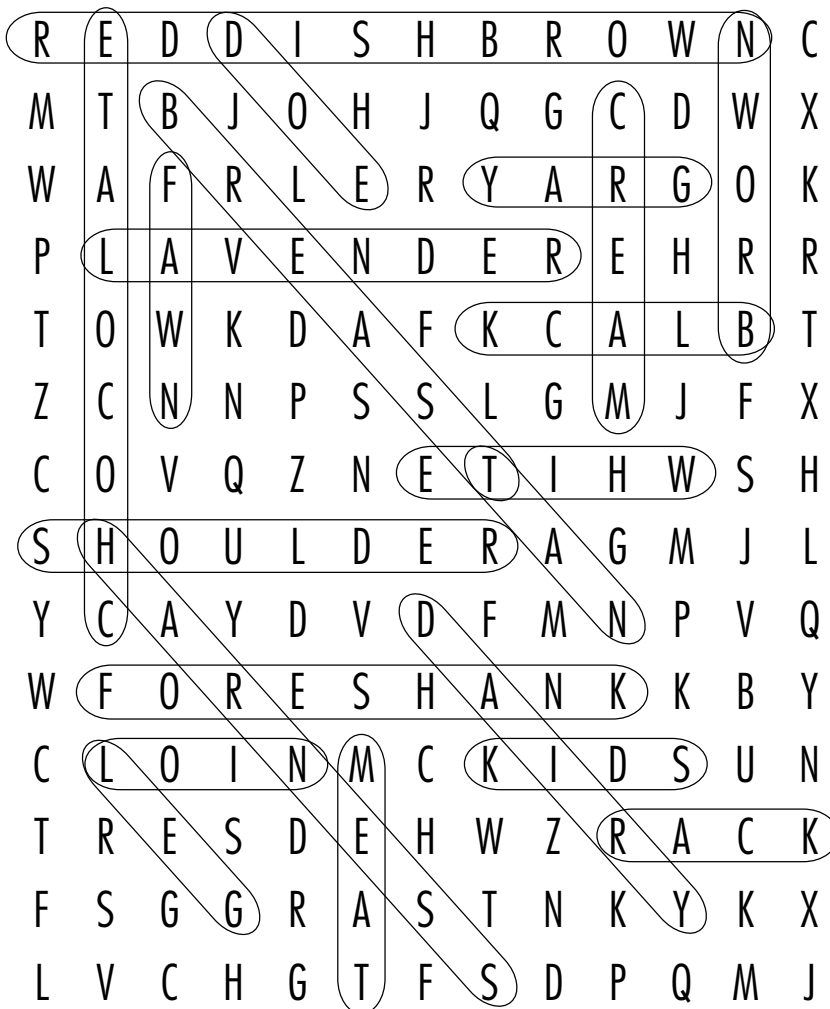
### Goat Types

doe  
buck  
kids  
dairy  
meat  
harness

## Word Search—Key

### In this activity you will:

- learn words and associate them with particular groups.



References: Goat Learning Laboratory Kit and the 4-H Goat Manual

Prepared By: Jodi Black, State Extension Associate, 4-H/Animal Sciences; Andrea Auker, Animal Sciences Student

# Livestock

## Sheep Word Search

Circle the sheep words listed in the puzzle below.

### Wholesale Cuts

leg

loin

rack

shoulder

breast

foreshank

### Sheep Types

breeding

market

ewe

ram

lamb

### Mouth Structure

parrot

monkey

### Grading

prime

choice

good

utility

cull

## Word Search

### In this activity you will:

- learn words and associate them with particular groups.

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

References: *Sheep Learning Laboratory Kit; 4-H Beef, Sheep and Swine Evaluation and Selection Book; 4-H Sheep Resource Handbook*  
Prepared By: Jodi Black, State Extension Associate, 4-H/Animal Sciences; Andrea Auker, Animal Sciences Student

# Livestock

## Sheep Word Search

Circle the sheep words listed in the puzzle below.

### Wholesale Cuts

leg  
loin  
rack  
shoulder  
breast  
foreshank

### Sheep Types

breeding  
market  
ewe  
ram  
lamb

### Mouth Structure

parrot  
monkey

### Grading

prime  
choice  
good  
utility  
cull

## Word Search—Key

### In this activity you will:

- learn words and associate them with particular groups.



References: Sheep Learning Laboratory Kit; 4-H Beef, Sheep and Swine Evaluation and Selection Book; 4-H Sheep Resource Handbook  
Prepared By: Jodi Black, State Extension Associate, 4-H/Animal Sciences; Andrea Auker, Animal Sciences Student

# Livestock

## Swine Word Search

Circle the swine words listed in the puzzle below.

### Wholesale Cuts

Boston butt

picnic

loin

side

ham

### Meat Cuts

bacon

chops

ribs

### Swine Types

breeding

market

gilt

boar

barrow

sow

### Grading

acceptable

unacceptable

### Colors

white

black

red

## Word Search

**In this activity you will:**

- learn words and associate them with particular groups.

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

References: 4-H Beef, Sheep and Swine Evaluation and Selection Book; 4-H Swine Resource Handbook  
 Prepared By: Jodi Black, State Extension Associate, 4-H/Animal Sciences; Andrea Auker, Animal Sciences Student

# Livestock

## Swine Word Search

Circle the swine words listed in the puzzle below.

### Wholesale Cuts

Boston butt

picnic

loin

side

ham

### Meat Cuts

bacon

chops

ribs

### Swine Types

breeding

market

gilt

boar

barrow

sow

### Grading

acceptable

unacceptable

### Colors

white

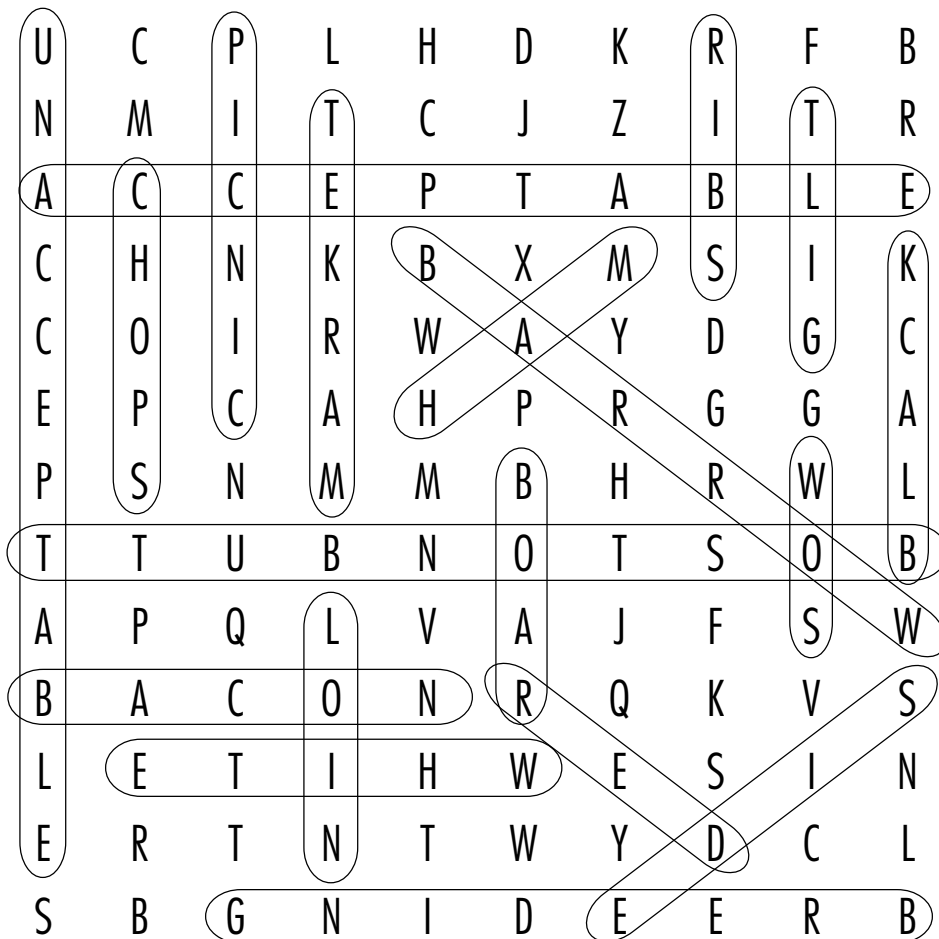
black

red

## Word Search—Key

**In this activity you will:**

- learn words and associate them with particular groups.



References: 4-H Beef, Sheep and Swine Evaluation and Selection Book; 4-H Swine Resource Handbook  
Prepared By: Jodi Black, State Extension Associate, 4-H/Animal Sciences; Andrea Auker, Animal Sciences Student

***Countdown Chapter 1***

***Small Animals and  
Veterinary Science***



# **Countdown Chapter 1**

## **Small Animals and Veterinary Science**

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# Small Animals and Veterinary Science

## Small Animals Crossword

Complete the crossword puzzle below to learn small animals terms.

### Crossword

**In this activity you will:**

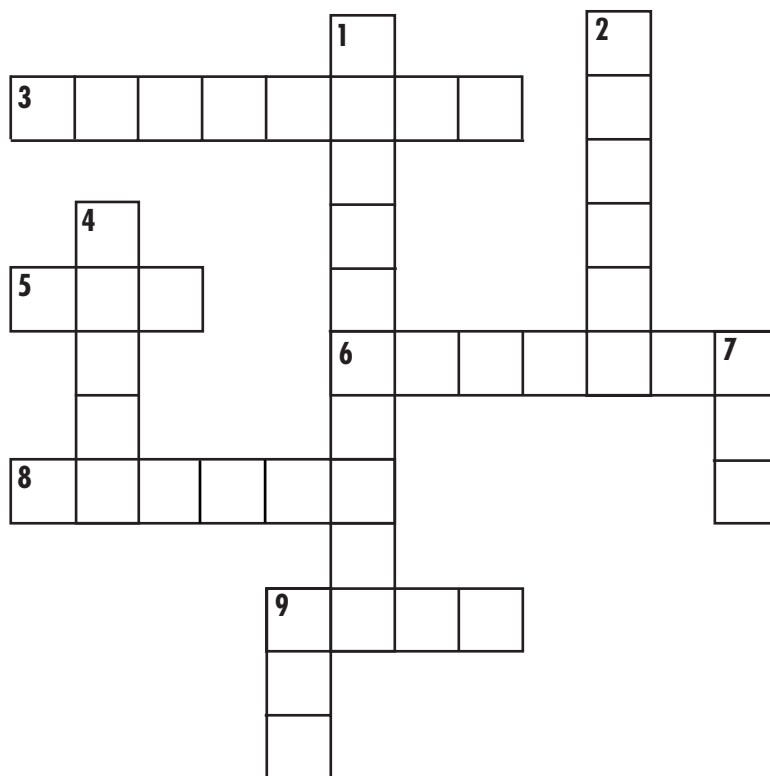
- become familiar with small animal terms.

#### Across

3. Spiny Insectivore
5. Canine
6. Has cheek pouches
8. Rodent from Mongolia
9. Guinea Pig

#### Down

1. Prized for fur
2. Hare
4. Mus Musculus
7. R. norvegicus
9. Feline



Developed by: Lucinda Miller, Extension Agent, 4-H Youth Development, Pike County and Team Leader, Ohio 4-H Small Animal Leadership Team

# Small Animals and Veterinary Science

## Small Animals Crossword

Complete the crossword puzzle below to learn small animals terms.

### Crossword—Key

**In this activity you will:**

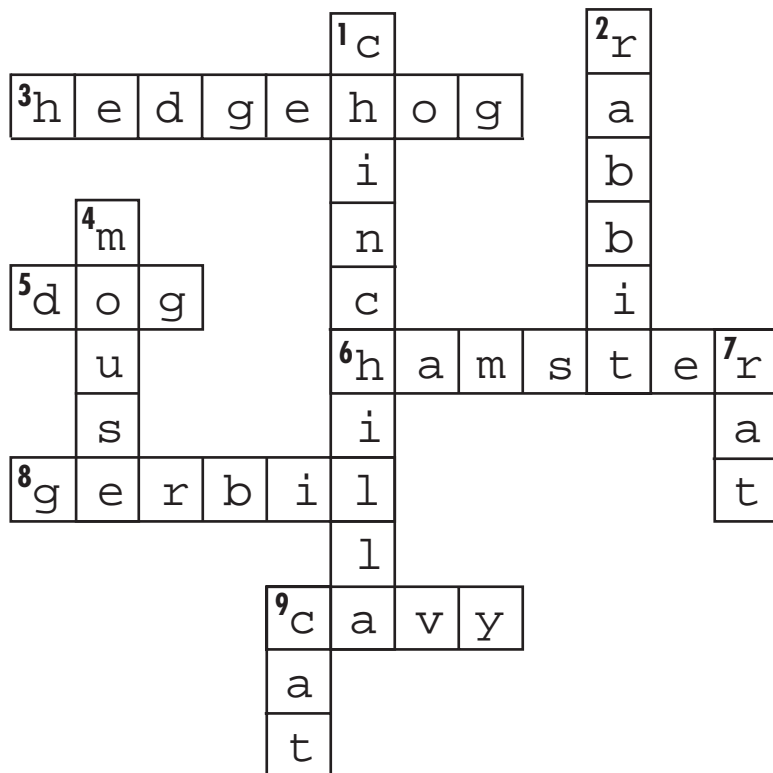
- become familiar with small animal terms.

#### Across

- Spiny Insectivore
- Canine
- Has cheek pouches
- Rodent from Mongolia
- Guinea Pig

#### Down

- Prized for fur
- Hare
- Mus Musculus
- R. norvegicus
- Feline



Developed by: Lucinda Miller, Extension Agent, 4-H Youth Development, Pike County and Team Leader, Ohio 4-H Small Animal Leadership Team

# Small Animals and Veterinary Science

## Small Animal Vocabulary

### Fill in the Blanks

#### In this activity you will:

- learn facts about different species of small animals.

Fill in the blanks with the words from the word list.

Aharoni	chinchilla	ferret	hamster	litter	polecat	Russian
ball	crepuscular	fur	hedgehog	nocturnal	rat	spines
burrow	deer	gerbil	house	Norway	rodent	Syria
cheek	diastema	grow	jill	omnivorous	Rodentia	zoonoses

- An animal that is most active at night is \_\_\_\_\_.
- One dwarf species of hamster is the \_\_\_\_\_ hamster.
- This rodent's gestation period is 15 to 17 days.  
\_\_\_\_\_
- Mus musculus* is called the \_\_\_\_\_ mouse.
- These agile mice run and hop through fields and thick underbrush. \_\_\_\_\_
- Rodents belong to the order \_\_\_\_\_.
- The gap present between a rodent's molars and incisors, where there are no teeth, is called the \_\_\_\_\_.
- A rodent's teeth continually \_\_\_\_\_.
- The hamster was discovered in this country.  
\_\_\_\_\_
- Professor \_\_\_\_\_ led the expedition to capture the first wild golden hamster.
- This rodent is native to the desert and semi-desert areas of Mongolia and northeastern China. \_\_\_\_\_
- The bubonic plague is associated with this animal.  
\_\_\_\_\_
- \_\_\_\_\_ refer to diseases transmitted from animals to humans.
- \_\_\_\_\_ is derived from the Latin verb "rodere" meaning "to gnaw."
- Rattus norvegicus*, or the \_\_\_\_\_ rat, is now found throughout the United States. Fancy rats are direct ancestors of this rat.
- Hamsters are \_\_\_\_\_ meaning they are most active at dusk and at dawn.
- Hamsters and gerbils \_\_\_\_\_ underground during the day in their natural habitat.
- Chinchillas were prized by the native Inca Indians for their \_\_\_\_\_.
- Noise and sudden movement upsets this pet.  
\_\_\_\_\_
- Hamsters use their \_\_\_\_\_ pouches to carry their food.
- Domestic ferrets were derived from the \_\_\_\_\_.
- Ferrets are easily \_\_\_\_\_ trained.
- A female ferret is called a \_\_\_\_\_.
- The hollow, horny hairs of a hedgehog are called \_\_\_\_\_.
- A hob is a male \_\_\_\_\_.
- \_\_\_\_\_ refers to eating foods of both plant and animal origins.
- A frightened hedgehog rolls into a \_\_\_\_\_.
- This animal is an insectivore. \_\_\_\_\_

Developed by: Lucinda Miller, Extension Agent, 4-H Youth Development, Pike County and Team Leader, Ohio 4-H Small Animal Leadership Team

# Small Animals and Veterinary Science

## Small Animal Vocabulary

### Fill in the Blanks—Key

#### In this activity you will:

- learn facts about different species of small animals.

Fill in the blanks with the words from the word list.

Aharoni	chinchilla	ferret	hamster	litter	polecat	Russian
ball	crepuscular	fur	hedgehog	nocturnal	rat	spines
burrow	deer	gerbil	house	Norway	rodent	Syria
cheek	diastema	grow	jill	omnivorous	Rodentia	zoonoses

- An animal that is most active at night is nocturnal.
- One dwarf species of hamster is the Russian hamster.
- This rodent's gestation period is 15 to 17 days. hamster
- Mus musculus* is called the house mouse.
- These agile mice run and hop through fields and thick underbrush. deer
- Rodents belong to the order Rodentia.
- The gap present between a rodent's molars and incisors, where there are no teeth, is called the diastema.
- A rodent's teeth continually grow.
- The hamster was discovered in this country. Syria
- Professor Aharoni led the expedition to capture the first wild golden hamster.
- This rodent is native to the desert and semi-desert areas of Mongolia and northeastern China. gerbil
- The bubonic plague is associated with this animal. rat
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- Hamsters and gerbils burrow underground during the day in their natural habitat.
- Chinchillas were prized by the native Inca Indians for their fur.
- Noise and sudden movement upsets this pet. chinchilla
- Hamsters use their cheek pouches to carry their food.
- Domestic ferrets were derived from the polecat.
- Ferrets are easily litter trained.
- A female ferret is called a jill.
- The hollow, horny hairs of a hedgehog are called spines.
- A hob is a male ferret.
- Omnivorous refers to eating foods of both plant and animal origins.
- A frightened hedgehog rolls into a ball.
- This animal is an insectivore. hedgehog

Developed by: Lucinda Miller, Extension Agent, 4-H Youth Development, Pike County and Team Leader, Ohio 4-H Small Animal Leadership Team

# Small Animals and Veterinary Science

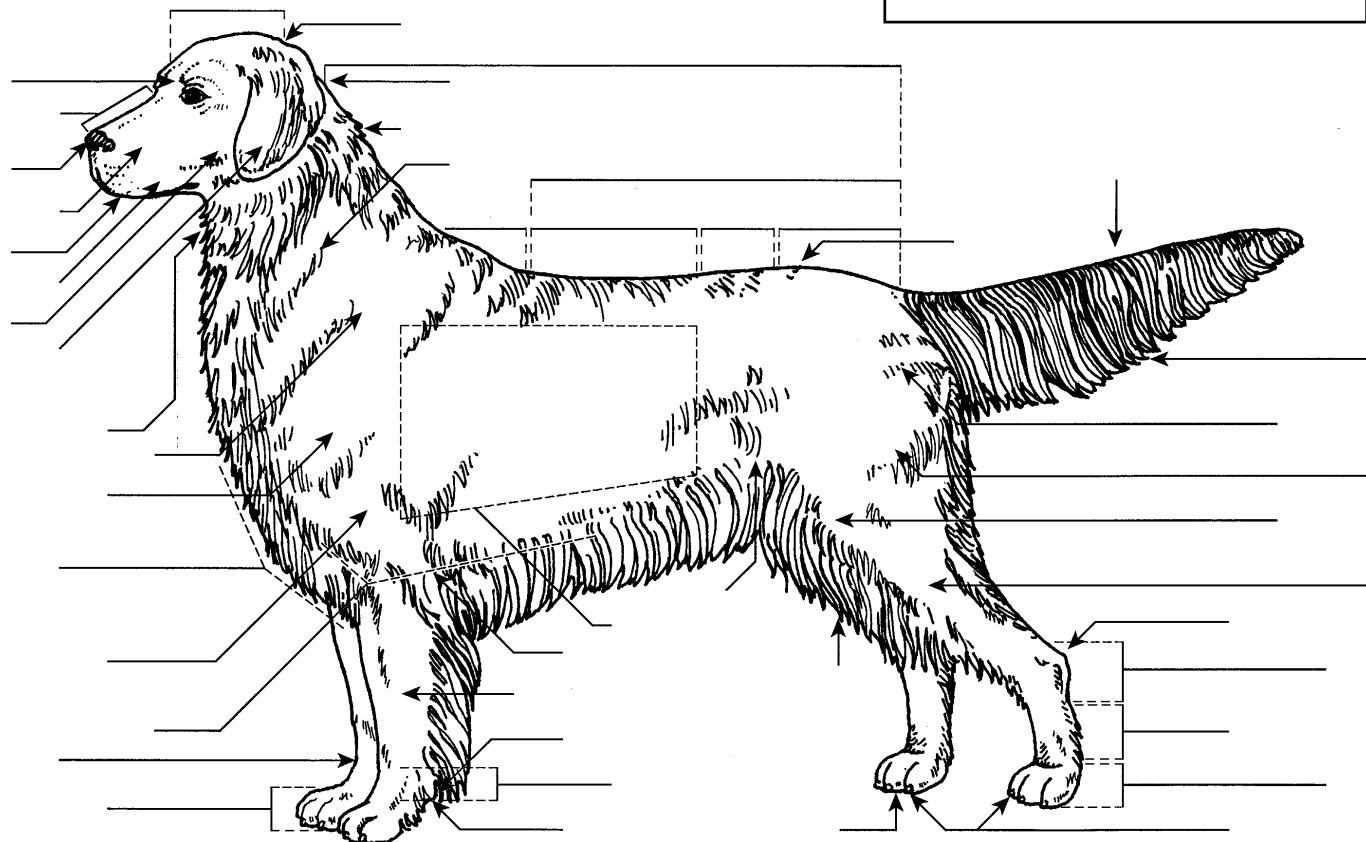
## Parts of a Dog

On the diagram below, fill in the names of the parts of the dog on the lines that point to each part. After filling in the names of the parts of a dog, point to the part on your body that most closely resembles the dog's parts.

### Identification

#### In this activity you will:

- become familiar with the external body parts of a dog.
- identify the external body parts of a dog.
- relate the parts of the dog to the human equivalent.
- complete a scenario using a minimum of five parts of a dog.



**Scenario:** A family member forgot to close the gate to your fenced in back yard. Your dog ran out through the opened gate into the street. A car hit your dog and injured him. Before taking him to the veterinarian for treatment, you call to let her know you are coming. She asks you to tell her the visible injuries to your dog. Using at least five of a dog's body parts, describe your dog's injuries.

Source: This component adapted from information found in *The Complete Dog Book, 19th Edition* (© American Kennel Club—1997) and *K-9 Structure and Terminology* (© E. M. Gilbert Jr. and Thelma Brown—1995).  
Graphic property of Curriculum Materials Service.

Developed by: Lucinda Miller, Extension Agent, 4-H Youth Development, Pike County and Team Leader, Ohio 4-H Small Animal Leadership Team

# Small Animals and Veterinary Science

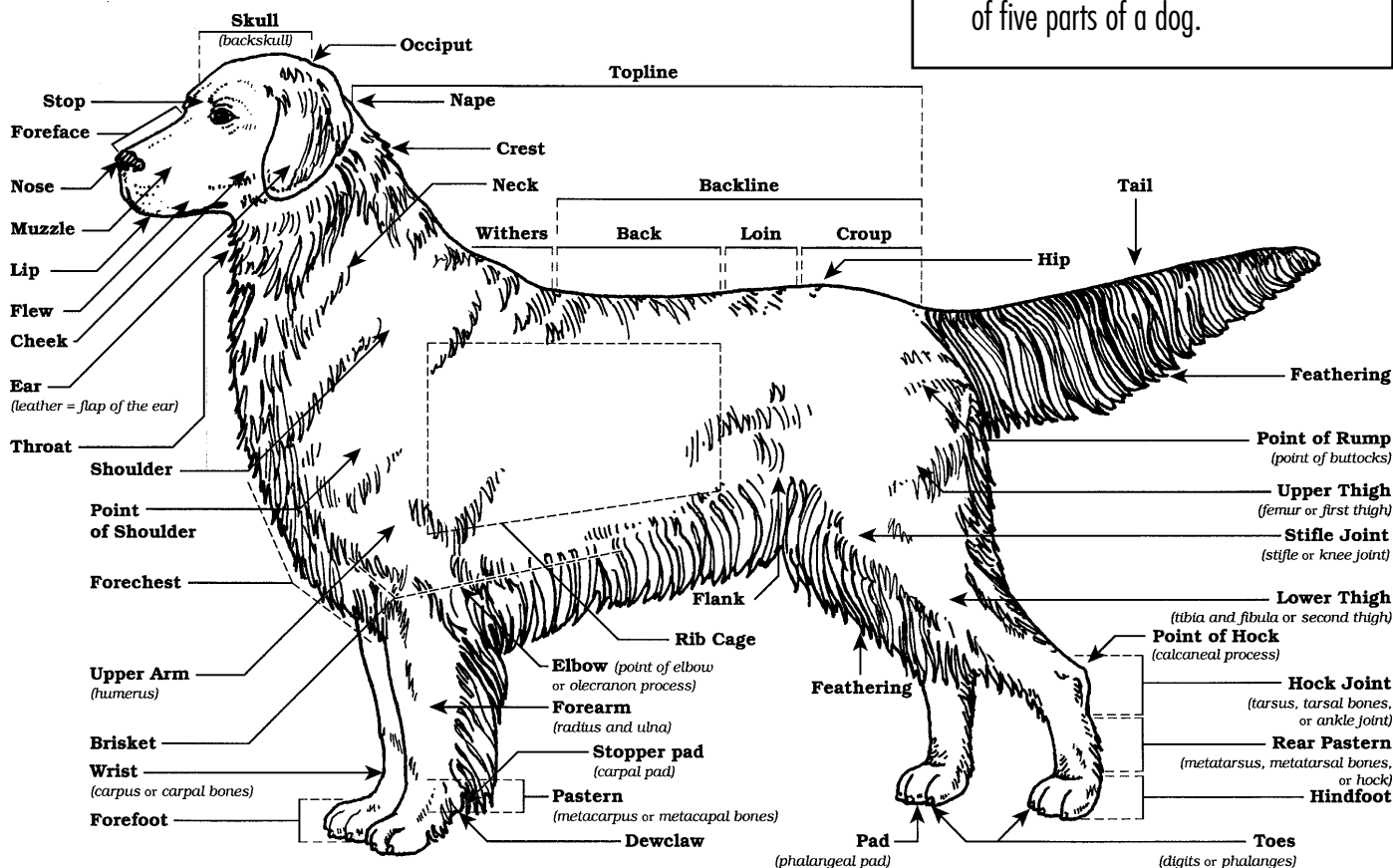
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Graphic property of Curriculum Materials Service.

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# Small Animals and Veterinary Science

## Breeds of Dogs: The Groups

The American Kennel Club (AKC) is the largest dog registry in the United States. It recognizes more than 130 breeds of dogs with more being accepted in the future. These breeds have been categorized into seven groups according to their purpose. They are: Group 1: Sporting Dogs; Group 2: Hounds; Group 3: Working Dogs; Group 4: Terriers; Group 5: Toys; Group 6: Non-Sporting Dogs; and Group 7: Herding Group. There is also a Miscellaneous category recognized by AKC and granted an Indefinite Listing Privilege (ILP). Dogs in this category are eligible to compete in shows and obedience trials. Once they are accepted into the regular groups, they become eligible for points toward AKC championships and can compete in Variety Groups.

Draw a line from each group description to the correct dog breed.

### Group Descriptions

1. The dogs in this group are alert and bold. These breeds were developed to dig out the small animals chased underground by the tracking hounds. Many are small and can burrow through tunnels with ease. They are ferocious fighters once they corner their quarry.
2. These breeds of dogs were developed to help move livestock from pasture to pasture or barn to pasture. They are more prone to chasing cars because of their natural instincts.
3. This group has the smallest breeds of dogs, ranging from four to 16 pounds. They were developed for the purpose of pleasure and companionship to their owners. Many of the breeds were prized by the royalty of ancient times. They are long-lived breeds of dogs.
4. The breeds in this group include pointers, setters, retrievers, and spaniels. The pointers and setters are hunters that cover the ground with great speed and freeze like a statue at the scent of game birds. The retrievers are expert swimmers and excel at retrieving game, either in the field or water. Spaniels flush out game from underbrush and thickets.
5. The breeds in this group were developed for serving humans by drawing sleds and carts, driving cattle to market, and protecting property. More recently they have been developed for guiding the blind and detecting bombs and narcotics.
6. In this group, the breeds vary a great deal in their historical and physical characteristics. They also vary greatly in disposition and size. Although they were developed to perform certain tasks, today they serve mainly as pets.
7. This group of breeds includes those dogs with long legs developed for speed, endurance, and keen vision. It also includes dogs, ranging from small to large, which trail by scent with diligence and patience.

### Matching

#### In this activity you will:

- become familiar with the seven groups of dogs and their purposes.

### Dog Breeds

Group 1  
Sporting Dogs

Group 2  
Hounds

Group 3  
Working Dogs

Group 4  
Terriers

Group 5  
Toys

Group 6  
Non-Sporting Dogs

Group 7  
Herding Group

Source: Dog Care, No. 200 Ohio State University Extension

Developed by: Lucinda Miller, Extension Agent, 4-H Youth Development, Pike County and Team Leader, Ohio 4-H Small Animal Leadership Team

# Small Animals and Veterinary Science

## Breeds of Dogs: The Groups

### Matching—Key

#### In this activity you will:

- become familiar with the seven groups of dogs and their purposes.

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### Dog Breeds

- Group 1  
Sporting Dogs
- Group 2  
Hounds
- Group 3  
Working Dogs
- Group 4  
Terriers
- Group 5  
Toys
- Group 6  
Non-Sporting Dogs
- Group 7  
Herding Group

Source: Dog Care, No. 200 Ohio State University Extension

Developed by: Lucinda Miller, Extension Agent, 4-H Youth Development, Pike County and Team Leader, Ohio 4-H Small Animal Leadership Team

# Small Animals and Veterinary Science

## Breeds of Dogs Group 1: Sporting Dogs

### Word Search

**In this activity you will:**

- become familiar with several breeds of dogs within the AKC Sporting Dog Group.

Find the breeds in the word search puzzle below. The breeds will be listed vertically, horizontally, or diagonally, and spelled either forward or backward.

Brittany      Clumber Spaniel      English Setter      Field Spaniel  
Golden      Gordon Setter      Irish Setter      Labrador  
Pointer      Retriever      Sussex Spaniel      Vizsla  
Weimaraner

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

Source: Dog Care, No. 200, Ohio State University Extension

Developed by: Lucinda Miller, Extension Agent, 4-H Youth Development, Pike County and Team Leader, Ohio 4-H Small Animal Leadership Team

# Small Animals and Veterinary Science

## Breeds of Dogs Group 1: Sporting Dogs

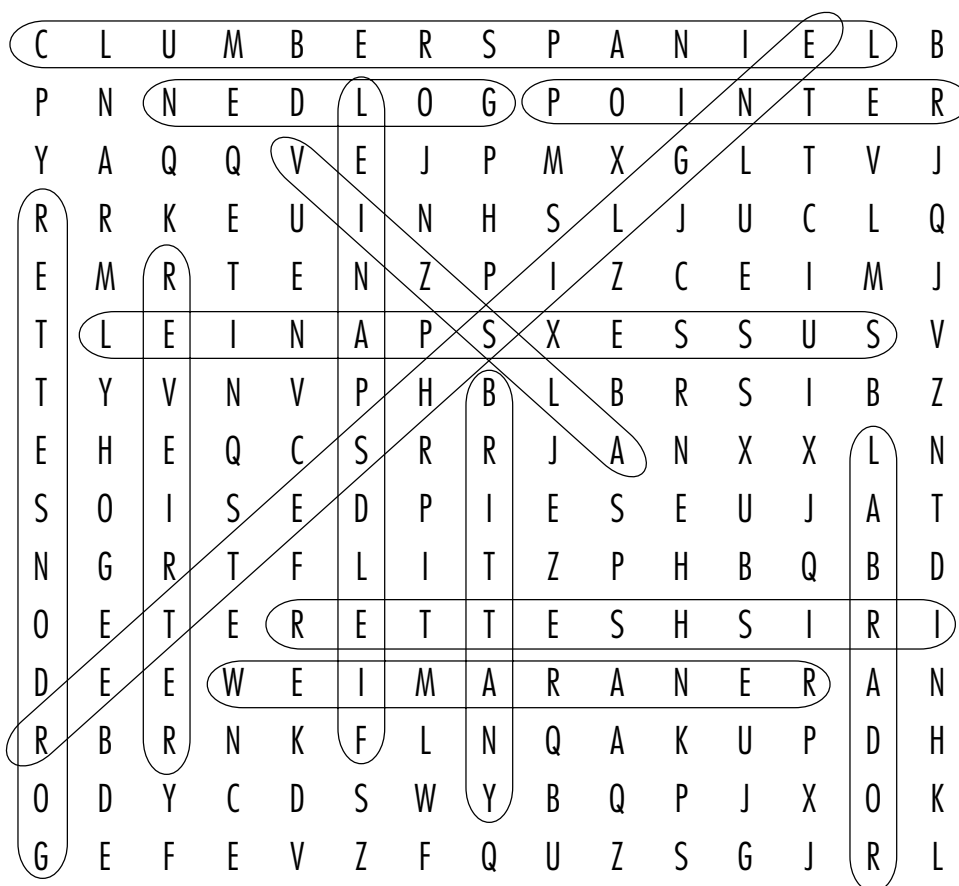
### Word Search—Key

In this activity you will:

- become familiar with several breeds of dogs within the AKC Sporting Dog Group.

Find the breeds in the word search puzzle below. The breeds will be listed vertically, horizontally, or diagonally, and spelled either forward or backward.

Brittany      Clumber Spaniel      English Setter      Field Spaniel  
Golden      Gordon Setter      Irish Setter      Labrador  
Pointer      Retriever      Sussex Spaniel      Vizsla  
Weimaraner



Source: Dog Care, No. 200, Ohio State University Extension

Developed by: Lucinda Miller, Extension Agent, 4-H Youth Development, Pike County and Team Leader, Ohio 4-H Small Animal Leadership Team

# Small Animals and Veterinary Science

## Breeds of Dogs

### Group 2: Hounds

Find the breeds in the word search puzzle below. The breeds will be listed vertically, horizontally, diagonally, and spelled either forward or backward.

Afghan Hound	Basenji	Basset Hound
Beagle	Bloodhound	Borzoi
Deerhound	Elkhound	Foxhound
Greyhound	Harrier	Otterhound
Saluki	Whippet	Wolfhound

## Word Search

**In this activity you will:**

- become familiar with several breeds of dogs within the AKC Hound Dog Group.

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

Source: Dog Care, No. 200, Ohio State University Extension

Developed by: Lucinda Miller, Extension Agent, 4-H Youth Development, Pike County and Team Leader, Ohio 4-H Small Animal Leadership Team

# Small Animals and Veterinary Science

## Breeds of Dogs

### Group 2: Hounds

Find the breeds in the word search puzzle below. The breeds will be listed vertically, horizontally, diagonally, and spelled either forward or backward.

Afghan Hound

Basenji

Basset Hound

Beagle

Bloodhound

Borzoi

Deerhound

Elkhound

Foxhound

Greyhound

Harrier

Otterhound

Saluki

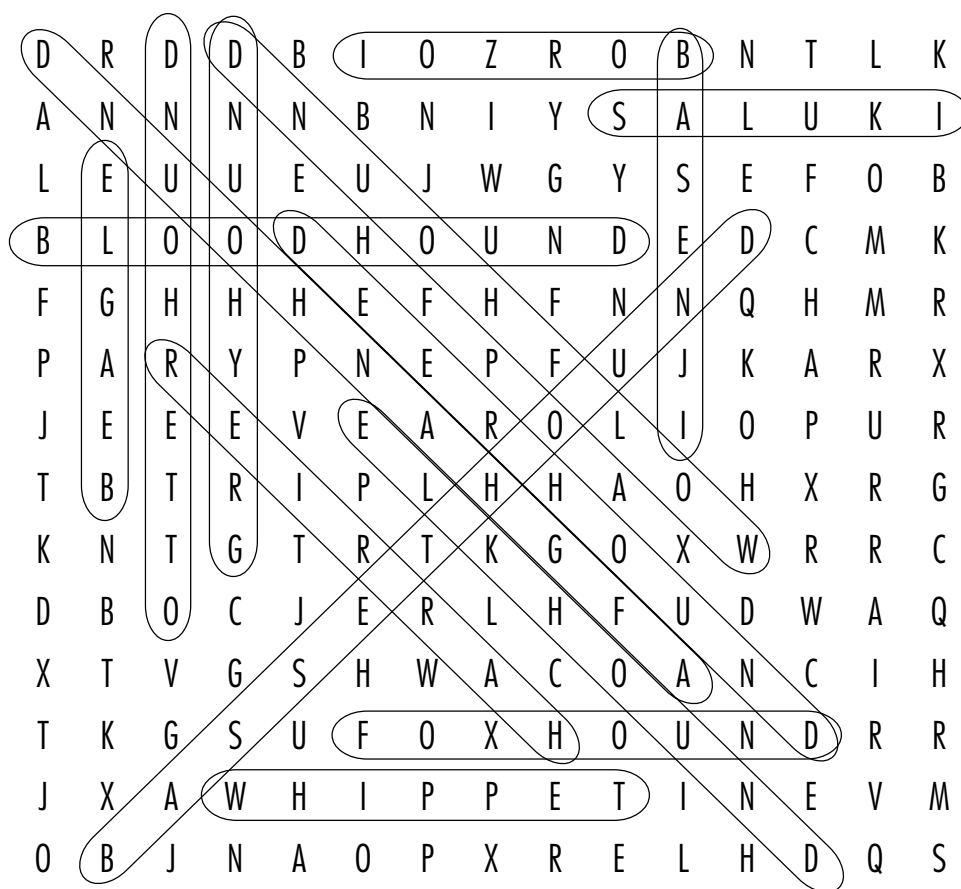
Whippet

Wolfhound

## Word Search—Key

### In this activity you will:

- become familiar with several breeds of dogs within the AKC Hound Dog Group.



Source: Dog Care, No. 200, Ohio State University Extension

Developed by: Lucinda Miller, Extension Agent, 4-H Youth Development, Pike County and Team Leader, Ohio 4-H Small Animal Leadership Team

# Small Animals and Veterinary Science

## Breeds of Dogs Group 3: Working Dogs

Find the breeds in the word search puzzle below. The breeds will be listed vertically, horizontally, or diagonally, and spelled either forward or backward.

Akita	Boxer	Bullmastiff
Doberman	Giant Schnauzer	Great Dane
Great Pyrenees	Komondor	Malamute
Mastiff	Newfoundland	Rottweiler
Saint Bernard	Samoyed	Siberian Husky

## Word Search

**In this activity you will:**

- become familiar with several breeds of dogs within the AKC Working Dog Group.

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

Source: Dog Care, No. 200, Ohio State University Extension

Developed by: Lucinda Miller, Extension Agent, 4-H Youth Development, Pike County and Team Leader, Ohio 4-H Small Animal Leadership Team

# Small Animals and Veterinary Science

## Breeds of Dogs Group 3: Working Dogs

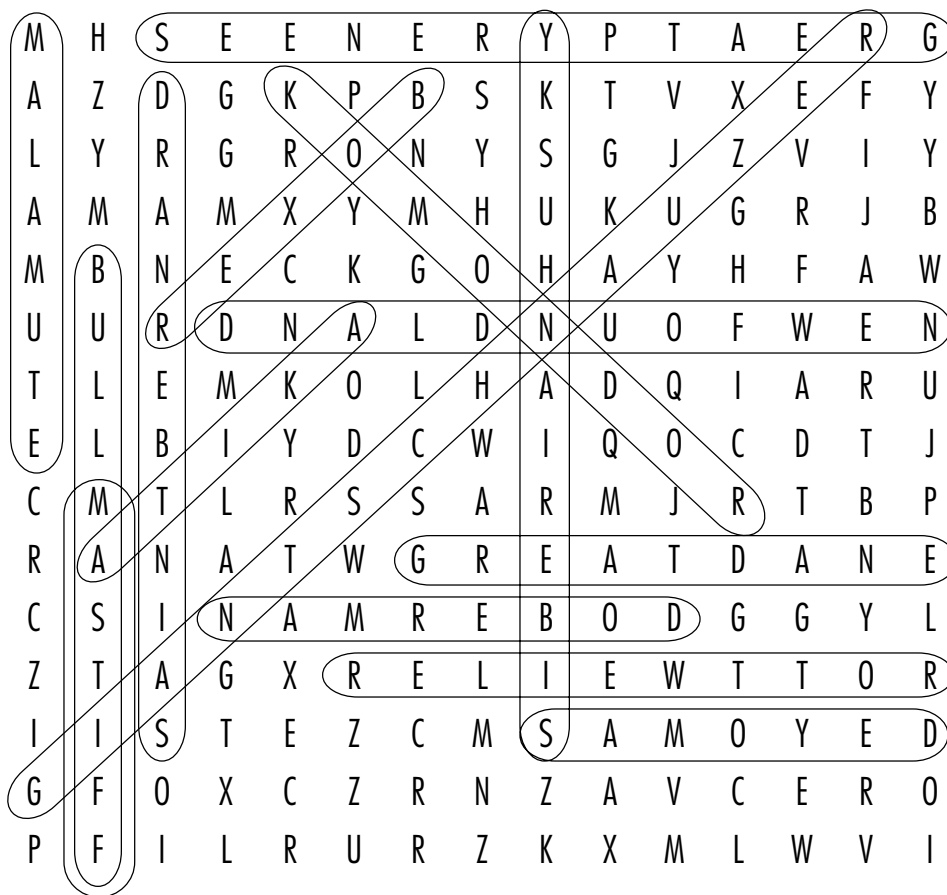
Find the breeds in the word search puzzle below. The breeds will be listed vertically, horizontally, or diagonally, and spelled either forward or backward.

- |                |                 |                |
|----------------|-----------------|----------------|
| Akita          | Boxer           | Bullmastiff    |
| Doberman       | Giant Schnauzer | Great Dane     |
| Great Pyrenees | Komondor        | Malamute       |
| Mastiff        | Newfoundland    | Rottweiler     |
| Saint Bernard  | Samoyed         | Siberian Husky |

### Word Search—Key

**In this activity you will:**

- become familiar with several breeds of dogs within the AKC Working Dog Group.



Source: Dog Care, No. 200, Ohio State University Extension

Developed by: Lucinda Miller, Extension Agent, 4-H Youth Development, Pike County and Team Leader, Ohio 4-H Small Animal Leadership Team

# Small Animals and Veterinary Science

## Breeds of Dogs

### Group 4: Terriers

Find the breeds in the word search puzzle below. The breeds will be listed vertically, horizontally, or diagonally, and spelled either forward or backward.

Airedale	Bedlington	Border Terrier
Bull Terrier	Cairn Terrier	Dandie Dinmont
Fox Terrier	Irish Terrier	Kerry Blue
Manchester	Norfolk Terrier	Norwich Terrier
Scotty	Sealyham	Skye Terrier
Staffordshire	Welsh Terrier	

## Word Search

**In this activity you will:**

- become familiar with several breeds of dogs within the AKC Terriers Group.

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

Source: Dog Care, No. 200, Ohio State University Extension

Developed by: Lucinda Miller, Extension Agent, 4-H Youth Development, Pike County and Team Leader, Ohio 4-H Small Animal Leadership Team

# Small Animals and Veterinary Science

## Breeds of Dogs

### Group 4: Terriers

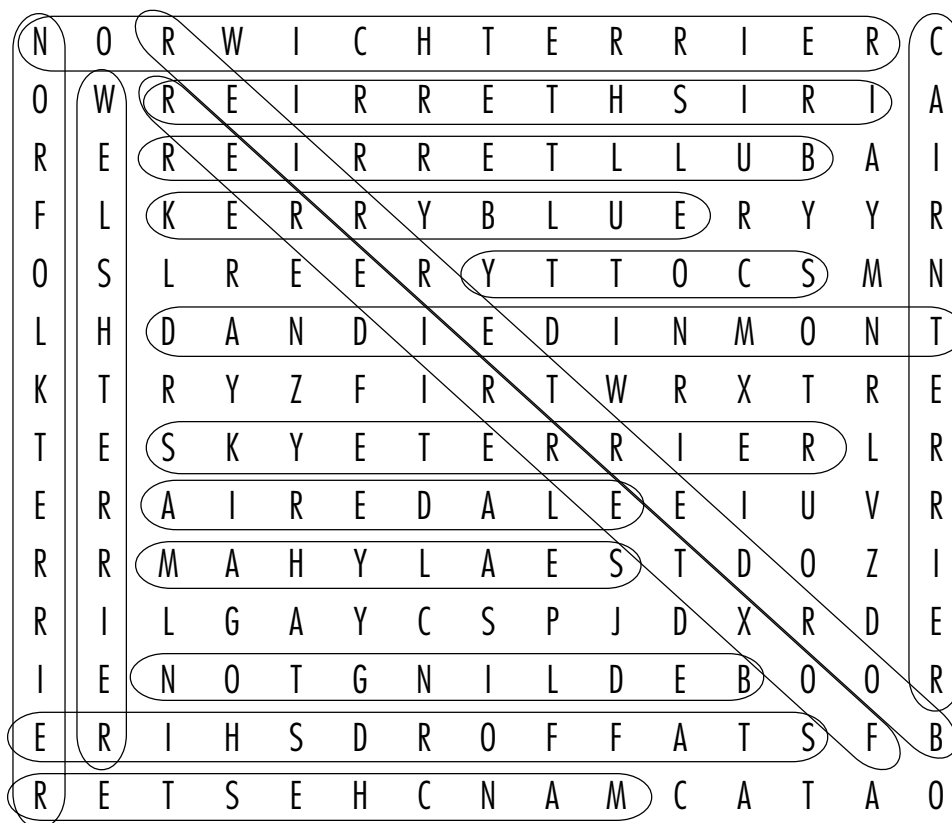
Find the breeds in the word search puzzle below. The breeds will be listed vertically, horizontally, or diagonally, and spelled either forward or backward.

Airedale	Bedlington	Border Terrier
Bull Terrier	Cairn Terrier	Dandie Dinmont
Fox Terrier	Irish Terrier	Kerry Blue
Manchester	Norfolk Terrier	Norwich Terrier
Scotty	Sealyham	Skye Terrier
Staffordshire	Welsh Terrier	

## Word Search—Key

### In this activity you will:

- become familiar with several breeds of dogs within the AKC Terriers Group.



Source: Dog Care, No. 200, Ohio State University Extension

Developed by: Lucinda Miller, Extension Agent, 4-H Youth Development, Pike County and Team Leader, Ohio 4-H Small Animal Leadership Team

# Small Animals and Veterinary Science

## Breeds of Dogs

### Group 5: Toys

Find the breeds in the word search puzzle below. The breeds will be listed vertically, horizontally, or diagonally, and spelled forward or backward.

Affenpinscher

Chihuahua

Chinese Crested

Japanese Chin

Maltese

Papillon

Pekingese

Pomeranian

Pug

Shih Tzu

Silky Terrier

Toy Poodle

Yorkshire

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

## Word Search

**In this activity you will:**

- become familiar with several breeds of dogs within the AKC Toys Group.

Source: Dog Care, No. 200, Ohio State University Extension

Developed by: Lucinda Miller, Extension Agent, 4-H Youth Development, Pike County and Team Leader, Ohio 4-H Small Animal Leadership Team

# Small Animals and Veterinary Science

## Breeds of Dogs

### Group 5: Toys

Find the breeds in the word search puzzle below. The breeds will be listed vertically, horizontally, or diagonally, and spelled forward or backward.

Affenpinscher

Chihuahua

Chinese Crested

Japanese Chin

Maltese

Papillon

Pekingese

Pomeranian

Pug

Shih Tzu

Silky Terrier

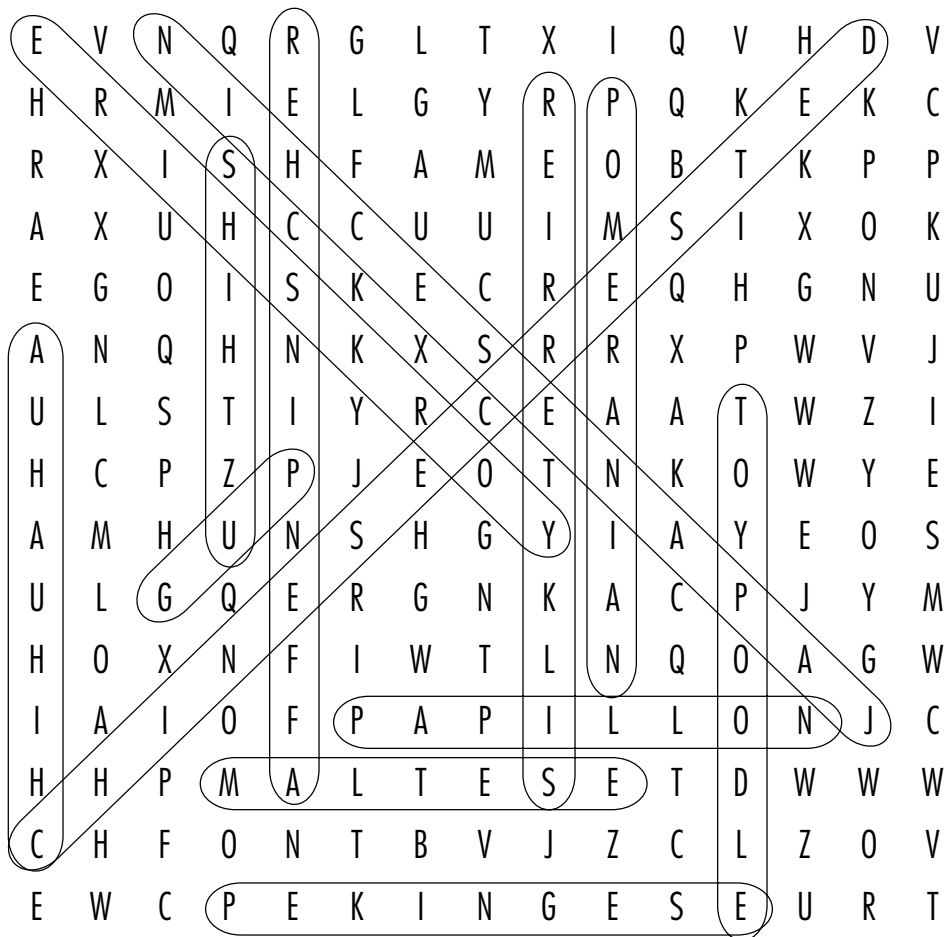
Toy Poodle

Yorkshire

## Word Search—Key

In this activity you will:

- become familiar with several breeds of dogs within the AKC Toys Group.



Source: Dog Care, No. 200, Ohio State University Extension

Developed by: Lucinda Miller, Extension Agent, 4-H Youth Development, Pike County and Team Leader, Ohio 4-H Small Animal Leadership Team

# Small Animals and Veterinary Science

## Breeds of Dogs Group 6: Non-Sporting

Find the breeds in the word search puzzle below. The breeds will be listed vertically, horizontally, or diagonally, and spelled either forward or backward.

Bichons Frise	Boston Terrier	Bulldog
Chinese SharPei	Chow Chow	Dalmation
Finnish Spitz	Keeshond	Lhasa Apso
Poodle	Schipperke	Shibu Inu
Tibetan Spaniel	Tibetan Terrier	

## Word Search

**In this activity you will:**

- become familiar with several breeds of dogs within the AKC Non-Sporting Dog Group.

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

Source: Dog Care, No. 200, Ohio State University Extension

Developed by: Lucinda Miller, Extension Agent, 4-H Youth Development, Pike County and Team Leader, Ohio 4-H Small Animal Leadership Team

# Small Animals and Veterinary Science

## Breeds of Dogs Group 6: Non-Sporting

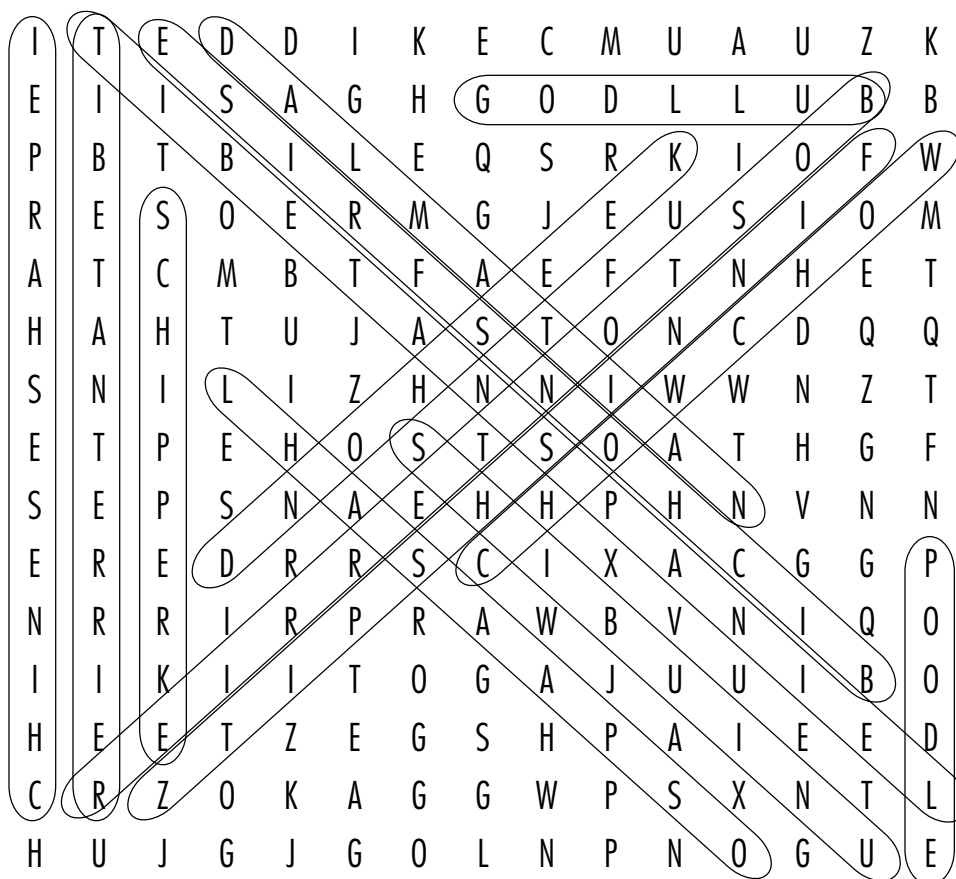
Find the breeds in the word search puzzle below. The breeds will be listed vertically, horizontally, or diagonally, and spelled either forward or backward.

- |                 |                 |            |
|-----------------|-----------------|------------|
| Bichons Frise   | Boston Terrier  | Bulldog    |
| Chinese SharPei | Chow Chow       | Dalmation  |
| Finnish Spitz   | Keeshond        | Lhasa Apso |
| Poodle          | Schipperke      | Shibu Inu  |
| Tibetan Spaniel | Tibetan Terrier |            |

### Word Search—Key

**In this activity you will:**

- become familiar with several breeds of dogs within the AKC Non-Sporting Dog Group.



Source: Dog Care, No. 200, Ohio State University Extension

Developed by: Lucinda Miller, Extension Agent, 4-H Youth Development, Pike County and Team Leader, Ohio 4-H Small Animal Leadership Team

# Small Animals and Veterinary Science

## Breeds of Dogs Group 7: Herding

Find the breeds in the word search puzzle below. The breeds will be listed vertically, horizontally, or diagonally, and spelled either forward or backward.

Aussie	Bearded Collie	Belgian Malinoi
Border Collie	Bouvier	Briard
Cardigan Corgi	Collie	German Shepherd
Old English	Pembroke Corgi	Puli
Sheepdog	Sheltie	Welsh Corgi

### Word Search

**In this activity you will:**

- become familiar with several breeds of dogs within the AKC Herding Group.

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

Source: Dog Care, No. 200, Ohio State University Extension

Developed by: Lucinda Miller, Extension Agent, 4-H Youth Development, Pike County and Team Leader, Ohio 4-H Small Animal Leadership Team

# Small Animals and Veterinary Science

## Breeds of Dogs Group 7: Herding

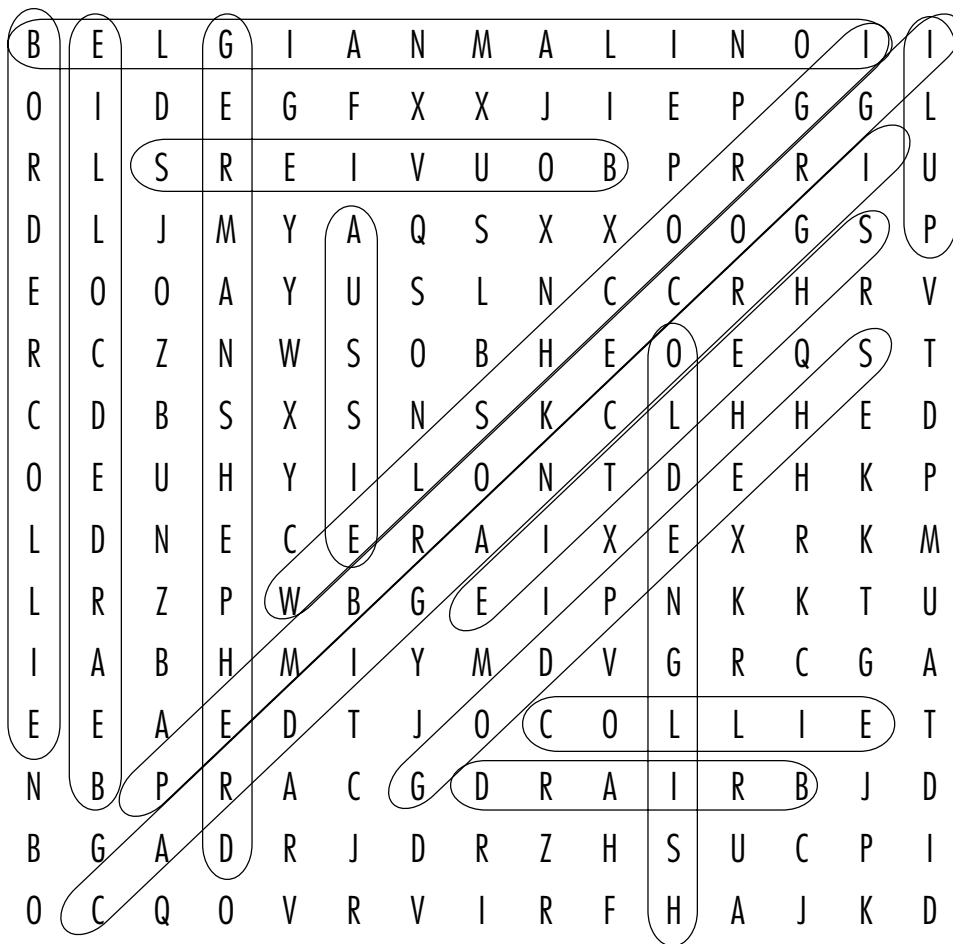
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- |                |                |                 |
|----------------|----------------|-----------------|
| Aussie         | Bearded Collie | Belgian Malinoi |
| Border Collie  | Bouviars       | Briard          |
| Cardigan Corgi | Collie         | German Shepherd |
| Old English    | Pembroke Corgi | Puli            |
| Sheepdog       | Sheltie        | Welsh Corgi     |

### Word Search—Key

**In this activity you will:**

- become familiar with several breeds of dogs within the AKC Herding Group.



Source: Dog Care, No. 200, Ohio State University Extension

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# Small Animals and Veterinary Science

## The Body Language of Dogs

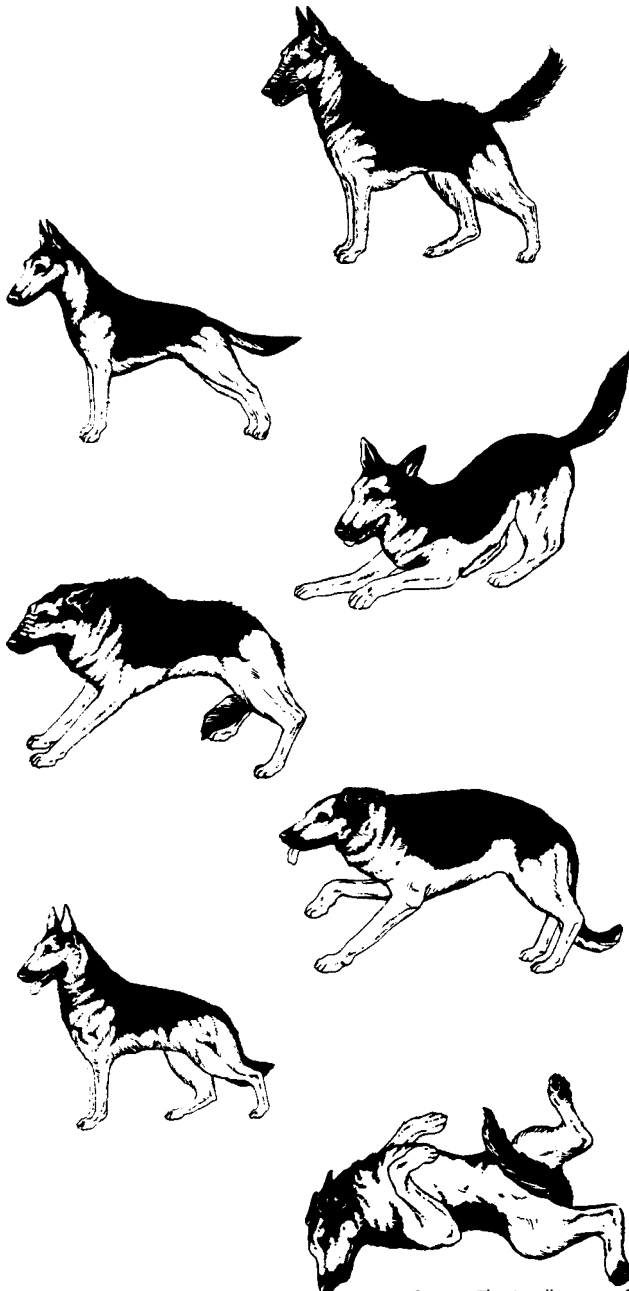
### Matching

#### In this activity you will:

- become familiar with the different intended messages of dogs.

Dogs use body language to communicate their social and emotional states to other dogs and humans. Along with their body language, vocalizations, such as barks and growls, add to the dog's intended message.

Match the picture of the dog to the description of the type of behavior the dog is portraying in the picture by drawing a line from the picture to the correct definition.



**Play Initiation:** The dog is inviting someone to play.

**Passive Submission:** A dog in this body position communicates complete surrender, submission, and fear.

**Active Submission:** This dog shows some signs of fear and becomes submissive to avoid any further threats.

**Frightened yet Threatening:** This dog is frightened and may attack if pressed.

**Aggressive Threat:** This dominant dog is aggressive and threatening.

**Attentive and Interested:** This alert dog is interested in something in its surroundings.

**Content and Unthreatened:** This dog is relaxed and unconcerned about the activities going on around it. It does not feel threatened by anything.

Source: *The Intelligence of Dogs*, Stanley Coren, pp. 98-99, 110-113

Developed by: Lucinda Miller, Extension Agent, 4-H Youth Development, Pike County and Team Leader, Ohio 4-H Small Animal Leadership Team

# Small Animals and Veterinary Science

## The Body Language of Dogs

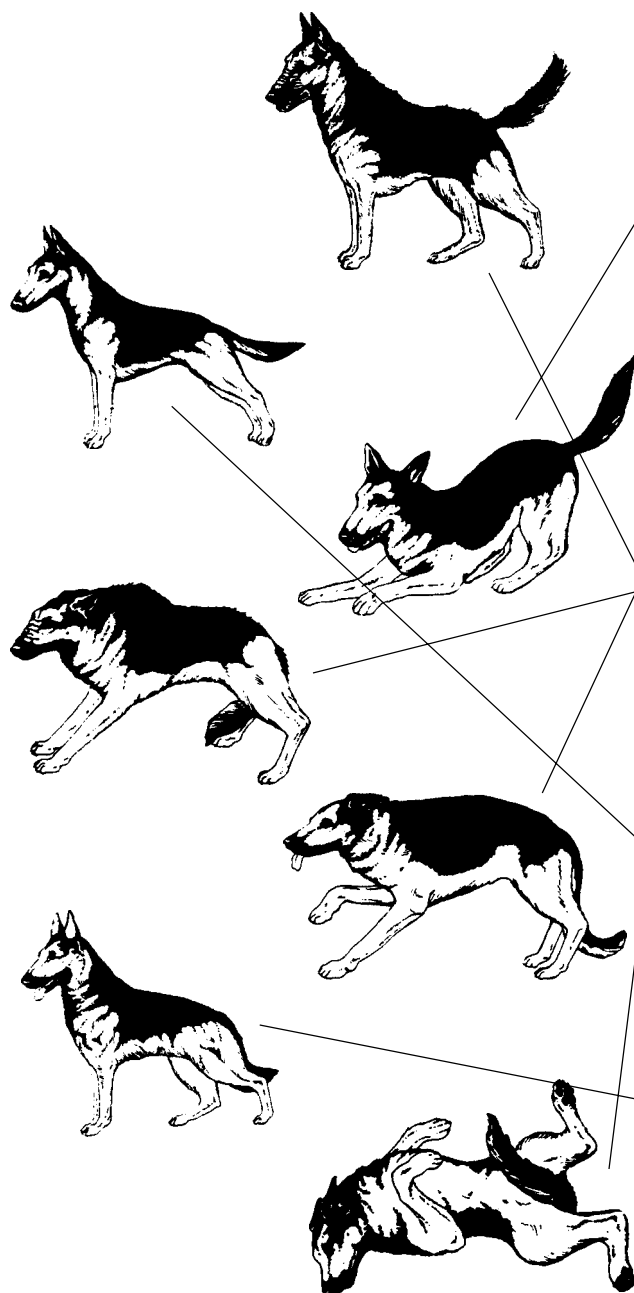
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# Small Animals and Veterinary Science

## Parts of a Cat

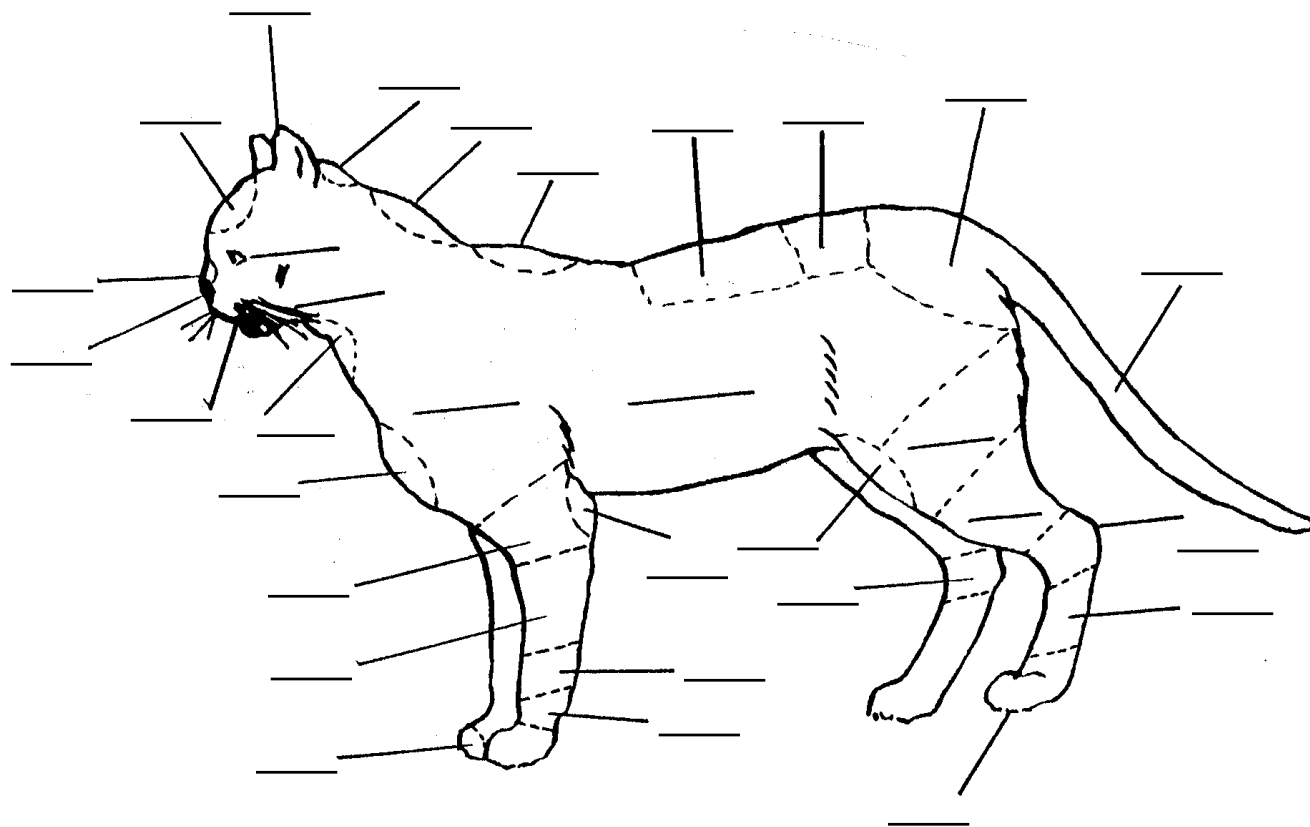
### Identification

**In this activity you will:**

- become familiar with the external body parts of a cat.

The names of the parts of a cat are listed below. Place the number of the correct part next to the line that points to that part of the cat. Point to the part on your body that most closely resembles the cat part.

- |                |                         |                         |                 |                          |
|----------------|-------------------------|-------------------------|-----------------|--------------------------|
| 1. metatarsus  | 8. croup (rump)         | 14. toes                | 20. back        | 26. forehead             |
| 2. nose        | 9. lips                 | 15. occiput             | 21. lower thigh | 27. metacarpus (pastern) |
| 3. hock (heel) | 10. tail                | 16. tarsal joint (hock) | 22. eyes        | 28. abdomen              |
| 4. nostrils    | 11. whiskers            | 17. forearm             | 23. loin        | 29. claws                |
| 5. shoulder    | 12. elbow               | 18. nape                | 24. chest       | 30. throat               |
| 6. withers     | 13. stifle (knee joint) | 19. carpus (knee)       | 25. upper arm   | 31. ears                 |
| 7. upper thigh |                         |                         |                 |                          |



**Scenario:** You find an injured kitten in your backyard. Even though it is not your kitten, you know that the humane action is to call a veterinarian. You make the phone call and the veterinarian asks you to describe the visible injuries. Using at least eight of the cat's body parts, describe the injuries to the veterinarian.

Source: *Cats*, 4-H 218 Ohio State University Extension

Developed by: Lucinda Miller, Extension Agent, 4-H Youth Development, Pike County and Team Leader, Ohio 4-H Small Animal Leadership Team

# Small Animals and Veterinary Science

## Parts of a Cat

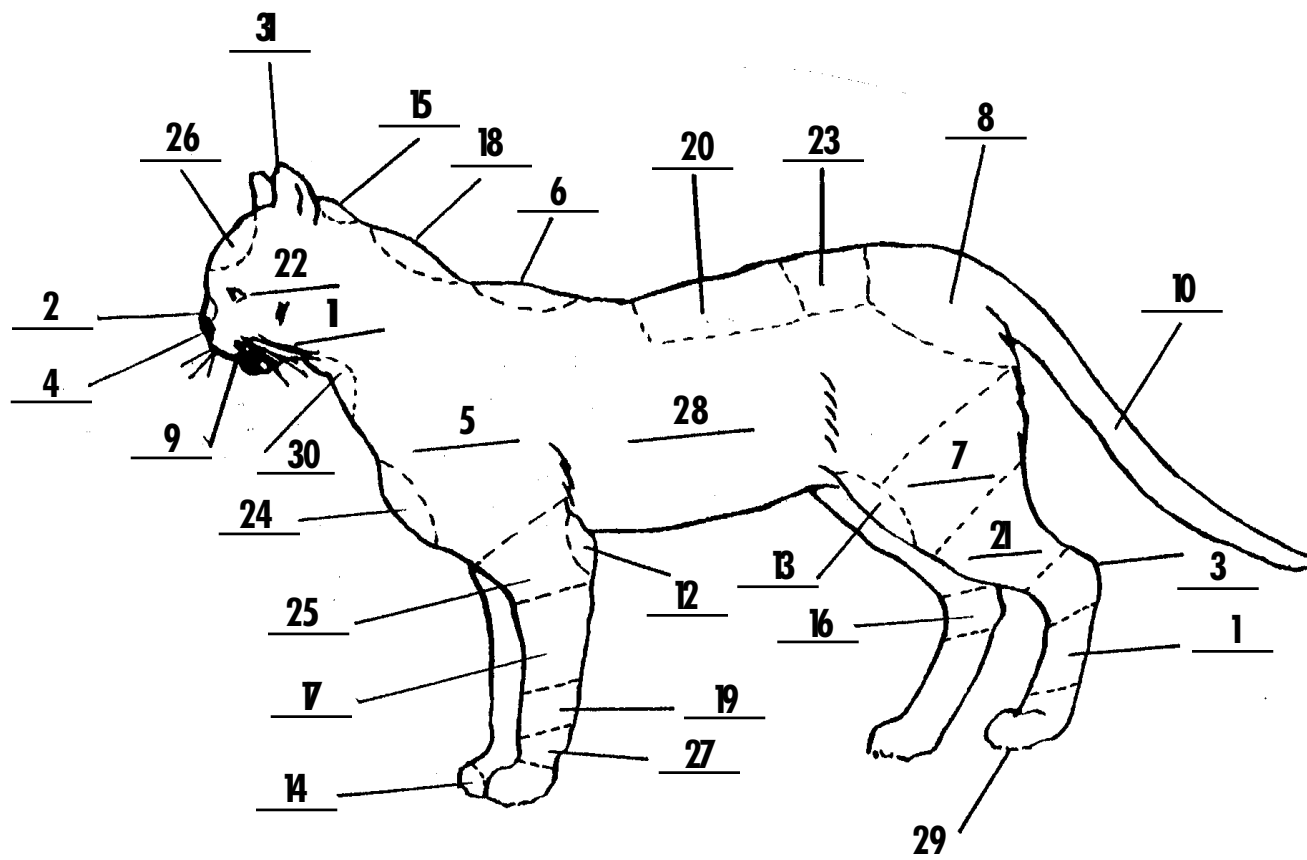
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| 7. upper thigh |                         |                         |                 |                          |



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Source: *Cats*, 4-H 218 Ohio State University Extension

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# Small Animals and Veterinary Science

## Breeds of Cats

Find the breeds of cats in the word search puzzle below. The breeds will be listed vertically, horizontally, or diagonally, and spelled either forward or backward.

Abyssinian	American Curl	Balinese	Bengal	Birman	Bombay
Burmese	Burmilla	Cornish Rex	Cymric	Egyptian Mau	Havana Brown
Himalayan	Javanese	Korat	Maine Coon Cat	Manx	Ocicat
Persian	Ragdoll	Russian Blue	Scottish Fold	Siamese	Snowshoe
Somali	Sphynx	Tonkinese	Turkish Van		

## Word Search

**In this activity you will:**

- become familiar with several breeds of cats.

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

*Developed by: Lucinda Miller, Extension Agent, 4-H Youth Development, Pike County and Team Leader, Ohio 4-H Small Animal Leadership Team*

# Small Animals and Veterinary Science

## Breeds of Cats

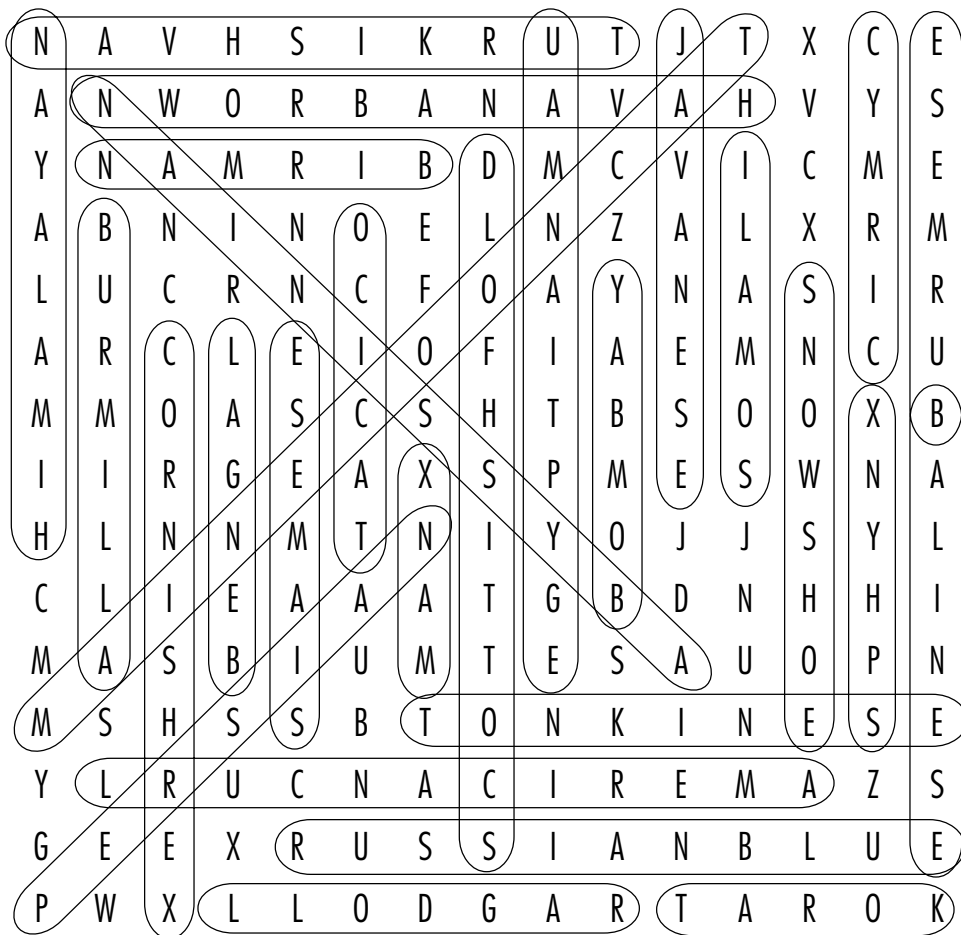
Find the breeds of cats in the word search puzzle below. The breeds will be listed vertically, horizontally, or diagonally, and spelled either forward or backward.

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Burmese	Burmilla	Cornish Rex	Cymric	Egyptian Mau	Havana Brown
Himalayan	Javanese	Korat	Maine Coon Cat	Manx	Ocicat
Persian	Ragdoll	Russian Blue	Scottish Fold	Siamese	Snowshoe
Somali	Sphynx	Tonkinese	Turkish Van		

### Word Search—Key

**In this activity you will:**

- become familiar with several breeds of cats.



Developed by: Lucinda Miller, Extension Agent, 4-H Youth Development, Pike County and Team Leader, Ohio 4-H Small Animal Leadership Team

# Small Animals and Veterinary Science

## Cat Talk

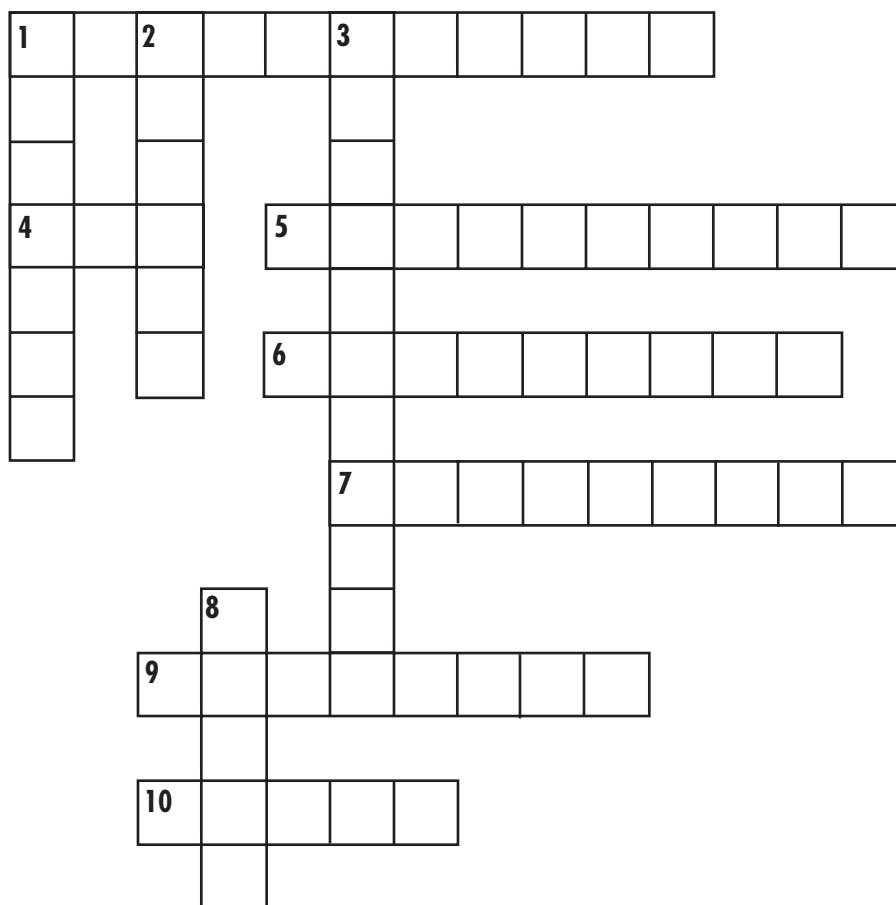
Complete the crossword puzzle below by filling in the puzzle with terms pertaining to cats.

### Across

1. Extra toes
4. Feline
5. Primary hairs
6. Overall health
7. Swallowed fur
9. Giving birth
10. Wild cats

### Down

1. Upright ears
2. Kittens born
3. Cat lover
8. Unspayed female



## Crossword

### In this activity you will:

- become familiar with vocabulary used in your 4-H cat project.

Sources: NCR Extension Publications 411-1993, Purrr-fect Pals, 412-1993, Climbing Up, and 413-1993, Cat Connections.

Developed by: Lucinda Miller, Extension Agent, 4-H Youth Development, Pike County and Team Leader, Ohio 4-H Small Animal Leadership Team

# Small Animals and Veterinary Science

## Cat Talk

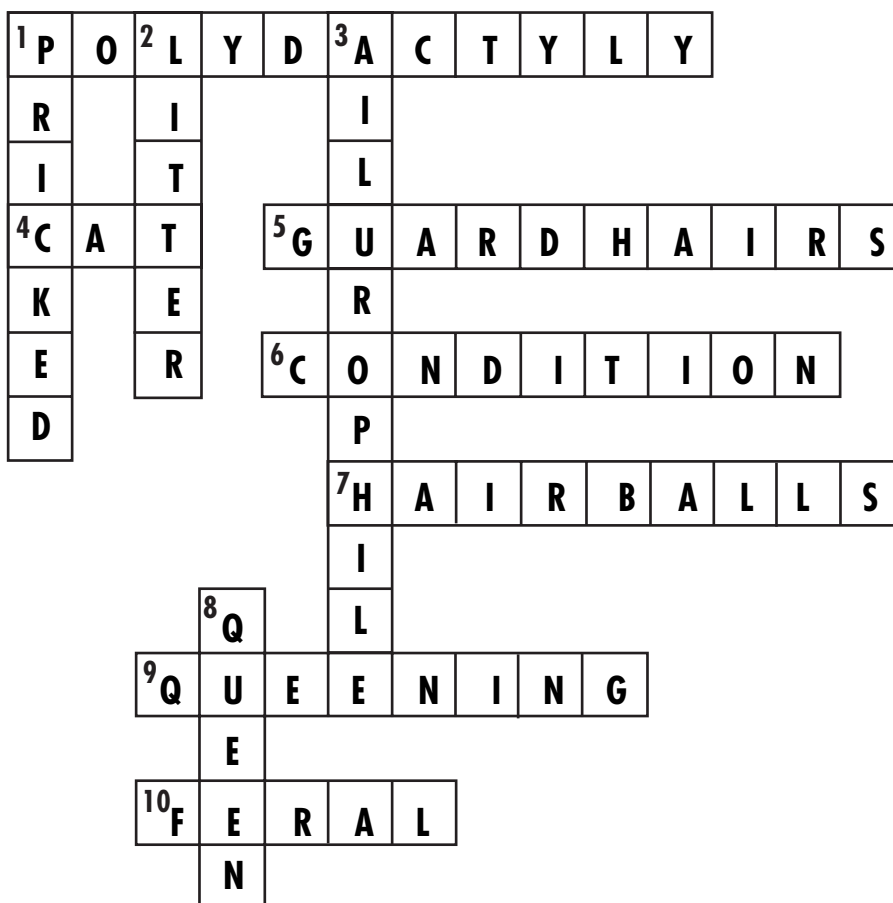
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### Across

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1. Upright ears
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3. Cat lover
8. Unspayed female



## Crossword—Key

In this activity you will:

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Sources: NCR Extension Publications 411-1993, Purrr-fect Pals, 412-1993, Climbing Up, and 413-1993, Cat Connections.

Developed by: Lucinda Miller, Extension Agent, 4-H Youth Development, Pike County and Team Leader, Ohio 4-H Small Animal Leadership Team

# Small Animals and Veterinary Science

## Cat Talk 2

Complete the crossword puzzle below by filling in the puzzle with terms pertaining to cats.

### Crossword

**In this activity you will:**

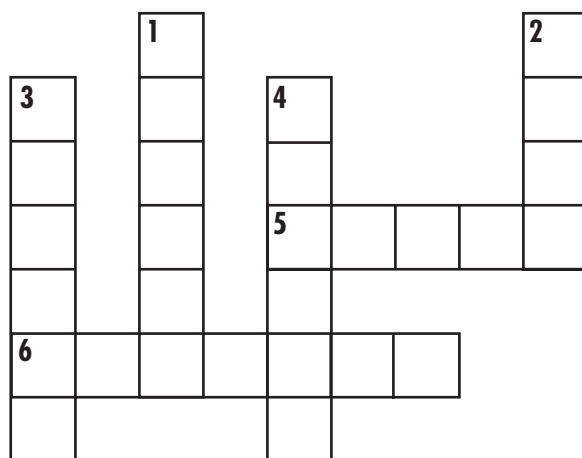
- become familiar with vocabulary used in your 4-H cat project.

#### Across

5. Striped markings
6. Place to board cats

#### Down

1. Male cat
2. Remove ovaries
3. Orange, black, white
4. Young cat



Sources: NCR Extension Publications 411-1993, Purrr-fect Pals, 412-1993, Climbing Up, and 413-1993, Cat Connections.

Developed by: Lucinda Miller, Extension Agent, 4-H Youth Development, Pike County and Team Leader, Ohio 4-H Small Animal Leadership Team



# Small Animals and Veterinary Science

## Cat Vocabulary

Match each term with its correct definition by writing the number of the term in front of the correct definition.

### Matching

**In this activity you will:**

- identify and define vocabulary that will help you learn more about cats.

1. ailurophile	9. catnip	16. fleas	23. litter box	30. queening
2. agouti	10. cat fancy	17. ghost markings	24. pedigree	31. quick
3. angora	11. cattery	18. guard hairs	25. points	32. tabby
4. bicolor	12. CFA	19. hair balls	26. polydactyly	33. third eyelid
5. breed	13. condition	20. hybrid	27. pricked	34. tomcat
6. calico	14. feline	21. kitten	28. purebred	35. tortoiseshell
7. calling	15. feral	22. litter	29. queen	36. undercoat
8. cat				

### Definitions

- \_\_\_\_ A. These markings on a cat are either striped, spotted, or blotched.
- \_\_\_\_ B. The most common parasite found on a cat's skin live by feeding on blood. An infestation of these could cause a cat to become anemic.
- \_\_\_\_ C. Cats that have an extra number of toes are called this.
- \_\_\_\_ D. This breed of cat has long hair and a long, slim body. It lacks the woolly undercoat of the true long-haired cats.
- \_\_\_\_ E. This is a young cat, usually under 15 months of age.
- \_\_\_\_ F. This faint tabby pattern seen in young kittens usually disappears as the kitten becomes older.
- \_\_\_\_ G. An unsprayed female cat of breeding age.
- \_\_\_\_ H. A collective term used to cover cat clubs, cat fanciers, and pedigree cats.
- \_\_\_\_ I. When cats wash themselves with their tongues, they swallow some of their fur. If they swallow more fur than they can digest, they may vomit this compacted mass of fur.
- \_\_\_\_ J. This document contains the first three to five generations of a cat's predecessors. It includes the known names, titles, colors, and registration numbers of these cats.

*Source: NCR Extension Publications 411-1993 Purrfect Pals!, 412-1992 Climbing Up, and 413-1993 Cat Connections.  
Developed by: Lucinda Miller, Extension Agent, 4-H Youth Development, Pike County and Team Leader, Ohio 4-H Small Animal Leadership Team*

- \_\_\_\_\_ K. Usually females, these cats have a black and orange coat color. The coat results from a linkage of dominant and recessive orange genes, both carried by the female chromosomes.
- \_\_\_\_\_ L. This is a person who loves cats.
- \_\_\_\_\_ M. Markings such as a Siamese cat has where the ears, face, legs, feet, and tail are a different color than the body color.
- \_\_\_\_\_ N. A member of the family Felidae.
- \_\_\_\_\_ O. The vein in a cat's claw. When trimming the nails, you must be careful not to cut into the quick, which will result in bleeding.
- \_\_\_\_\_ P. The yowling sounds a female cat in heat often makes.
- \_\_\_\_\_ Q. The sandy color located between the black stripes of a tabby.
- \_\_\_\_\_ R. Eyelid that is often seen at the corners of a cat's eye.
- \_\_\_\_\_ S. Cat Fancier's Association
- \_\_\_\_\_ T. Kittens born from the female cat at the same time during one gestation. Also the absorbent materials used in a litter box.
- \_\_\_\_\_ U. Upright or forward ears.
- \_\_\_\_\_ V. The overall health, cleanliness, and well-being of a cat.
- \_\_\_\_\_ W. A male cat that has not been neutered.
- \_\_\_\_\_ X. A group of cats with a related ancestry and similar characteristics.
- \_\_\_\_\_ Y. A cat whose ancestors are of the same variety or allowable varieties.
- \_\_\_\_\_ Z. Giving birth to kittens.
- \_\_\_\_\_ AA. Tame cats that have reverted back to the wild state.
- \_\_\_\_\_ BB. Derived from the herb, *Nepeta Cataria*, often used in cat toys. Most cats like this herb.
- \_\_\_\_\_ CC. The thick layer of insulating fur under the topcoat.
- \_\_\_\_\_ DD. This is a shallow box filled with absorbent material used as an indoor cat's toilet.
- \_\_\_\_\_ EE. This is a tortoise-shell and white-haired cat, almost always a female.
- \_\_\_\_\_ FF. These are the primary hairs, or the outer and longest hairs in a cat's fur.
- \_\_\_\_\_ GG. A cat's fur consisting of white hair mixed with one other color.
- \_\_\_\_\_ HH. A place where cats are bred and/or boarded.
- \_\_\_\_\_ II. Belonging to the cat family, which includes jungle cats, wild and domestic cats.
- \_\_\_\_\_ JJ. A cat produced from breeding cats of different breeds.

*Source: NCR Extension Publications 411-1993 Purrrfect Pals!, 412-1992 Climbing Up, and 413-1993 Cat Connections.*

*Developed by: Lucinda Miller, Extension Agent, 4-H Youth Development, Pike County and Team Leader, Ohio 4-H Small Animal Leadership Team*

# Small Animals and Veterinary Science

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4. bicolor	12. CFA	19. hair balls	26. polydactyly	33. third eyelid
5. breed	13. condition	20. hybrid	27. pricked	34. tomcat
6. calico	14. feline	21. kitten	28. purebred	35. tortoiseshell
7. calling	15. feral	22. litter	29. queen	36. undercoat
8. cat				

### Definitions

- 1 A. These markings on a cat are either striped, spotted, or blotched.
- 16 B. The most common parasite found on a cat's skin live by feeding on blood. An infestation of these could cause a cat to become anemic.
- 26 C. Cats that have an extra number of toes are called this.
- 3 D. This breed of cat has long hair and a long, slim body. It lacks the woolly undercoat of the true long-haired cats.
- 21 E. This is a young cat, usually under 15 months of age.
- 7 F. This faint tabby pattern seen in young kittens usually disappears as the kitten becomes older.
- 29 G. An unsprayed female cat of breeding age.
- 10 H. A collective term used to cover cat clubs, cat fanciers, and pedigree cats.
- 19 I. When cats wash themselves with their tongues, they swallow some of their fur. If they swallow more fur than they can digest, they may vomit this compacted mass of fur.
- 24 J. This document contains the first three to five generations of a cat's predecessors. It includes the known names, titles, colors, and registration numbers of these cats.

Source: NCR Extension Publications 411-1993 Purrfect Pals!, 412-1992 Climbing Up, and 413-1993 Cat Connections.

Developed by: Lucinda Miller, Extension Agent, 4-H Youth Development, Pike County and Team Leader, Ohio 4-H Small Animal Leadership Team

- 32** K. Usually females, these cats have a black and orange coat color. The coat results from a linkage of dominant and recessive orange genes, both carried by the female chromosomes.
- 1** L. This is a person who loves cats.
- 25** M. Markings such as a Siamese cat has where the ears, face, legs, feet, and tail are a different color than the body color.
- 8** N. A member of the family Felidae.
- 3** O. The vein in a cat's claw. When trimming the nails, you must be careful not to cut into the quick, which will result in bleeding.
- 7** P. The yowling sounds a female cat in heat often makes.
- 2** Q. The sandy color located between the black stripes of a tabby.
- 33** R. Eyelid that is often seen at the corners of a cat's eye.
- 12** S. Cat Fancier's Association
- 22** T. Kittens born from the female cat at the same time during one gestation. Also the absorbent materials used in a litter box.
- 27** U. Upright or forward ears.
- 13** V. The overall health, cleanliness, and well-being of a cat.
- 34** W. A male cat that has not been neutered.
- 5** X. A group of cats with a related ancestry and similar characteristics.
- 28** Y. A cat whose ancestors are of the same variety or allowable varieties.
- 30** Z. Giving birth to kittens.
- 15** AA. Tame cats that have reverted back to the wild state.
- 9** BB. Derived from the herb, Nepeta Cataria, often used in cat toys. Most cats like this herb.
- 36** CC. The thick layer of insulating fur under the topcoat.
- 23** DD. This is a shallow box filled with absorbent material used as an indoor cat's toilet.
- 6** EE. This is a tortoise-shell and white-haired cat, almost always a female.
- 18** FF. These are the primary hairs, or the outer and longest hairs in a cat's fur.
- 4** GG. A cat's fur consisting of white hair mixed with one other color.
- 1** HH. A place where cats are bred and/or boarded.
- 14** II. Belonging to the cat family, which includes jungle cats, wild and domestic cats.
- 20** JJ. A cat produced from breeding cats of different breeds.

*Source: NCR Extension Publications 411-1993 Purrr-fect Pals!, 412-1992 Climbing Up, and 413-1993 Cat Connections.*

*Developed by: Lucinda Miller, Extension Agent, 4-H Youth Development, Pike County and Team Leader, Ohio 4-H Small Animal Leadership Team*

# Small Animals and Veterinary Science

## Cat Health

### Matching

In this activity you will:

- become familiar with terms and definitions relating to a cat's health.

The following terms relate to a cat's health. Match the term with its correct definition. Write the number of the term in front of the correct definition.

### Definitions

- \_\_\_\_\_ A. To surgically remove the ovaries of a cat so it will not be able to reproduce.
- \_\_\_\_\_ B. This virus decreases the ability of the immune system to respond to infection and may cause leukemia. It is passed from cat to cat by direct contact. It is not contagious to humans or other animals.
- \_\_\_\_\_ C. This is a common respiratory infection with symptoms of sneezing, decreased appetite, and fever. It may provide an opportunity for the development of more serious bacterial complications. Rarely fatal, it may recur when the cat is ill or stressed.
- \_\_\_\_\_ D. An inflammation of the skin.
- \_\_\_\_\_ E. Symptoms of this disease include loss of appetite, vomiting, and diarrhea. It is widespread and highly contagious. It is often fatal in both kittens and adult cats.
- \_\_\_\_\_ F. This is a fatal viral infection of the central nervous system that can affect all mammals, including humans. The virus is transmitted through the bite of an infected animal.
- \_\_\_\_\_ G. A localized collection of pus in the tissues of the body.
- \_\_\_\_\_ H. This respiratory infection often leaves the cat more susceptible to serious infections. It is usually not fatal. Ulcers may be seen on the tongue and in the mouth.
- \_\_\_\_\_ I. This disease of the eye is characterized by increased pressure within the eyeball and progressive loss of vision.
- \_\_\_\_\_ J. There is no cure for this contagious, usually fatal disease. Signs may include a dramatically enlarged abdomen.
- \_\_\_\_\_ K. This disease is an abnormal, uncontrolled growth of a group of body cells.
- \_\_\_\_\_ L. Inoculation of an animal to produce an immunity from certain diseases.
- \_\_\_\_\_ M. Parasites that live in the ear canal and cause irritation.
- \_\_\_\_\_ N. To surgically remove the testicles of a male cat.
- \_\_\_\_\_ O. This common respiratory infection is often fatal in kittens. Symptoms include sneezing, decreased appetite and fever, followed by a thick discharge from the eyes and nose.

### Word List

1. abscess
2. cancer
3. dermatitis
4. ear mites
5. Feline Calicivirus (FCV)
6. Feline Infectious Peritonitis (FIP)
7. Feline Leukemia (FeLV)
8. Feline Panleukopenia (FPL)
9. Feline Pneumonitis-Chlamydia (FPN)
10. Feline Viral Rhinotracheitis (FVR)
11. glaucoma
12. neuter
13. rabies
14. spay
15. vaccination

Sources: Drs. Bach and Barnett, Waverly, Ohio, NCR Extension Publication 413-1993, Cat Connections

Developed by: Lucinda Miller, Extension Agent, 4-H Youth Development, Pike County and Team Leader, Ohio 4-H Small Animal Leadership Team

# Small Animals and Veterinary Science

## Cat Health

The following terms relate to a cat's health. Match the term with its correct definition. Write the number of the term in front of the correct definition.

### Matching—Key

In this activity you will:

- become familiar with terms and definitions relating to a cat's health.

### Definitions

- 4 A. To surgically remove the ovaries of a cat so it will not be able to reproduce.
- 7 B. This virus decreases the ability of the immune system to respond to infection and may cause leukemia. It is passed from cat to cat by direct contact. It is not contagious to humans or other animals.
- 9 C. This is a common respiratory infection with symptoms of sneezing, decreased appetite, and fever. It may provide an opportunity for the development of more serious bacterial complications. Rarely fatal, it may recur when the cat is ill or stressed.
- 3 D. An inflammation of the skin.
- 8 E. Symptoms of this disease include loss of appetite, vomiting, and diarrhea. It is widespread and highly contagious. It is often fatal in both kittens and adult cats.
- B F. This is a fatal viral infection of the central nervous system that can affect all mammals, including humans. The virus is transmitted through the bite of an infected animal.
- 1 G. A localized collection of pus in the tissues of the body.
- 5 H. This respiratory infection often leaves the cat more susceptible to serious infections. It is usually not fatal. Ulcers may be seen on the tongue and in the mouth.
- 1 I. This disease of the eye is characterized by increased pressure within the eyeball and progressive loss of vision.
- 6 J. There is no cure for this contagious, usually fatal disease. Signs may include a dramatically enlarged abdomen.
- 2 K. This disease is an abnormal, uncontrolled growth of a group of body cells.
- 5 L. Inoculation of an animal to produce an immunity from certain diseases.
- 4 M. Parasites that live in the ear canal and cause irritation.
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### Word List

1. abscess
2. cancer
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5. Feline Calcivirus (FCV)
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11. glaucoma
12. neuter
13. rabies
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15. vaccination

Sources: Drs. Bach and Barnett, Waverly, Ohio, NCR Extension Publication 413-1993, Cat Connections

Developed by: Lucinda Miller, Extension Agent, 4-H Youth Development, Pike County and Team Leader, Ohio 4-H Small Animal Leadership Team

# Small Animals and Veterinary Science

## Parts of a Rabbit

The names of the different parts of a rabbit are listed below. Place the number of the correct part on the blank next to the line that points to that part of the rabbit. Point to the part on your body that most closely resembles the rabbit parts.

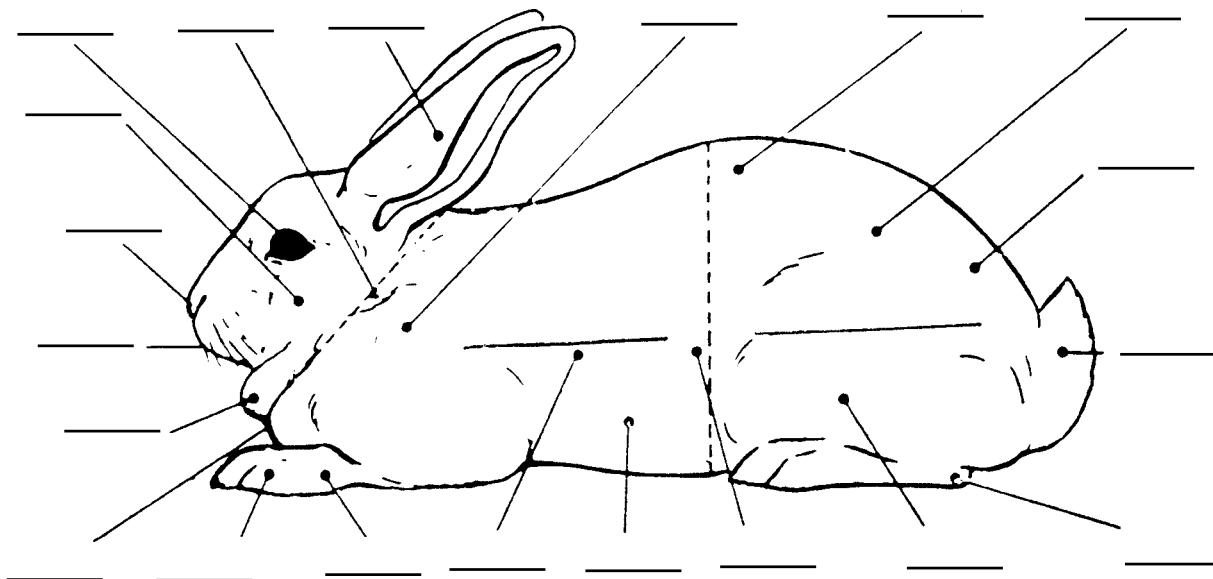
### Identification

**In this activity you will:**

- become familiar with the external body parts of a rabbit.

### Word List

- |                |                |           |              |           |           |
|----------------|----------------|-----------|--------------|-----------|-----------|
| 1. toes        | 5. hock        | 9. ear    | 13. dewlap   | 17. cheek | 20. loin  |
| 2. hip         | 6. neck        | 10. foot  | 14. shoulder | 18. nose  | 21. eye   |
| 3. forequarter | 7. hindquarter | 11. chest | 15. rump     | 19. leg   | 22. belly |
| 4. mouth       | 8. rib         | 12. tail  | 16. flank    |           |           |



Source: ARBA Standard of Perfection, 1991-1995

Developed by: Lucinda Miller, Extension Agent, 4-H Youth Development, Pike County and Team Leader, Ohio 4-H Small Animal Leadership Team

# Small Animals and Veterinary Science

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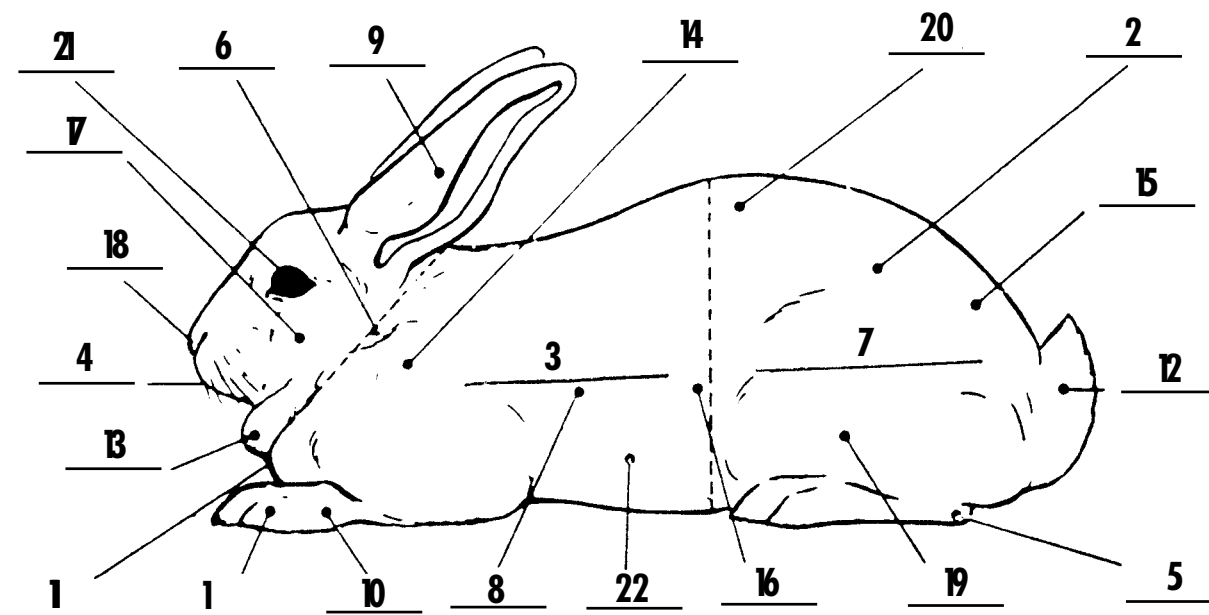
### Identification—Key

**In this activity you will:**

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### Word List

- |                |                |           |              |           |           |
|----------------|----------------|-----------|--------------|-----------|-----------|
| 1. toes        | 5. hock        | 9. ear    | 13. dewlap   | 17. cheek | 20. loin  |
| 2. hip         | 6. neck        | 10. foot  | 14. shoulder | 18. nose  | 21. eye   |
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| 4. mouth       | 8. rib         | 12. tail  | 16. flank    |           |           |



Source: ARBA Standard of Perfection, 1991-1995

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# Small Animals and Veterinary Science

## Breeds of Rabbits

### Word Scramble

**In this activity you will:**

- become familiar with fifteen breeds of rabbits.

Complete scrambled words to learn fifteen breeds of rabbits.

1. erx \_\_\_\_\_
2. solphi \_\_\_\_\_
3. cdhut \_\_\_\_\_
4. mhfeils atngi \_\_\_\_\_
5. lbgenia reah \_\_\_\_\_
6. tiasn \_\_\_\_\_
7. yeerjs loyow \_\_\_\_\_
8. nlehtedra rwfda \_\_\_\_\_
9. kedccrehe iangt \_\_\_\_\_
10. rlfncianaai \_\_\_\_\_
11. nfechr pol \_\_\_\_\_
12. ewn leaznda \_\_\_\_\_
13. lanhhicicl \_\_\_\_\_
14. roldfia theiw \_\_\_\_\_
15. ivresl ramnet \_\_\_\_\_

# Small Animals and Veterinary Science

## Breeds of Rabbits

### Word Scramble—Key

In this activity you will:

- become familiar with fifteen breeds of rabbits.

Complete scrambled words to learn fifteen breeds of rabbits.

- |                     |  |
|---------------------|--|
| 1. erx              | <u>R</u> <u>e</u> <u>x</u>   |
| 2. solphi           | <u>P</u> <u>o</u> <u>l</u> <u>i</u> <u>s</u> <u>h</u>  |
| 3. cdhut            | <u>D</u> <u>u</u> <u>t</u> <u>c</u> <u>h</u>   |
| 4. mhfeils atngi    | <u>F</u> <u>l</u> <u>e</u> <u>m</u> <u>i</u> <u>s</u> <u>h</u> <u>G</u> <u>i</u> <u>a</u> <u>n</u> <u>t</u>                            |
| 5. lbgenia reah     | <u>B</u> <u>e</u> <u>l</u> <u>g</u> <u>i</u> <u>a</u> <u>n</u> <u>H</u> <u>a</u> <u>r</u> <u>e</u>                                     |
| 6. tiasn            | <u>S</u> <u>a</u> <u>t</u> <u>i</u> <u>n</u>   |
| 7. yeerjs loyow     | <u>J</u> <u>e</u> <u>r</u> <u>s</u> <u>e</u> <u>y</u> <u>W</u> <u>o</u> <u>o</u> <u>l</u> <u>y</u>                                     |
| 8. nlehntedra rwfda | <u>N</u> <u>e</u> <u>t</u> <u>h</u> <u>e</u> <u>r</u> <u>l</u> <u>a</u> <u>n</u> <u>d</u> <u>D</u> <u>w</u> <u>a</u> <u>r</u> <u>f</u> |
| 9. kedccrehe iangt  | <u>C</u> <u>h</u> <u>e</u> <u>c</u> <u>k</u> <u>e</u> <u>r</u> <u>e</u> <u>d</u> <u>G</u> <u>i</u> <u>a</u> <u>n</u> <u>t</u>          |
| 10. rlfncianaai     | <u>C</u> <u>a</u> <u>l</u> <u>i</u> <u>f</u> <u>o</u> <u>r</u> <u>n</u> <u>i</u> <u>a</u> <u>n</u>                                     |
| 11. nfechr pol      | <u>F</u> <u>r</u> <u>e</u> <u>n</u> <u>c</u> <u>h</u> <u>L</u> <u>o</u> <u>p</u>   |
| 12. ewn leaznda     | <u>N</u> <u>e</u> <u>w</u> <u>Z</u> <u>e</u> <u>a</u> <u>l</u> <u>a</u> <u>n</u> <u>d</u>  |
| 13. lanhhicicl      | <u>C</u> <u>h</u> <u>i</u> <u>n</u> <u>c</u> <u>h</u> <u>i</u> <u>l</u> <u>l</u> <u>a</u>  |
| 14. roldfia theiw   | <u>F</u> <u>l</u> <u>o</u> <u>r</u> <u>i</u> <u>d</u> <u>a</u> <u>W</u> <u>h</u> <u>i</u> <u>t</u> <u>e</u>                            |
| 15. ivresl ramnet   | <u>S</u> <u>i</u> <u>l</u> <u>v</u> <u>e</u> <u>r</u> <u>M</u> <u>a</u> <u>r</u> <u>t</u> <u>e</u> <u>n</u>                            |

# Small Animals and Veterinary Science

## Rabbit Vocabulary

### Fill in the Blanks

#### In this activity you will:

- become familiar with terms used in your rabbit project.

Fill in the blanks to complete the sentences using words from the list below.

Combine the circled letters in each answer to spell a word that you should be familiar with when raising rabbits.

dewlap	fryer	junior	lapin	nest box	slobbers	wool
doe	hindquarters	kindle	litter	rabbitry	tattoo	wry tail
ear canker	hutch	kit	malocclusion	senior	wolf teeth	

1. Rabbits that fulfill the weight requirements of their breed and are six months of age and older in those breeds having two show classes or eight months of age and older in those breeds having three show classes would be shown in the \_\_\_\_\_ class.
2. To put a permanent identification mark in a rabbit's left ear would be to \_\_\_\_\_ the rabbit. If the rabbit is registered with the American Rabbit Breeder's Association, the A.R.B.A. number would go in the right ear.
3. The \_\_\_\_\_ is the section of the rabbit's body containing the loin, rump, hips, and hind legs.
4. This term refers to an inherited defect where the upper and lower jaws do not let the teeth meet correctly. Resulting in long, uneven teeth extending out of the rabbit's mouth, \_\_\_\_\_ keeps the rabbit from eating and chewing correctly.
5. When a doe gives birth she is said to \_\_\_\_\_.
6. A tail that is curled or twisted permanently to one side, or is a corkscrew tail with one or more turns is called a \_\_\_\_\_.
7. A rabbit with \_\_\_\_\_ salivates excessively leaving the fur wet and unsightly around the mouth and lower jaw.
8. The folds of loose skin that hang from the throat of a doe is called a \_\_\_\_\_.
9. A female rabbit is called a \_\_\_\_\_.
10. \_\_\_\_\_ are long and in either jaw caused by improper alignment of the front teeth. These prevent normal eating action.

Developed by: Lucinda Miller, Extension Agent, 4-H Youth Development, Pike County and Team Leader, Ohio 4-H Small Animal Leadership Team

11. The French word for rabbit is \_\_\_\_      \_\_\_\_ . It is also a term for dyed rabbit fur.
12. A group of young rabbits raised by a doe is called a \_\_\_\_      \_\_\_\_ .
13. The      \_\_\_\_ is the place where a group of hutches and rabbits are kept.
14. A young meat rabbit under five pounds is called a      \_\_\_\_ .
15. About 28 days after the doe is bred, you should put a      \_\_\_\_ inside her hutch for the kits to be born in and live in for the first 18 to 21 days.
16. An inflamed, scabby condition in the lower inside of a rabbit's ear is called \_\_\_\_      \_\_\_\_ . This is caused by ear mites.
17. Before you get your rabbit you will need to build or buy a \_\_\_\_      \_\_\_\_ so your rabbit will have a place to live.
18. A baby rabbit that weighs less than 16 ounces is called a \_\_\_\_      \_\_\_\_ .
19. The fur of Angora rabbits is called \_\_\_\_      \_\_\_\_ .
20. Rabbits that are under six months of age and fulfill the weight requirements of the breed are shown in a \_\_\_\_      \_\_\_\_ class.

Now combine the circled letters to spell out the name of the book that lists the characteristics for each recognized breed of rabbits as approved by a registering organization. This book is called the \_\_\_\_\_  
\_\_\_\_\_ .

# Small Animals and Veterinary Science

## Rabbit Vocabulary

### Fill in the Blanks—Key

#### In this activity you will:

- become familiar with terms used in your rabbit project.

Fill in the blanks to complete the sentences using words from the list below.

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doe	hindquarters	kindle	litter	rabbitry	tattoo	wry tail
ear canker	hutch	kit	malocclusion	senior	wolf teeth	

1. Rabbits that fulfill the weight requirements of their breed and are six months of age and older in those breeds having two show classes or eight months of age and older in those breeds having three show classes would be shown in the s e n i o r class.
2. To put a permanent identification mark in a rabbit's left ear would be to t a t t o o the rabbit. If the rabbit is registered with the American Rabbit Breeder's Association, the A.R.B.A. number would go in the right ear.
3. The h i n d q u a r t e r s is the section of the rabbit's body containing the loin, rump, hips, and hind legs.
4. This term refers to an inherited defect where the upper and lower jaws do not let the teeth meet correctly. Resulting in long, uneven teeth extending out of the rabbit's mouth, m a l o c c l u s i o n keeps the rabbit from eating and chewing correctly.
5. When a doe gives birth she is said to k i n d l e.
6. A tail that is curled or twisted permanently to one side, or is a corkscrew tail with one or more turns is called a w r y t a i l.
7. A rabbit with s l o b b e r s salivates excessively leaving the fur wet and unsightly around the mouth and lower jaw.
8. The folds of loose skin that hang from the throat of a doe is called a d e w l a p.
9. A female rabbit is called a d o e.
10. W o l f t e e t h are long and in either jaw caused by improper alignment of the front teeth. These prevent normal eating action.

*Developed by: Lucinda Miller, Extension Agent, 4-H Youth Development, Pike County and Team Leader, Ohio 4-H Small Animal Leadership Team*

11. The French word for rabbit is l a **p** i n. It is also a term for dyed rabbit fur.
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13. The **r** a b b i t r y is the place where a group of hutches and rabbits are kept.
14. A young meat rabbit under five pounds is called a **f** r y e r.
15. About 28 days after the doe is bred, you should put a n **e** s t b o x inside her hutch for the kits to be born in and live in for the first 18 to 21 days.
16. An inflamed, scabby condition in the lower inside of a rabbit's ear is called e a r **c** a n k e r. This is caused by ear mites.
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Now combine the circled letters to spell out the name of the book that lists the characteristics for each recognized breed of rabbits as approved by a registering organization. This book is called the S t a n d a r d o f  
P e r f e c t i o n.

# Small Animals and Veterinary Science

## Breeds of Cavies

Fill in the blank with the correct breed that most closely fits the description provided.

Abyssinian	Satin	Teddy
American	Silkie	White Crested
Peruvian		

### Fill in the Blanks

#### In this activity you will:

- become familiar with characteristics of seven breeds of cavies.

1. I have a hair coat that is unusual. It is short and kinky. The texture of my hair coat may be either plush or soft, and harsh or rough. I am a \_\_\_\_\_ cavy.
2. I am the most common guinea pig. I have short silky hair and come in many colors. I have broad shoulders, a Roman nose, and a high full crown. I am an \_\_\_\_\_ cavy.
3. I am a long-haired guinea pig. My hair grows straight back to my rear with no middle part. When looking at me from above, my shape looks like a tear drop. I am a \_\_\_\_\_ cavy.
4. I have a short smooth hair coat and a single white rosette on top of my head just in front of my ears. I am a very calm guinea pig. I am a \_\_\_\_\_ guinea pig.
5. I have short harsh fur arranged in rosettes and ridges. I am usually the smallest and rangiest of the cavies. My nose is longer than other breeds of guinea pigs and I have a "moustache." I am an \_\_\_\_\_ cavy.
6. I am the newest recognized breed of guinea pig by the ARBA. I have a special type of hair. The hair shaft is smaller and has a glass-like hair shell that reflects light. I am very shiny. I am a \_\_\_\_\_ cavy.
7. My hair can grow to lengths of 12 to 14 inches or more. I look like a mop and it is hard to tell which end is my head. My owner needs to spend a lot of time grooming me. I am a \_\_\_\_\_ cavy.

Sources: ARBA Standard of Perfection, 1991 thru 1995 Guinea Pigs, Carolyn Ruf, T.F.H. Publications, 1990

Developed by: Lucinda Miller, Extension Agent, 4-H Youth Development, Pike County and Team Leader, Ohio 4-H Small Animal Leadership Team

# Small Animals and Veterinary Science

## Breeds of Cavies

Fill in the blank with the correct breed that most closely fits the description provided.

Abyssinian	Satin	Teddy
American	Silkie	White Crested
Peruvian		

### Fill in the Blanks—Key

#### In this activity you will:

- become familiar with characteristics of seven breeds of cavies.

1. I have a hair coat that is unusual. It is short and kinky. The texture of my hair coat may be either plush or soft, and harsh or rough. I am a Teddy cavy.
2. I am the most common guinea pig. I have short silky hair and come in many colors. I have broad shoulders, a Roman nose, and a high full crown. I am an American cavy.
3. I am a long-haired guinea pig. My hair grows straight back to my rear with no middle part. When looking at me from above, my shape looks like a tear drop. I am a Silkie cavy.
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7. My hair can grow to lengths of 12 to 14 inches or more. I look like a mop and it is hard to tell which end is my head. My owner needs to spend a lot of time grooming me. I am a Peruvian cavy.

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