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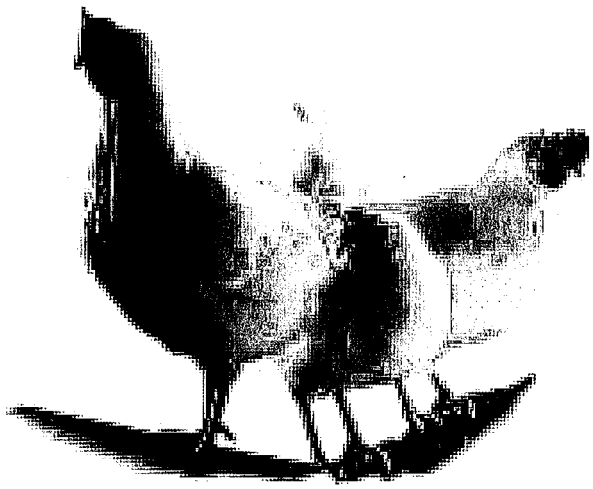
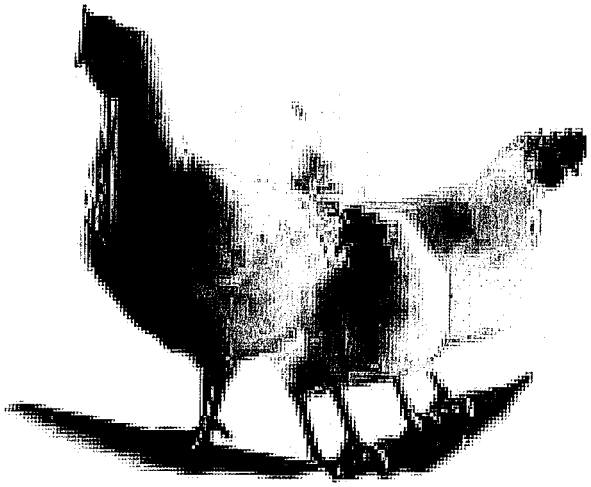
# Poultry





***This We Believe:***

- The boy and girl are more important than the projects.
- The member should be their own best product.
- No award is worth sacrificing the reputation of a member or leader.
- Competition is a natural human trait and should be recognized as such. It should be given no more emphasis than other fundamentals.
- Learning how to do the project is more important than the project itself.
- Many things are caught rather than taught.
- A blue ribbon member with a red ribbon project is more desirable than a red ribbon member with a blue ribbon project.
- To learn by doing is fundamental in any sound educational program.
- Generally speaking, there is more than one good way of doing most things.
- Every member needs to be noticed, to feel important, to win, and to be praised.
- Our job is to teach members *how* to think, not what to think.

# 4-H POULTRY PROJECT

Historically, humans and poultry have interacted in many ways beyond owning chickens as farm animals. From domesticated fowl being used for meat and egg production to fancy breeds being shown in competition, ducks, chickens, turkeys, and other poultry are a huge part of many cultures around the world. In 4-H, youth in the Poultry Project can learn:

- Caring for and raising chickens responsibly and humanely.
- Best management practices used on farms and industry.
- Value of poultry meant and eggs in human nutrition and how to grade eggs.
- Showmanship and showing techniques; breeds and anatomy of various types of poultry.

| Starting Out *Beginner* | Learning More *Intermediate* | Exploring Depth *Advanced* |
|---|---|---|
| ○ Identify different avian species.<br>○ Learn how to properly house birds.<br>○ Understand basic avian anatomy.<br>○ Learn the feed requirements of different poultry.<br>○ Demonstrate basic handling techniques. | ○ Name and describe breeds of poultry.<br>○ Understand the Standards for breeds of poultry.<br>○ Learn the basic of avian disease prevention and care.<br>○ Participate in poultry showmanship.<br>○ Identify breed characteristics for egg production, meat production, and special purposes. | ○ Learn how to properly incubate eggs.<br>○ Describe grades and sizes of eggs.<br>○ Understand use of photoperiods and lighting in production of chickens.<br>○ Participate in Poultry Bowls and Champion Exhibitor contests.<br>○ Present on topics pertaining to poultry.<br>○ Improve knowledge of breeds and standards of poultry. |

The activities above are ideas to inspire further project development. This is not a complete list.

## 4-H THRIVE

**Help Youth:**

### Light Their Spark

A spark is something youth are passionate about; it really fires them up and gives them joy and energy. Help youth find what it is about breeding poultry that excites them.

### Flex Their Brain

The brain grows stronger when we try new things and master new skills. Encourage youth effort and persistence to help them reach higher levels of success.

### Reach Their Goals

Help youth use the GPS system to achieve their goals.

**G**oal Selection: Choose one meaningful, realistic and demanding goal.

**P**ursue Strategies: Create a step-by-step plan to make daily choices that support your goal.

**S**hift Gears: Change strategies if you're having difficulties reaching your goal. Seek help from others. What are youth going to do when things get in their way?

### Reflect

Ask project members how they can use their passion for this project to be more confident, competent and caring. Discuss ways they can use their skills to make a contribution in the community, improve their character or establish connections.

# Expand Your Experiences!

## Science, Engineering, and Technology

- Design an experiment the affect of light and photoperiods on egg laying hens.
- Explore anatomical differences in various species of poultry and how they relate to different nutritional needs of each specie.
- Research and design the best chicken coop layouts.

## Healthy Living

- Research nutritional value of poultry meat and eggs in relation to human health needs.
- Create a list of safety and biosecurity recommendations for competitive poultry events.
- Create a chart of the vital signs for different birds including heart beats per minute, respiratory rate, and temperature. Compare your findings to the vital signs of the average human.

## Citizenship

- Develop and share a presentation in your community on poultry diseases and prevention.
- Study the history of poultry production in other cultures.
- Share your expertise and assist urban families who are starting to raise chickens in their backyard.

## Leadership

- Teach others the importance of caring for an animal.
- Become a role model for others by taking the position of junior/teen leader.
- Mentor younger members to learn how to raise and show poultry.

## Resources

- American Poultry Association
  www.amerpoultryassn.com
- California Department of Food and Agriculture
  www.cdfa.ca.gov
- California 4-H Animal Science
  www.ca4h.org/Projects/SET/Animal
- Oklahoma State University, Department of Animal Science
  www.ansi.okstate.edu/outreach-extension/poultry/poultry-resources
- U.S. Poultry and Egg Association
  www.poultryegg.org

## Connections & Events

Presentation Days - Share what you've learned with others through a poultry related presentation.

National 4-H Poultry and Egg Conference

California 4-H Animal Science Advisory Committee

## Curriculum

- National 4-H Poultry Curriculum
- Poultry Knowledge Bowl Sample Questions

## 4-H Record Book

4-H Record Books give members an opportunity to record events and reflect on their experiences. For each project, members document their personal experiences and learning.

4-H Record Books also teach members record management skills and encourage them to set goals and develop a plan to meet those goals.

To access the 4-H Record Book online, visit





Authors: A. Sanborn

# POULTRY

*Sonoma County 4-H*

Name: _____ Date: _____

Guidelines for Project Proficiency Award
Beginner:

| | Date Completed | Leader's Initials |
|---|---|---|
| 1. Name the parts of a chicken (or other types of birds) | ____ | ____ |
| 2. Describe how different types of facilities best accommodate | ____ | ____ |
| different breed types. Ex: feather legged, clean legged, waterfowl | ____ | ____ |
| 3. Describe Fowl Pox, it's prevention and cure | ____ | ____ |
| 4. Describe 5 other Avian Diseases, their prevention and cure | ____ | ____ |
| A. _____ | | |
| B. _____ | | |
| C. _____ | | |
| D. _____ | | |
| E. _____ | | |
| 5. Visit a major breeder and observe their housing, feeding and care of fowl. | ____ | ____ |
| 6. Explain why chicks, growing birds and adults need different food. | ____ | ____ |
| 7. Describe the care and protection of fowl in extremely hot or cold weather. | ____ | ____ |
| 8. Identify two parasites and their prevention. | ____ | ____ |
| 9. Describe proper sanitary procedures and fly control. | ____ | ____ |
| 10. Keep personal reference material of poultry literature and handouts. | ____ | ____ |
| 11. Learn about different kinds of poultry projects. | ____ | ____ |
| 12. Learn about four different breeds of fowl, use, origins and characteristics. | ____ | ____ |
| 13. Attend a breed and showmanship class. | ____ | ____ |
| 14. Give a demonstration at Presentation Day. | ____ | ____ |
| 15. Name the different feathers and where they are on the bird. | ____ | ____ |
| 16. Demonstrate how to catch, carry and hold a bird. | ____ | ____ |

Project Leader's Signature of Completion: _____ Date: _____

Club Leader's Signature of Completion: _____ Date: _____

# POULTRY

*Sonoma County 4-H*

Name: _____ Date: _____

| Guidelines for Project Proficiency Award<br>Intermediate: | Date Completed | Leader's Initials |
|---|---|---|
| 1. Learn about the care of eggs for reproduction and sale. | _____ | _____ |
| 2. Learn how to candle an egg. | _____ | _____ |
| 3. Learn how to butcher poultry. You don't need to actually butcher but must be able to describe the proper and humane way to do it. | _____ | _____ |
| 4. Learn how to cut up a chicken for cooking. | _____ | _____ |
| 5. Learn how to prepare fowl for show. | _____ | _____ |
| 6. Learn how to show fowl. | _____ | _____ |
| 7. Learn how to judge fowl and eggs. | _____ | _____ |
| 8. Point out how to critique (evaluate) your bird. | _____ | _____ |
| 9. Describe the needs and hatching times of waterfowl, chickens and gamebirds. | _____ | _____ |
| 10. Present a demonstration to your project group, club and at County Presentation Day. | _____ | _____ |
| 11. Describe 3 poultry diseases, their prevention and if there is a cure. | _____ | _____ |
| 12. As an individual or with your club, hatch eggs in an incubator or under a chicken or other fowl. | _____ | _____ |
| 13. Describe how a fowl digests its food and why it is different from other animals. | _____ | _____ |
| 14. Look up 3 items on your own, in a poultry reference book. Examples: eggs, health, feed, etc. Prepare a report on each to share with project members. | _____ | _____ |

Project Leader's Signature of Completion: _____ Date: _____

Club Leader's Signature of Completion: _____ Date: _____

# POULTRY

*Sonoma County 4-H*

Name: _____ Date: _____

| Guidelines for Project Proficiency Award<br>Advanced: | Date Completed | Leader's Initials |
|---|---|---|
| 1. Build an incubator and hatch at least six (6) eggs. | _____ | _____ |
| 2. Complete a poultry marketing project from chick to slaughter, such as The turkey project. | _____ | _____ |
| 3. Research reproduction advances in poultry, especially A.I. techniques in turkeys. | _____ | _____ |
| 4. Complete a poultry egg production project, including marketing eggs, and keeping a poultry record. | _____ | _____ |
| 5. Participate actively in chicken shows in both breeding and Showmanship classes. | _____ | _____ |
| 6. Complete an exotic birds project, such as Pheasants or Farrow Quail. | _____ | _____ |
| 7. Give a demonstration at -County Presentation Day. | _____ | _____ |
| 8. Attend Avian Science Day at U.C. Davis. | _____ | _____ |
| 9. Make a candle box to candle eggs. | _____ | _____ |
| 10. Make a balanced feed ration for your poultry (can be in written form but must equal a total of 50#) | _____ | _____ |

Project Leader's Signature of Completion: _____ Date: _____

Club Leader's Signature of Completion: _____ Date: _____

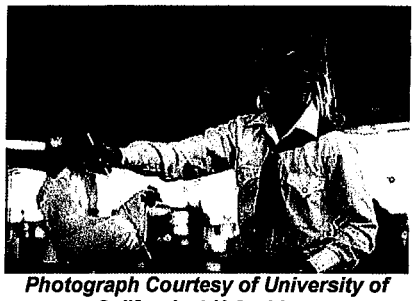
# CLOVER SAFE

AGRICULTURE AND NATURAL RESOURCES
ENVIRONMENTAL HEALTH AND SAFETY


#68

# SAFE CARE AND HANDLING OF CHICKENS

***Clover Safe notes are intended primarily for 4-H volunteers and members nine years and older.***



*Photograph Courtesy of University of California 4-H Archives*

Chickens are believed to have been domesticated first in China and India about 3,000 to 5,000 years ago. Later, chickens were brought to North America by Spanish and English explorers.

In the United States and Canada, adult male chickens are called roosters. Female chickens older than one year are called hens while those younger than one year are known as pullets.

## Safe Care and Handling of Chickens

- Approach your chicken in a calm and deliberate manner. Quick movements may startle your bird and cause it injury as it flees from you.
- Always protect your chicken(s) from potential predators such as dogs, raccoons, foxes, skunks, and hawks.
- Chickens are omnivores, meaning they eat plants and animals such as seeds and insects.
- Make sure your chicken is able to easily reach fresh feed and water at all times.
- To remove a chicken from a pen, cage, or coop, turn the bird so it exits the enclosure while facing the enclosure door. Likewise, return a chicken to its pen, cage, or coop so it enters the enclosure while facing the enclosure door.
- Be aware that chicken pens, cage, and coops often have sharp edges and enclosure doors can act as pinch points.
- If scratched or seriously pecked by a chicken, notify your group leader, parent, or guardian. Wash the wound with soap and water and cover with a clean bandage. Seek medical attention if the wound is large/deep or appears to be infected.
- To avoid slipping or falling, wear shoes with slip resistant soles and step carefully when feeding and watering your chicken(s) or while cleaning a chicken coop.
- During hot weather, assure your chicken has access to shade and/or areas of good air circulation. Alternatively, during cold weather assure your chicken has access to shelter.
- When showing your chicken at a poultry event, wear appropriate clothing such as a long-sleeved shirt, long pants, and closed-toed shoes. Always tuck your shirt in and tie your shoe laces.
- Be alert for vehicular traffic and follow safe pedestrian rules when attending poultry events.
- Always wash your hands with soap and water after handling a chicken or any other animal.

4-H Animal Science
Project Meeting Guide, AS-38, '81

# POULTRY

## SELECTING 4-H POULTRY MEETING TOPICS

THOMAS D. ZURCHER
Extension Specialist, 4-H Youth Development

## IMPORTANCE OF THE TOPIC

This project meeting guide is designed to help you and your 4-H project members identify the topics you will explore at your five or more yearly project meetings. Following each activity is a (1), (2), or (3) to give you an indication of the degree of experience it will usually require for a 4-H'er to be able to demonstrate this skill to others. The higher the number the more experience needed. If your learn-by-doing activities can be sequenced so your members may build on what they already know, a better learning experience will result. You will find a line preceding each topic for you to write in the date of the meeting at which your members will explore that particular topic. Check with your extension agent for the availability of project meeting guides for the topics you and your members choose.

The project meeting guide "Planning The Project Group's Yearly Program" will help your group get off to a good start.

### Selecting and Judging

____Identifying Breeds of Poultry (1)
____Identifying Parts of Poultry (1)
____Selecting Your Project Birds (1)
____Catching and Handling Poultry (1)
____Recognizing Abnormalities and Faults Of A Hen (2)
____Telling Layers From Lyers (2)
____Grading Poultry Carcasses (2)
____Judging A Egg Production Chickens (2)
____Talking Like A Poultryman (2)
____Presenting Oral Reasons (2)
____Scoring A Judging Class (2)
____Using The Poultry Standard Of Perfection (3)
____Conducting A Judging Contest (3)
____Selecting A Judging Class (3)

### Management Practices

____Identifying Your Project Birds (1)
____Identifying Project Equipment (1)
____Setting Goals For Profitable Poultry Production (2)
____Brooding Chicks (2)
____Planning Housing For Poultry (2)
____Keeping Poultry Litter In Good Condition (2)
____Lighting For Your Poultry Flock (2)
____Controlling Cannibalism In Poultry (2)
____Planning Your Poultry Management Schedule (2)
____Controlling Rodents In Poultry Houses (3)
____Controlling Poultry Predators (3)
____Caponizing Poultry (3)
____Calendarizing Poultry Management Practices (3)

### Health Practices

____Recognizing The Healthy Bird (2)
____Identifying Poultry Parasites (3)
____Identifying Poultry Health Supplies
____Administering Medication To Poultry (2)
____Controlling External Parasites (2)
____Recognizing Symptoms Of Poultry Diseases (3)
____Performing A Poultry Autopsy (3)
____Outlining A Flock Health Program (3)

## Feeds and Feeding

___Identifying and Classifying Feed Ingredients (1)
___Understanding A Feed Tag (2)
___Feeding Meat Production Birds (2)
___Feeding Egg Production Birds (2)
___Understanding Functions Of Feeds (3)
___Following Feed Through The Birds' Digestive System (3)
___Understanding A Bird's Nutrient Requirements (3)
___Formulating A Ration (3)
___Balancing A Ration (3)

## Fitting and Showing

___Selecting Your Show Birds (1)
___Washing Your Project Birds (1)
___Showing Your Project Birds (1)
___Making A Poultry Shipping Container (3)

## Meats, Eggs, and Marketing

___Butchering Your Poultry (2)
___Caring For Eggs (2)
___Cutting Up A Chicken (3)
___Packaging Poultry Meat (3)
___Grading Eggs (3)
___Marketing Poultry Meat and Eggs (3)
___Making An Egg Candler (3)

## Other Project Activities

___Giving A 4-H Presentation (1)
___Attending A Livestock Show (1)
___Conducting A 4-H Project Bowl (2)
___Conducting A 4-H Skillathon (2)
___Evaluating Your 4-H Project Meeting (2)
___Conducting Tours and Field Trips (3)

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# POULTRY

## IDENTIFYING POULTRY BREEDS

MELVIN L. HAMRE and TOM ZURCHER
Extension Specialists

## IMPORTANCE OF THE TOPIC

Poultry are kept for meat, eggs, and hobby purposes. One of the first and most important decisions the 4-H members must make is the selection of breeds which are best suited for the particular purposes used in the poultry activity. Knowing the breeds of poultry forms a basis for other activities such as: selection and judging, recognizing the ideal bird, understanding characteristics of various breeds, and filling out fair cards.

## WHAT YOUR 4-H'ERS WILL ACCOMPLISH

By the end of this project meeting the 4-H'ers should be able to do the following:

1. Identify 15 breeds of poultry.
2. Define the difference between breed, variety, and strain.
3. Outline the importance of breeds to the various segments of the poultry industry.
4. Give the breed characteristics of three different breeds.

## PREPARE FOR THE MEETING

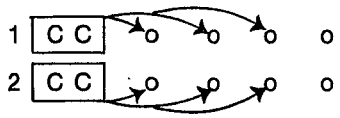
Pictures of chicken breeds and different varieties are very useful for this activity. You and your members can make a collection from several sources. See the list of references at the end of this guide.

## SET THE STAGE

Several activities are included here which will help your group meet the goals for the meeting. One way to get your members to focus on the topic is to give them a realistic situation and a task to do.

**SITUATION:** Pretend that while your chicken is being shown at the fair a person asks you about the breed, variety, strain of your bird, and what it's primarily used for.

**YOUR TASK:** Tell what you would say to this interested person. After giving teams the situation and task ask them to get together in teams of two and tell each other what they would say. Then ask the teams to report back to the group.




## LEARN-BY-DOING

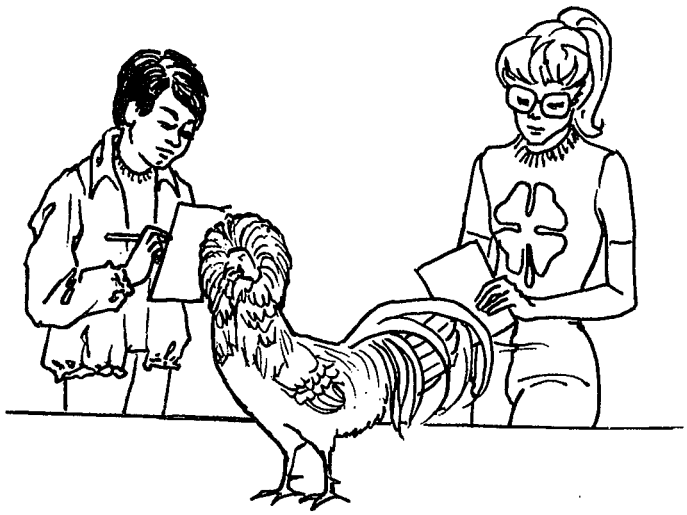
### IDENTIFYING POULTRY BREEDS

Many games and activities may be used to help 4-H'ers learn to identify poultry breeds. Three active games are outlined.

### PASSWORD

Six to twelve may play this fun and challenging game where originality and strategy are key ingredients.

1. The first person in each line becomes the clue-giver (CG) and goes to the person in charge to receive a breed name or picture (this game also works well for parts of animals, equipment, and diseases).
2. The two clue-givers then take turns presenting one word clues to their respective teams. After receiving a clue the first team member tries to guess what the breed is. Then the other clue-giver gives a clue and so on. Members of the team each get a chance until one team guesses the correct breed and receives a point.
3. After one team has guessed the answer both clue-givers go to the end of their lines and the heads of each line then obtain another breed and become the clue-givers.
4. Repeat the rotation until everyone in line has had a chance to be the clue-giver.



## AROUND THE WORLD

Five to ten 4-H'ers may play this fast-moving and exciting game. Flash cards with pictures will be needed.

1. Have your 4-H'ers sit on chairs in a circle with you or one of your members in the middle.
2. Select one person to start the game. This person would leave his or her chair and stand behind the person on the left.
3. The leader would then flash a picture card to the two of them. Whichever one of the two who first correctly answers moves behind the next person in the circle. If the person standing behind does not answer first, he sits down on the chair in front of him, the person sitting moves behind the person sitting to his left. If both 4-H'ers answer at the same time or neither answers correctly, another picture is flashed.
4. The first person who goes all the way back to his/her original seat wins the round. The second round starts with the person to the left of the winner standing behind the person to his/her left. End the activity while the excitement is still high.

## IDENTIFICATION CONTEST

Using drawings or pictures, have your 4-H'ers identify poultry breeds in an identification contest. A set of drawings is included in this guide for use with beginning project members. Over 50 color pictures are available for use with more advanced members. All poultry project members should have some familiarity with the more common breeds. Members interested in hobby and exhibition poultry may have interest in further identification activities. Use the breed identification information in this guide to help you with clues or background material on each drawing.

## DEFINING BREEDS, VARIETIES AND STRAINS

Ask your members, "If you were asked to identify the breed, variety, and strain in the name Shaver 288 White Leghorn Chicken, what would you say?" The answer is: strain–Shaver 288; variety–white; breed–leghorn; and kind of poultry–chicken.
Other examples for them to try:

Q. Single Comb Rhode Island Red
A. Variety–single comb; breed Rhode Island Red

Q. Hy-line W-36 White Leghorn
A. Strain–Hy-line W-36; variety—white; breed leghorn

Look for additional examples from commercial literature and the Standard of Perfection book of the American Poultry Association.

### Questions and Answers:

Q. How do you know a named chicken is a purebred?
A. Look and see if the breed is listed in the Standard of Perfection. This book lists breeds and varieties recognized by the American Poultry Association. Some breeds of recent foreign import and a few others will not be listed, but you will find most breeds raised in this country described in this book.

Q. Why is a Cornish Rock not listed in the Standard of Perfection?
A. Because it's a crossbred, a combination of Cornish and White Rock breeds.

Q. What breed is an Indian River meat-type chicken?
A. This is a trade name of a Cornish Rock crossbred. The only way you would be able to classify this bird in relation to breed and variety would be to refer to the breeder's literature.

## THE IMPORTANCE OF BREEDS TO THE VARIOUS SEGMENTS OF THE POULTRY INDUSTRY

Using either pictures of breeds or simply names of breeds on cards, have the 4-H'ers put the pictures or names under one of four different classifications: egg production, meat, dual purpose meat and eggs, or hobby.
Example: egg–Leghorn; dual purpose meat and egg—Rhode Island Red, Plymouth Rock, New Hampshire; meat–Cornish Rock crosses; hobby—Houdans, Hamburgs, Polish, Frizzles, bantam breeds.

## UNDERSTANDING BREED CHARACTERISTICS

Q. What are some of the different characteristics of birds which help identify them?
A. Size, shape, color, feather pattern, comb type are the major characteristics used.

Q. Looking at pictures or real birds, how are these characteristics different from one breed to another. Emphasis should be put on the difference between the breed primarily used for egg laying and another breed primarily used for meat production.

Q. Where would a person find the characteristics for breed and variety in detail?
A. The Standard of Perfection. Example: For Rhode Island Reds, it includes the history of of the breed, standard weights, shape of both male and female, disqualifications, and the color descriptions of each part of the male and female. It also includes variety information such as in the Rhode Island Red, a single comb and rose comb variety.

Q. Which breed of chicken lays a blue or greenish shelled egg?
A. Araucana (not included in the Standard of Perfection; see Poultry Fact Sheet #47).

## OTHER MEETING ACTIVITIES

1. Roll call answered with the name of a breed or a breed used for a specific purpose.
2. Name game—a breed name taped on each person's back. The members' questions are answered with a yes or no.
3. Identification contest using live birds as part of or separate from a judging contest.
4. Project bowl questions and answers.
5. Drawing the different breeds.
6. Drawing the shapes of different breeds.

## Supporting Activities

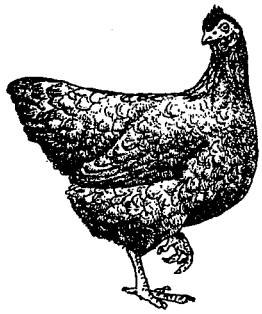
Topics for other meetings might include:
1. Identifying the Parts of the Chicken
2. Judging Egg Production Chickens
3. Selecting Your Project Bird

### References


1. Poultry Fact Sheet #47, Araucana Chickens and Their Unusual Egg Shell Colors
2. Advertising and literature from poultry breeders and hatcheries
3. Magazines such as Poultry Tribune or Broiler Industry
4. Poultry Breed Pictures may be purchased from:
   Watt Publishing Company
   Service Section
   Sandstone Building
   Mount Morris, IL 61504
5. Wisconsin Extension Publication A2880, Chicken Breeds and Varieties; 50 cents, from:
   Agricultural Bulletin Building
   1535 Observatory Drive
   Madison, WI 53706
6. Standard of Perfection, American Poultry Association
7. Publications of the American Bantam Association

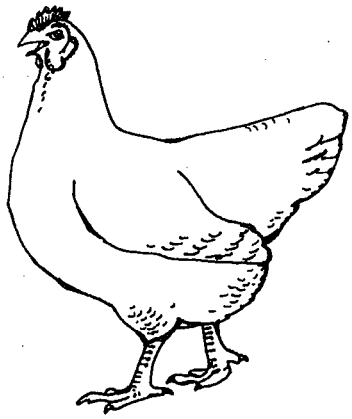

## POULTRY BREED: IDENTIFICATION, INFORMATION & CLUES

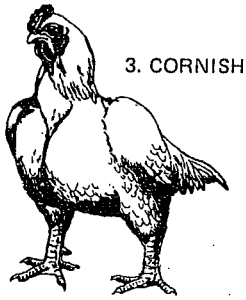
1. **Rhode Island Red**—dual purpose breed. Pretty good layer. What color egg shell? (Brown) How do you tell? (Colored earlobe) Commercial strains are usually lighter brown in color of feather than the desired standard breed color. (Single comb variety).
2. **White (Plymouth) Rock**—dual purpose breed. Pretty good layer. What color eggshell? (Brown) Why? Same reason as above. The "Rock" part of the Cornish—Rock crosses we use for meat birds.
3. **White Cornish**—meat type breed. Comb type is called the pea comb. Blocky conformation—rather slow growing breed. The Cornish part of the Cornish-Rock crosses.
4. **Pekin** (not Peking) **Ducks**—fastest growing duck. Duckling in meat counter at store raised commercially will be this breed. Not broody so will not set on own eggs. White plumage.
5. **Barred (Plymouth) Rock**—dual purpose breed once popular in area. Some were excellent layers. Used in some early Cornish-Rock crosses for meat birds. Hackle feathers in demand for tying fishing flies. What color eggshell? (Brown). Black and white plumage.
6. **Rouen Duck** (pronounced Roo'-en or Row'en) (not Mallards—these are too big for Mallards). Common midwest farmyard ducks. Will set and raise own young. Not as fast growing as Pekin breed. Colored plumage similar to Mallard.
7. **Mottled Houdan**—(Hoo-dan) A French breed of interest to exhibition poultry raisers. "V" comb, crest (top-knot of feathers on head), White skin (shanks), five toes instead of usual four, mottled black and white feather pattern. Lays a white shelled egg.
8. **White Leghorn**—Most commercial layers are of this breed. Excellent egg layer, a small-bodied bird that produces eggs more economically than many larger birds. Eggshell color? (White-note white earlobe).
9. **Embden Goose**—large breed, white feathers, meat type.
10. **Silver Laced Wyandotte**—an ornamental feather pattern where each feather is outlined with silver-gray. Dual purpose breed raised primarily for hobby and exhibition purposes. Eggshell color? (Brown - colored earlobe). This breed has a rose comb.
11. **Colored Muscovy Duck**—A breed of South American origin not related to other common duck breeds. Rough growths on face and head area are called caruncles. Male is almost twice as large as female in this breed. Black and white plumage in colored variety.
12. **Buff Cochin** (Coach-In)—Primarily kept for exhibition. Buff is the feather color, there are three other color varieties of this breed. Color of eggshell? (Brown) Shanks are feathered. A loose-feathered breed—fluffy, feathers do not lay tightly against body like in leghorns, rocks, or other common breeds.
13. **Golden Sebright Bantam**—Bantams are miniature fowl. Many breeds have a bantam developed from them. This breed has laced feathers and rose comb. Both male and female are "hen feathered"—the male does not have the usual pointed hackle feathers.
14. **White Crested Black Polish**—An ornamental breed laying white - shelled eggs. How does the breed differ from Houdan? (Houdan has five toes).
15. **Toulouse Goose** (Too-loose),—large breed, meat type. Dark gray back and wings, light gray breast, almost white abdomen. Dewlap.



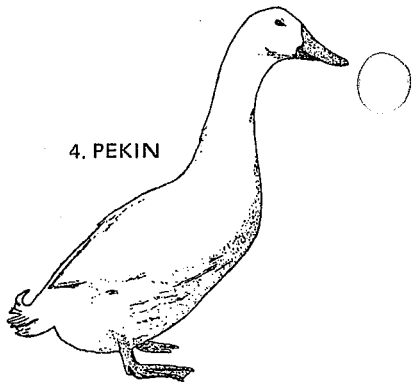
1. RHODE ISLAND RED

2. WHITE (PLYMOUTH) ROCK

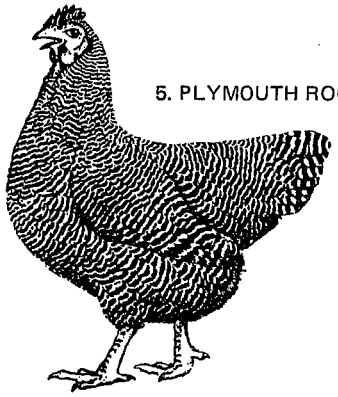




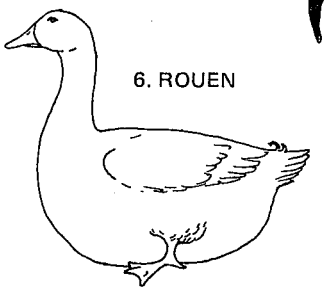
3. CORNISH



4. PEKIN

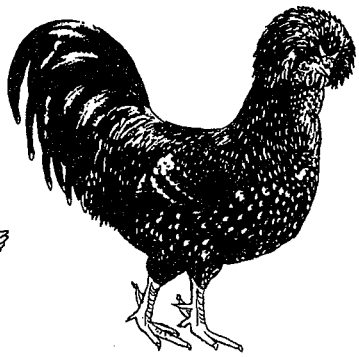


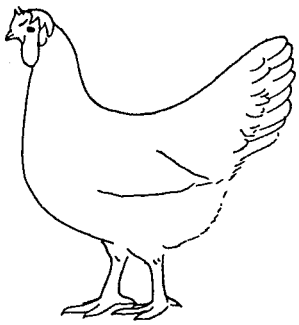
5. PLYMOUTH ROCK



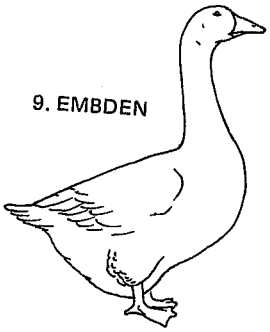
6. ROUEN

7. HOUDANS



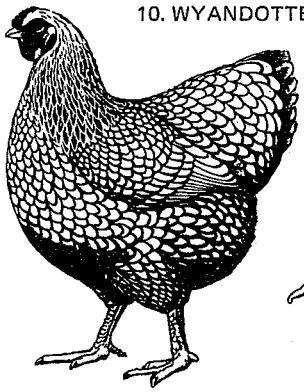


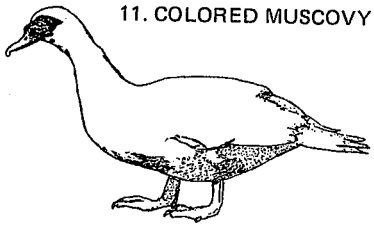
8. WHITE LEGHORN



9. EMBDEN

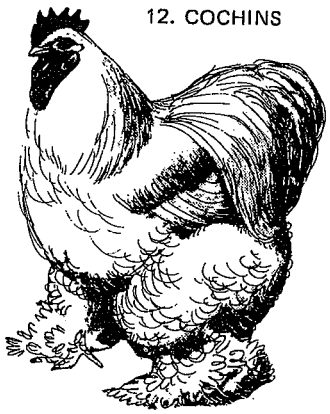
10. WYANDOTTES

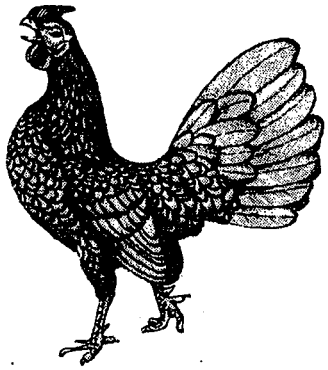




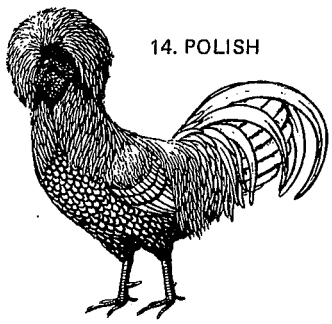
11. COLORED MUSCOVY

12. COCHINS

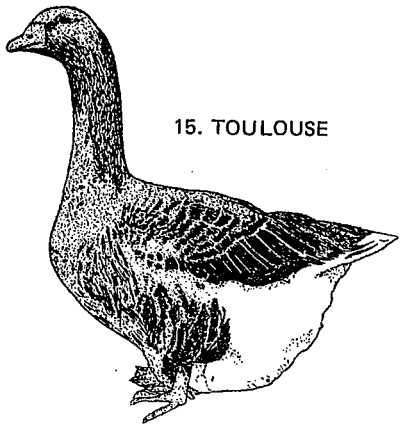




13. SEBRIGHT



14. POLISH



15. TOULOUSE

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# POULTRY

## CATCHING & HANDLING POULTRY

MELVIN L. HAMRE
Extension Poultry Specialist

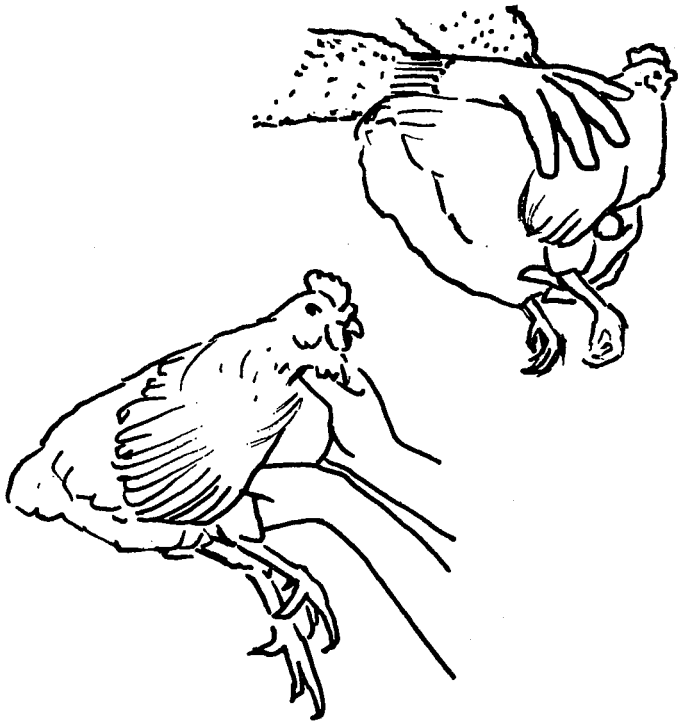
## IMPORTANCE OF THE TOPIC

It is necessary to catch and handle birds when judging, culling, and at various times in the management of the flock. Proper catching and handling methods can avoid both injury and discomfort to the birds and the persons doing the handling. By using proper procedures, 4-H members can show skills they have learned in working with poultry.

## WHAT YOUR 4-H'ERS WILL ACCOMPLISH

By participating in this learning activity, your 4-H'ers should be able to do the following:

1. Properly catch a bird in a cage or coop, remove it, and then return it after examination.
2. Properly hold a bird for judging and culling examination.
3. Use a net, catching hook, or catching frame to aid in catching birds from a flock. (Optional activity)
4. Develop self-confidence and self-expression.



## PREPARE FOR THE MEETING

This guide and its references outline some relatively simple procedures to follow in catching and handling poultry. The first two accomplishments above can be taught anywhere you have a few birds and an exhibition coop or crate. To allow 4-H'ers to demonstrate catching birds from a flock you will need to have a meeting at a farm with a poultry flock housed on litter, on the floor, or on range.

If you are involving members in judging contests or other activities where members will be handling birds, review proper catching and holding of the birds just prior to the activity.

**Supplies:** catching net, hook and/or catching frames to practice the various catching methods.

**Visuals:** check on availability of slide sets through your extension office. Slide set 550 shows both catching birds from the flock and removing birds from crates and cages. Slide set 406 shows catching and handling birds from exhibition cages in the first few slides in the set.

## FACILITATE THE ACTIVITY

This would be an easy activity to simply demonstrate to the members how to catch and handle birds and then ask them to practice the various steps. Another method which provides greater opportunities to develop life skills as well as catching and handling skills is diagrammed below. You'll find that the members will have additional enthusiasm and interest as you give them the opportunity to "Learn By Doing Before Being Told or Shown How".

Examples of situation and task:

**SITUATION:** The poultry showmanship judge has asked you to remove your bird from the cage.

**YOUR TASK:** Demonstrate how you would remove the bird while the judge looks on.

**SITUATION:** The judge asks you to pass your bird to the person next to you.

**YOUR TASK:** Demonstrate how you would safely pass the bird.

## QUESTIONS TO ASK

Q. What is one recommended method for removing a bird from a cage?

A. Guide the bird to the front of the cage with the right hand over its back so it is facing or partially facing the cage opening. Place the left hand under the body with the forefinger between the legs, grasping around one leg with the other three fingers and the other with the thumb. Holding the right hand over the back to restrain the bird, guide it out of the cage.

Q. When the bird is held as described above, what can the holder then do?

A. Held in this manner, the bird can be examined for culling, judging, checked for external parasites, or evaluated for other purposes.

Q. How would you carry the bird?

A. Using the same holding procedure the bird can be comfortably carried resting on the arm held against the holder's body or restrained during carrying by holding the bird against the body with the arm.

Q. How is the bird returned to the cage?

A. After examining the bird, always return it to the cage head first.

### Supporting Activities

If a flock is available, demonstrate and practice using a net, catching hook and/or catching frame using procedures shown in slide set 550.

After the demonstrations by the 4-H'ers, follow up the meeting by showing slide sets 550 and 406.

Provide use for these skills by involving members in judging contests, culling demonstrations, and other hands-on project learning activities.

### References


1. Slide set 550, Hatching and Handling Poultry
2. Slide set 406, Poultry Selection and Judging, Part 1 (first few slides)
3. Poultry Showmanship, University of Arizona 4-H publication (limited quantities available from 4-H office)
4. Brief details on catching and handling poultry are often included in publications on poultry judging.



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# POULTRY

## TELLING LAYERS FROM LYERS

MELVIN L. HAMRE
Extension Poultry Specialist

## IMPORTANCE OF THE TOPIC

There are several reasons for culling the laying flock: to save the cost of feeding unproductive hens; to remove non-layers to provide more space for the remaining flock; to salvage non-producing birds for stewing or other poultry meat uses, and to select birds for a second year of production if desired. By learning how to tell layers from non-layers, your 4-H project members will be able to have a more profitable poultry flock and utilize the meat by-products.

## WHAT YOUR 4-H'ERS WILL ACCOMPLISH

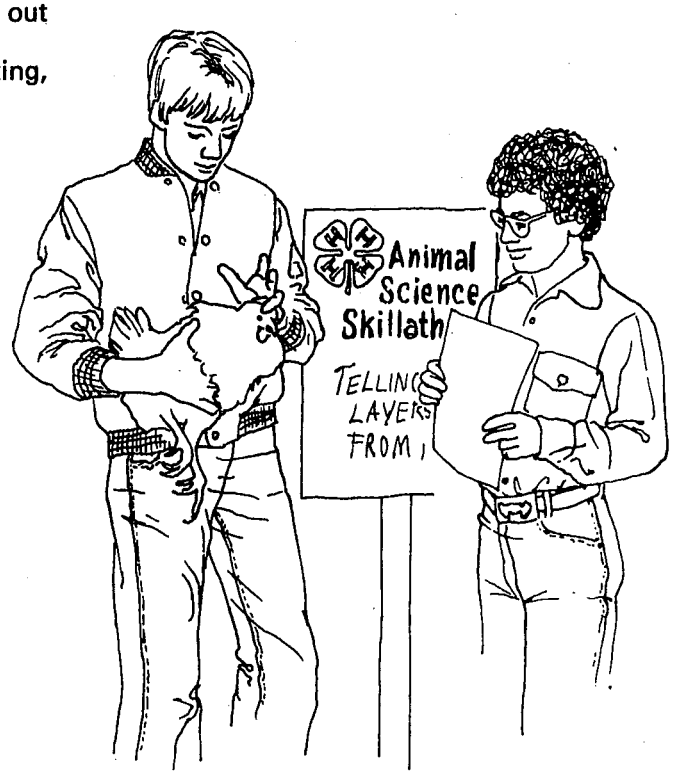
By involving them in learn-by-doing activities your 4-H'ers should be able to do the following:

1. Describe four characteristics of laying and non-laying hens.
2. Using pictures or live birds, tell whether birds are laying or not and be able to give reasons for their decisions.
3. Using what they have learned in this project meeting experience, go into a flock of birds and cull out the non-layers.
4. Further develop the life skills of decision making, utilizing knowledge and giving oral reasons.

## PREPARE FOR THE MEETING

This experience is most meaningful if live birds can be used. One of your poultry members may have a laying flock which contains birds that are suitable for this learning experience. Involve the member and his parents in planning the meeting. It is best not to bring birds in from several sources to be mingled together and then returned to the owners' flocks. This can be a potential means of spreading diseases.

Pictures of birds which appear to be layers or non-layers often appear in magazines and advertising literature. You and your members might look for pictures that can be used in a learning experience of keep and cull with the use of pictures. You might also want to have the characteristics for laying and non-laying hens written on cards or pieces of paper that can be matched for a cull and used in a matching game. Two excellent references listed in this guide are available from your extension office.



## LEARN-BY-DOING ACTIVITIES

1. **Matching Game.**
   Characteristics identifying layers and non-layers. Using the chart from this guide, make pieces of paper which list the characteristics for laying and non-laying hens. Have either individuals or teams sort the characteristics for laying and non-laying catagories. The characters could also be listed on a blackboard or chart and have individuals write in the identifying characteristics for layers or non-layers. Score by correctness of answers and/or speed in finishing the assignment.
2. **Coloring a Hen.**
   Using the University of Minnesota 4-H Children Worksheet or Chart have your members color a layer or non-layer and give a short presentation of their reasons for coloring it as they did.
3. **Judging.**
   Using pictures or live birds, place each bird in a laying or non-laying catagory. Give reasons for placement.

## QUESTIONS TO ASK

Q. What happens to a bird's comb when it goes out of production?
A. It becomes small, shriveled, and scaly.
Q. What is the order of appearance of the pigment as it returns to the body parts of a hen of the yellow-skinned breeds as she goes out of egg production?
A. 1) vent, 2) eye ring, 3) earlobe, 4) beak and 5) feet and shanks
Q. How does the space between the pubic bones differ between a layer and a non–layer?
A. The pubic bones are rigid and close together in the non-layer; two- finger spread or more between the pubic bones in a good layer.
Q. Are all yellow-skinned birds that show bleaching of pigment showing a sign of good egg production?
A. No, in some cases of disease and abnormality, birds may show faded pigment and yet be poor producers.

## FOLLOW-UP ACTIVITIES

Go into a chicken house and pick out birds that you suspect are nonlayers. This is often best done at night with a flashlight. You will disturb the birds less. Examine those birds that appear to be non-layers by looking for the egg laying indicators. Have an experienced poultryman check your reasoning, or if possible put the birds you cull into a separate area and check their egg production for a week to determine your ability to sort layers from lyers.

### Supporting Activities

Topics for other meetings include:
1. Identifying parts of poultry
2. Talking like a poultryman
3. Judging egg production hens
4. Giving oral reasons

### References


1. Poultry Fact Sheet #32, Judging Egg Production Classes
2. Publication A1266, Recognizing the Producing Hen, University of Wisconsin, (single copy in Poultry Production References for County Extension Offices, a notebook in each county extension office).
3. Culling and selection information contained in poultry management literature and general poultry production books.


### Characteristics Identifying Layers & Non- Layers

| LAYING HEN CHARACTERISTICS | CHARACTER | NON-LAYING HEN CHARACTERISTICS |
|---|---|---|
| Large, red, waxy | Comb, wattles | Small, scaly, shriveled |
| Bleached or bleaching | Beak | Yellow or growing yellow |
| Bright, prominent | Eyes | Dull, sunken |
| Bleached | Eye ring | Yellow-tinted |
| Flexible, wide apart, thin | Pubic bones | Rigid, close together, blunt |
| Soft, pliable | Abdomen | Hard, contracted |
| Large, moist, bleached | Vent | Dry, puckered, yellow |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# POULTRY

## MAKING AN EGG CANDLER

MELVIN L. HAMRE
Extension Poultry Specialist

## IMPORTANCE OF THE TOPIC

Although egg candlers can be purchased, they are relatively simple and inexpensive to make. Making an egg candler can be a fun learn-by-doing activity for 4-H project members. The candler constructed can be easily used by members producing eggs from their project or by others for demonstration purposes.

## WHAT YOUR 4-H'ERS WILL ACCOMPLISH

During the project meeting the 4-H'ers will do the following:

1. Develop the life skills of learning-by-doing, expressing themselves, developing leadership skills, using resources, and applying science and technology.
2. Either singly or in groups, make an egg candler with little or no assistance.
3. Demonstrate to others how to make an egg candler.
4. Demonstrate how the candler that has been constructed is used to candle eggs.

## PREPARE FOR THE MEETING

Spend a little time reviewing this meeting guide, collecting supplies, and deciding on how much of the activity you want to take place at the meeting. Time can be saved if you want to precut the materials, or have one of the members do the precutting prior to the meeting time. Directions follow for construction of a candler out of wood. You can follow these directions exactly or make some modifications to fit suitable materials you may have on hand.

The electrical connections required to make a candler are simple. If you had no experience with electrical wiring you may wish to have someone who is experienced check your materials and procedures to be sure the candler is constructed properly and presents no electrical hazard. These directions provide for the use of a porcelain or plastic socket with the terminals for the electric wires on the side towards the bulb (the type used with exposed wiring), a 60-watt bulb, and 6 feet of extension cord with a male electric plug.

For the wooden candler you will need a 1" × 6" piece of lumber 38" long, a piece of ¼" plywood 6 ⅜" square, 2 wood screws that fit the holes in the electric socket and some 7-penny box nails. A piece of heavy felt material can be placed around the candling opening to prevent light leakage between the candler and the egg.

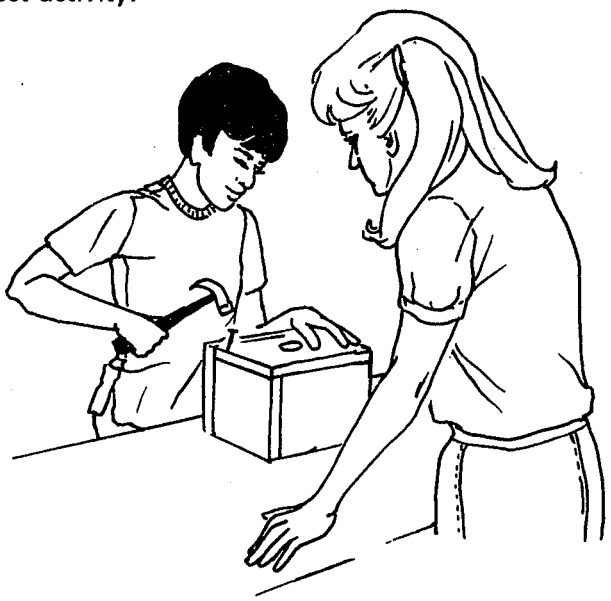
## FACILITATE THE ACTIVITY

Divide your group into two or three teams and present them with a situation and a task.

**SITUATION:** Your neighbors have complained that some of the eggs you have been selling to them contain blood spots.

**YOUR TASK:** You decide to make an egg candler so you can pick out eggs that have quality defects.

Provide each team with necessary tools, materials, and directions. Let them go to work. Junior leaders and parents may want to be free to move from team to team. Stand back and observe. Avoid the impulse to jump in and do the work for the members. Let them have the feeling of accomplishment from doing this project activity.



## DISCUSSION QUESTIONS

Q. What are the major considerations to be observed in constructing and using the candler?

A. The size of the candling opening, the centering of the bulb on the opening, and the relation of the light to the person doing the candling are all important. (See Figure 5)

Q. What precautions are necessary in the candler construction?

A. Construction must be made light tight so that light does not leak through the cracks between the boards. Electrical connections must be properly made.

## SUMMARIZING THE ACTIVITY

Give your 4-H'ers recognition plus a chance to demonstrate that they followed the proper procedure in constructing their candler. Let them suggest modifications that might be made to use other materials or methods in making a satisfactory candler to look at some eggs.

### Supporting Activities

Meeting topics which support this activity include:

Grading eggs.

Project members with electric or shop projects might include building a candler as part of these activities.

Giving a demonstration.

## REFERENCES

Project Meeting Guide - Grading Eggs.

Poultry Fact Sheet #34, Egg Grading.

## STEPS IN MAKING THE CANDLER

1. Cut four pieces 8" long from the 1" x 6" board.
2. Drill a hole in one of the pieces as shown in Figure 1.
3. Nail the four 8" pieces together as shown in Figures 2 and 3.
4. Cut the remaining piece of board to fit inside the candling box as a bottom.
5. Before nailing the bottom piece in place, screw the electric socket to the center of this piece. Use a block if necessary to adjust bulb height to center on opening.
6. Drill a hole in back of the candler for the extension cord.
7. Wire male plug to cord, feed extension cord through hole in back of candler, and connect extension cord to the socket that has been placed in the proper position in the candling box. Nail bottom in place.
8. Cut two small wooden cleats from scrap lumber and fasten to the inside of the plywood cover with brands so you will have a removable top for your candler that will be held in place.
9. Cut a 1" hole in a heavy felt pad and glue this to the front of the candler. This cushioning around the candler cuts down on the danger of cracking eggs and also allows the eggs to fit the opening better so light will not leak around the egg.
10. Have a leader check electrical connections and construction to see that you have properly followed instructions. Test your candler by plugging it in to see that the bulb lights. Darken the room. Hold an egg up to the opening of the candler as shown in Figure 5 and you will be able to observe the contents.

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# POULTRY

## GRADING EGGS

MELVIN L. HAMRE
Extension Poultry Specialist

## IMPORTANCE OF THE TOPIC

Project members should candle eggs before marketing to remove those with cracked shells, blood spots, and other quality defects. Eggs that are being incubated should also be checked by candling to determine the progress of embryo development. A knowledge of egg grading should be of interest to all of us as consumers.

## WHAT YOUR 4-H'ERS WILL ACCOMPLISH

By participating in this learn-by-doing activity, your members will be able to:

1. Classify eggs into their correct grade.
2. Demonstrate how to candle eggs properly to determine their interior quality.
3. Gain experience in making decisions and judgments.

## PREPARE FOR THE MEETING

Involve your 4-H members as much as possible in the preparation. The more involved they are, the more interest and enthusiasm they will bring to the activity.

You will need eggs with different quality characteristics. Store some eggs for differing lengths of time under refrigerated and non-refrigerated conditions to obtain quality differences. Members can also bring eggs so you will have eggs from a number of sources held at differing storage times and conditions.

In addition to the eggs, you will need an egg candler, a dark room in which to carry out the candling activity, and Poultry Fact Sheet #34, which gives the grading specifications and describes the candling procedure. An illustrated chart showing the candled appearances of the various grades is also a helpful learning tool.

## FACILITATE THE MEETING

This particular activity is one that you might let your 4-H members discover for themselves how to grade eggs before telling or showing them how. Divide the members into small groups and give them a copy of the fact sheet which tells how to hold the eggs for candling and has a summary table which gives the specifications for each quality factor. Give them a situation and a task to be done. Then stand back and let the members carry out the activity. Here are examples:

**SITUATION:** A neighbor is willing to buy eggs from your small poultry flock but won't buy any unless you can insure him there are no blood spots in your eggs.

**YOUR TASK:** Demonstrate how you would candle a dozen eggs to check for blood spots before you sell them to your neighbor.

**SITUATION:** You want to only sell quality eggs from your flock. You have been away on vacation and some of the eggs have not been sold for some time.

**YOUR TASK:** Demonstrate how you would candle your eggs to select a dozen that were A quality or better for sale.

## QUESTIONS TO ASK

Q. What factors are observed in determining interior quality?
A. Depth of air cell, clarity and firmness of the white, outline of the yolk, and freedom from defects.

Q. You look in an egg that has A quality air cell, but a B quality yolk outline. What grade would you give this egg?
A. Grade B. The lowest grade for any quality factor determines the grade of the egg.

Q. What relationship does grade have to size of egg?
A. None. Grade and size of eggs are independent of each other.

Q. What are the consumer grades of eggs in Minnesota?
A. Grades AA, A, and B.

Q. How does cleaniness of the egg effect grade?
A. A shell that has adhering dirt or more than a small amount of stain cannot be placed in a consumer quality grade.

Q. How do you evaluate the thickness of the white when you candle the egg?
A. By turning your hand at the wrist as you place the egg up to the candle, you can cause the contents of the egg to spin within the shell. The spinning action will show a more definite yolk shadow as the yolk comes closer to the shell in an egg with thin albumen.

## SUMMARIZING THE ACTIVITY

Help your members understand what they have learned. Questions from the group will expand their learning experience. Show a slide set or film to reinforce it.

### Supporting Activities

A meeting topic that would support this activity would be making an egg candler. To demonstrate the effect of storage conditions on holding eggs, have members candle some eggs and then store them under refrigerated and non-refrigerated conditions and candle them again at a later meeting to see the decline in quality.

### References

1. Poultry Fact Sheet #34, Egg Grading
2. Chart showing standards of quality for shell eggs.
3. Extension Folder #174, Know the Eggs You Buy
4. Slide set #556, U.S. Standards for Quality of Individual Shell Eggs or Slide-Tape set #405, Grading Eggs for Quality
5. Film #3140, Egg Grades—A Matter of Quality. Shows a modern commercial egg production system from the laying hen to the market place. Emphasizes the grading of eggs in commercial operations.

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# POULTRY

## JUDGING EGG PRODUCTION CHICKENS

MELVIN L. HAMRE
Extension Poultry Specialist

## IMPORTANCE OF THE TOPIC

There are a number of characteristics of the laying hen which indicate her productive performance. If 4-H'ers know these characteristics and how they are expressed, they can compare birds in relation to their productivity. To have both fun and an educational experience, place birds with differing productivities in a group or class to rank them in their order of productivity. By learning how to judge an egg production class your members can become familiar with a judging contest and also gain useful information for comparison of birds, selection of exhibition or breeding stock, and practicing abilities in decision making.

## WHAT YOUR 4-H'ERS WILL ACCOMPLISH

After participating in this hands-on learning activity, your 4-H'ers should be able to do the following:

1. Estimate past production of laying hens by pigmentation and molt.
2. Use the characteristics of egg production to properly place a class of egg production chickens.
3. Develop skills in making decisions and giving reasons for placings.

## PREPARE FOR THE MEETING

This activity can be conveniently carried out on a farm where there is a laying flock, or the birds can be brought to another location in coops or crates. Birds to be judged in a class should be of the same age and from the same flock for best comparisons. For this activity, it would be desirable to have enough birds so that one class could be used for demonstration and discussion purposes, and another for letting the members apply what they have learned. This activity will be most effective if it builds on previous learning experiences. Identifying parts of the animal, talking like a poultryman, catching and handling poultry, and telling layers from lyers are project meeting topics which can provide useful background information for judging egg production classes.

Birds for the classes must be picked out ahead of time. There will not be a lot of differences between the majority of birds. You will need to look over quite a few birds to find individuals with enough differences to make placeable classes for your 4-H members. Once selected, the birds must be identified so that you can tell them apart for the judging activity. If leg bands are not available, place a couple wraps of masking tape around one leg of the bird and mark numbers on the tape for bird identification.

Obtain supplies you will need for the activity. Members can bring their own pencils and note pads if they are involved in the planning ahead of time. Judging cards and oral reasons 4-H cards can also be obtained from your extension office. Check with your extension office for project meeting guides you would like to use and other supporting materials.

Involve members and parents in preparation and presentation. Plan to have someone demonstrate how to properly take a bird from a coop or cage and return it after examination. Have someone explain how to estimate past production by pigmentation; someone else can tell how past production can be determined by molt. Another person can show how to systematically

examine the bird or the characteristics you are evaluating. Then you need someone to explain how to make the placings and mark the cards properly.

## FACILITATING THE ACTIVITY

Introduce the topic and have the people selected make their presentations on catching and handling the birds, how to evaluate the birds, and how to make their placings and mark the cards. Ask for questions.

Next, have your 4-H'ers turn attention to the class you have set up for them to judge. Ask the members to judge each bird without handling it. Using these first visual observations ask members to place the class. Have each discuss their placings after they have had an opportunity to make their judgments. Point out the values of these first impressions. They can make pairings, select top and bottom birds, or make other observations that can be followed up with handling of the birds.

Next have the members handle each bird. Have them observe pigmentation, molt, and handling qualities. After members have handled each bird, have them place the class order of production characteristics based on all of the factors they have considered. Again ask them to discuss their placings. Compare first observations with more detailed characteristics found by handling the birds. Have the member or adult acting as the official judge give the placing on the class and discuss the reasons for the placing. Let members discuss the placing and ask questions.

Now have the members put into practice what they have learned with their previous experience to place a second class. Have the members observe the birds for two or three minutes before letting them handle the class. After all the members have handled the birds have them mark down their placings. Ask a member to give his placing and a couple reasons why he placed the birds the way he did. Let other members give their placings and reasons. Then let the judge give the official placing with the reasons for placement.

## SUMMARIZING THE ACTIVITY

Praise those taking part in the activity for their contributions. Review handling the birds, ways to estimate production, making the placings, marking the cards, giving reasons for placement. Emphasize the importance of developing a definite system for examining the birds. Point out that judging is a skill that takes time and practice to develop proficiency. Other opportunities may be provided to judge classes of different ages and other types of poultry. Skills obtained in properly judging birds, livestock, or other objects can be useful in making judgments in many other decision making situations.

### Supporting Activities

Topics for other meetings include:
* Identifying parts of the animal.
* Talking like a poultryman.
* Catching and handling poultry.
* Telling layers from lyers.
* Giving oral reasons.
* Scoring a judging class.
* Conducting a judging contest.

### References

1. Poultry Fact Sheet #32, Judging Egg Production Classes
2. Publication A1266, Recognizing the Producing Hen, University of Wisconsin (single copy in Poultry References for County Extension Offices, a notebook in each county extension office)
3. Poultry Fact Sheet #31, Giving Reasons on Egg Production Classes

Issued in furtherance of cooperative extension work in agriculture and home economics, acts of May 8 and June 30, 1914, in cooperation with the U.S. Department of Agriculture. Norman A. Brown, Director of Agricultural Extension Service, University of Minnesota, St. Paul, Minnesota 55108. The University of Minnesota, including the Agricultural Extension Service, is committed to the policy that all persons shall have equal access to its programs, facilities, and employment without regard to race, creed, color, sex, national origin, or handicap.

4-H Animal Science
Poultry Project Meeting Guide, AS-45, '81

# POULTRY

## WASHING YOUR PROJECT BIRD

MELVIN L. HAMRE
Extension Poultry Specialist

## IMPORTANCE OF THE TOPIC

Exhibiting is an important part of most 4-H member's project activity. A dirty bird is a reflection on the exhibitor. Birds that are cleaned and properly groomed are impressive both to the judge and the viewing public. In order to receive top placings, members must do a good job of selecting birds of excellent quality and then properly clean them up and prepare them for the show.

## WHAT YOUR 4-H'ERS WILL ACCOMPLISH

As a result of participating in this activity, your 4-H'ers will be able to:

1. Properly wash a bird and prepare it for showing.
2. Further develop their life skills of working together as a group, presenting a demonstration and gaining self-confidence.

## PREPARE FOR THE MEETING

Involve your 4-H members as much as possible in the preparation. The more they are involved, the more interest and enthusiasm they will bring to the activity.

Supplies needed: 3 tubs or large containers of warm water, mild soap, sponge, thermometer, soft cloths (old towels), old toothbrush or other small brush, clean coops or cages.

## FACILITATE THE ACTIVITY

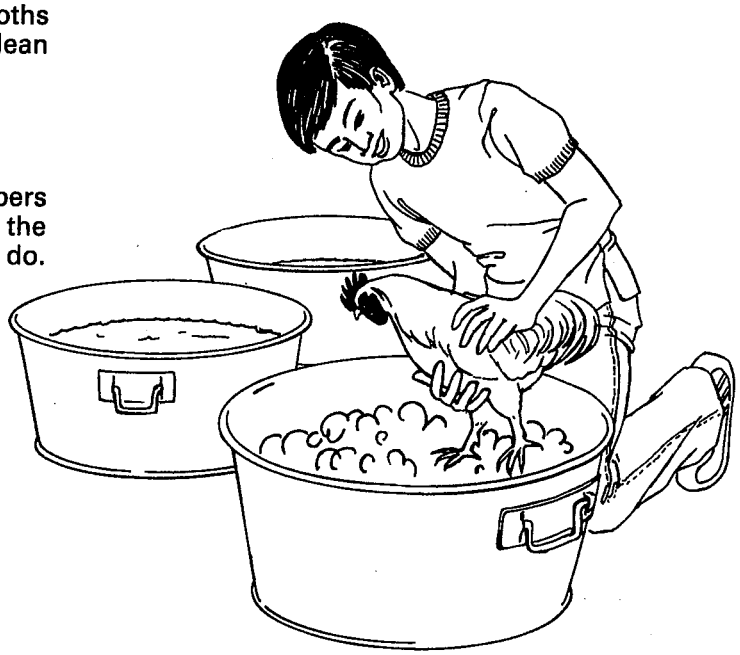
Divide the group into teams of two or three members each; provide them with a bird and access to the supplies needed. Give them a situation and task to do. Help them discover for themselves that they can wash a bird and prepare it for show. Ask them questions to help them discover how to do what they need to know.

**SITUATION:** Several club members are going to show their poultry at the county fair. Some first year project members ask if it is necessary to wash the birds and how do they do the job properly.

**YOUR TASK:** Demonstrate how you would wash a bird for showing.

Step back and observe: even if some of your members have no idea what to do, first step back and give them a few minutes to discuss the task. Then help them along by asking them questions and answering their questions with further questions. Try to lead them to the correct answers.

Not all poultry showmen use the same procedure in washing their birds. You or some of your more experienced project members may be familiar with a washing procedure. By involving members in discussion and asking questions, decide on a procedure to follow before the members actually begin washing their birds. A suggested procedure is included under discussion questions.



## DISCUSSION QUESTIONS

Q. Should birds always be washed before showing?
A. A bird should be clean to look its best. Top notch showmen wash their birds. White birds especially need washing to have a good clean appearance. Some feel that colored birds kept under clean conditions may only need their shanks and feet washed and some cleaning about the head with a damp cloth. Waterfowl with access to water will generally clean themselves pretty well. They need a clean area to be in after they get out of the water. It may be necessary to only wash their shanks and feet and do a little cleaning about the head.

Q. How do you avoid damaging the birds feathers?
A. Sponge the feathers clean, being careful to wash in the direction that the feathers lay so as to not ruffle or disturb their appearance. All feathers must be entirely wetted by immersing the bird in the wash water (keeping the head above water most of the time). To avoid feather damage, have your hands wet before working with a wet bird and dry before handling a dry bird.

Q. How can you clean the feet and shanks?
A. Use an old toothbrush to clean around the scales on the feet and shanks. A toothpick can be used to clean dirt from under scales.

Q. When should birds be washed?
A. Wash birds not less than 48 hours prior to the show so your bird will be dry before transport. Then you can be sure you have dry birds to exhibit, and not damp birds that get chilled during hauling.

Q. Where should the birds be washed and dried?
A. It is convenient to wash the birds outside if the weather is 70 degrees F or above and not too windy. The birds will be subject to chilling until they are dry. If the weather is cool, then drying must be done inside. Room temperatures of 80-90 degrees F work well. Birds should dry slowly for best results. If a warm room is not available, use a heat lamp over the cage in which the birds are placed to dry.

Q. What temperature should the wash water and rinse water be?
A. Three tubs of water are necessary for a good washing procedure. Work up a good batch of suds from a mild soap in the first container which has the water temperature at 95 degrees F. The second and third tubs are for the rinse water. Rinse water should be cooler than wash water to aid in the removal of the soap. One tub at 85 degrees and the other slightly cooler will work fine. If the water is too cool and the birds are held in it too long, their combs may turn purple. Remove the birds from the water immediately if this occurs.

Q. How should the birds be handled when washing?
A. When placing the bird in the wash water, rest the bird on the palm of one hand and restrain the bird with the other hand spread over the back. If the bird struggles, dipping the head under for just an instant will usually cause the bird to be more calm. The feathers must be well soaked or they will break easily. Wash the bird thoroughly with your hands or with a sponge, washing with the grain of the feathers. Pay particular attention to any heavily soiled spots and try to remove all dirt before removing the bird from the suds.

Q. Describe how you would rinse and dry the bird.
A. Hold the bird in the first rinse water for two minutes to soak out much of the soap. Draw the water through the feathers three or four times when moving the bird in the water. After you remove the bird from the water press as much water as you can from the feathers.

Next rinse the bird in the final rinse water. Be sure there is no soap left in the feathers. If any soap remains, the feathers will not regain their normal appearance. Again press water from the feathers after you remove the bird from the final rinse. Drying of the birds may be aided by wrapping them in a turkish towel after the last rinse. Birds should be placed in a clean coop with clean straw or shavings on the floor. The drying area must be warm and free from drafts.

Q. How can you improve the appearance of birds just prior to judging?
A. Check birds over for any soiled spots that can be removed with a damp cloth. A few drops of mineral oil or a small amount of petroleum jelly on a soft cloth can be used to polish the shanks, feet and beak. Combs and wattles may also look more attractive if rubbed with a small amount of these substances. Properly done, no oily or greasy appearance remains.

## SUMMARIZING THE ACTIVITY

Examine the birds to be sure they have been properly cleaned and ask members to review the procedures to tell what they have learned. Praise their efforts for a good job and emphasize the learning experiences gained by participating.

### Supporting Activities

Selecting your show birds.
Showing your project birds.
Making a shipping container.

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4-H Animal Science
Project Meeting Guide, AS-46, '81

# POULTRY

## DEVELOPING 4-H POULTRY PROJECT MEETING KITS

THOMAS D. ZURCHER
Extension Specialist, 4-H Youth Development

## THE PROJECT MEETING KIT IDEA

Learn-by-doing 4-H project meetings in which the members develop both project skills and life skills usually do not just happen without some advance planning. Many times for one reason or another a 4-H project leader is unable to pull together all the supplies and other resources necessary. At times like these the project meeting kit is very helpful. A leader will usually find in the kit a project meeting guide with ideas on how to involve the 4-H'ers plus training aids and equipment useful in assisting the 4-H'ers with the activity selected. Project meeting guides on several topics are available from County Extension Offices. The information in this guide is designed to provide ideas to leaders and 4-H agents who are interested in assembling their own kits for project meetings or county use. The goal is for each county to have a readily available library of resources for leaders who want to use them as they meet with their 4-H'ers five or more times during the 4-H year.

## USES OF STATE 4-H PROJECT MEETING KITS

Currently over 120 model kits have been designed by the State 4-H and Animal Science Specialists at the University of Minnesota. These kits are primarily in the animal science area. Counties who are interested in using the kits as models or in county leader workshops or skillathons may do so.

## RESERVING KITS

Kits may be reserved by contacting the State 4-H Office. Arrangements must be made for transporting the kits to and from the county. Because of the size and weight of many kits, mailing costs would be prohibitive.

## PROJECT MEETING BOXES

A supply of specially made boxes which can be used to package county kits is available for counties to purchase at a cost of $1.50 each. Make checks payable to the University of Minnesota. Arrangements for pick up must be made.

# 4-H POULTRY PROJECT MEETING KITS

Listed below are examples of kits which have been developed:

1. **IDENTIFYING PARTS OF A CHICKEN**
   **Kit Contents:**
   Project meeting guide, Conducting a 4-H Poultry Skillathon Station Guide, situation and task sign, Minnesota Chicken Parts Chart, parts T-pins, sponge for pins, cardboard for chart.
2. **IDENTIFYING BREEDS OF POULTRY**
   **Kit Contents:**
   Project meeting guide, Conducting a 4-H Poultry Skillathon Station guide, situation and task sign, station sign, pictures of 15 poultry breeds, chips with breed names, supplementary information sheet on "Identifying Breeds of Poultry."
3. **JUDGING LAYING HENS**
   **Kit Contents:**
   Project meeting guide, Conducting a 4-H Poultry Skillathon Station guide, situation and task sign, station sign, judging placing cards, oral reason cards, Poultry Fact Sheet #32 "Judging Egg Production Classes", four pictures of chickens.
4. **GIVING ORAL REASONS**
   **Kit Contents:**
   Project meeting guide, Conducting a 4-H Poultry Skillathon Station guide, situation and task sign, station sign, Poultry Fact Sheet #31 "Giving Reasons on Egg Production Classes."
5. **SCORING A JUDGING CLASS**
   **Kit Contents:**
   Project meeting guide, Conducting a 4-H Poultry Skillathon Station guide, situation and task sign, station sign, Hormel Computing Slide, paper, pencils.
6. **IDENTIFYING POULTRY FEED INGREDIENTS**
   **Kit Contents:**
   Project meeting guide, Conducting a 4-H Poultry Skillathon Station guide, situation and task sign, station sign, packet of 9-12 feed ingredients, chips with ingredient names, plates with PROTEIN, ENERGY, VITAMINS, MINERALS, chips with human food names.
7. **UNDERSTANDING A FEED TAG**
   **Kit Contents:**
   Project meeting guide, Conducting a 4-H Poultry Skillathon Station guide, situation and task sign, station sign, poultry feed tags.
8. **WASHING YOUR PROJECT BIRD**
   **Kit Contents:**
   Project meeting guide, Conducting a 4-H Poultry Skillathon Station guide, situation and task sign, station sign, washing and rinsing containers (3), thermometer, soap (Ivory liquid), towels, rags, old toothbrushes.
9. **SHOWING YOUR PROJECT BIRD**
   **Kit Contents:**
   Project meeting guide, Conducting a 4-H Poultry Skillathon Station guide, situation and task sign, station sign.
10. **GRADING EGGS**
    **Kit Contents:**
    Project meeting guide, Conducting a 4-H Poultry Skillathon Station guide, situation and task sign, station sign, egg candler, cloth cover, eggs of differing quality for candling, Poultry Fact Sheet #34 "Egg Grading."
11. **TELLING LAYERS FROM LYERS**
    **Kit Contents:**
    Project meeting guide, Conducting a 4-H Poultry Skillathon guide, situation and task sign, station sign, Poultry Fact Sheet #32 "Judging Egg Production."

## Donor Support

Special thanks goes to the following donors who provided funding to support the development of the kits:

Minnesota Livestock Breeders Association
Minnesota Pork Producers
Minnesota Production Credit Associations
Cenex Foundation
Land O'Lakes

4-H Animal Science
Project Meeting Guide, AS-83, '83

# POULTRY

## TALKING LIKE A POULTRY RAISER

MELVIN HAMRE
Extension Poultry Specialist
THOMAS D. ZURCHER
Extension 4-H Specialist

## IMPORTANCE OF THE TOPIC

Understanding various poultry terms helps 4-H members expand their knowledge of poultry production and products. Whether a member is judging a class of chickens or eggs, reading about poultry, or simply talking with others, the ability to use correct terms will be very helpful.

## WHAT YOUR 4-H'ERS WILL ACCOMPLISH

By the end of this project meeting, the 4-H'ers will:

1. Define a minimum of ten new terms and use each in a sentence.
2. Further develop the life skills of expressing themselves, working together, and dealing with a competitive situation.

## PREPARE FOR THE MEETING

Preparation for this meeting depends on the type of activity you select and whether you use poultry terms as the only topic for the meeting. Read the activities and select one or two to fit the age and experience level of your 4-H'ers. Included in this guide are alphabetical lists of general poultry terms and terms related to domestic waterfowl and turkeys.

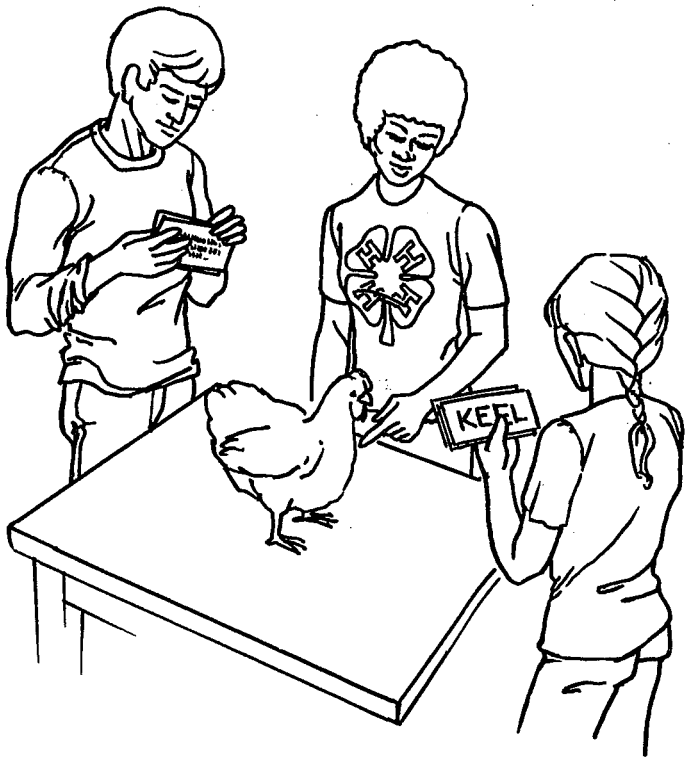
## SUGGESTED ACTIVITIES

**Matching**—Make up *two* sets of cards with a term on one side and its definition on the other. Use one set with the terms showing and the other set with the definitions showing. Give each group of two or three 4-H'ers about ten terms and definitions to match. Have them check their matchings by turning the cards over. Ask each group to discuss one or two terms and tell how they would use the terms in a sentence.

**Quiz Bowl**—Definitions make excellent questions for quiz bowl use. To hold a quiz bowl, divide the 4-H'ers into two teams, read a definition or term to the teams, and give the team answering it most correctly a point. See the project meeting guide "Conducting a 4-H Project Bowl" for additional information.

**Drawing**—Many of the terms can be understood more clearly by having your 4-H'ers make a drawing of what they think it means. Have them explain their drawings or sketches to each other.

**Charades**—Your 4-H'ers will enjoy acting out many of the terms as the rest of the group tries to figure out the term. To play charades, hand out or have them draw terms and let them take turns doing a charade.




**Crossword Puzzle**—Have your 4-H'ers, individually or in teams of two, make a crossword puzzle out of ten or more terms. Let them exchange to see if they can solve each other's puzzle.

**Comparing With Chicken**—Using either a live chicken or one made from the University of Minnesota 4-H Chicken Pattern, ask your 4-H'ers how many terms they can use that apply to the chicken. This is another enjoyable, competitive activity.

### Supporting Activities

Giving Oral Reasons
Judging Poultry Classes

## Poultry Terms

Here are some terms that are used in describing and working with poultry and poultry products. Some uses are quite general and others are more specific. Many involve poultry production. Quite a few terms you hear will be used only by the poultry judge or raiser of exhibition poultry. Some terms which have specific meanings for producers of waterfowl and turkeys are included in a separate list.

**Avian**—Relating to or pertaining to birds.

**Axial Feather**—The short feather in the middle of the wing that separates the primary feathers from the secondary feathers.

**Bantams**—Miniature chickens, usually ¼-⅕ the size of regular chickens.

**Barring**—Two alternating colors on a feather, running across its width.

**Beak**—The horny mouthparts of birds.

**Bird**—An individual of any avian species.

**Blade**—The portion of a single comb below the points.

**Bow-Legged**—A deformity in which the legs are farther apart at the hocks than at the feet.

**Brassiness**—The light yellowish metallic cast commonly found in the plumage of white or partly white varieties.

**Breed**—A group of chickens within a class with a distinctive body shape and having the same general features and body weight.

**Broody**—The characteristic of birds to develop motherly instincts for setting on eggs and brooding chicks.

**Candling**—Examining the contents of an egg by holding it up to a light source in a darkened room.

**Capon**—A castrated male chicken, usually processed at about 5 months of age for meat purposes.

**Carriage**—The posture of the bird.

**Chalaze**—White, twisted, cord-like structures which hold the yolk in the center of the white.

**Class**—A group of chickens that has been developed in a particular region of the world.

**Close Feathered**—Feathers held tight to the body.

**Cockerel**—A male chicken under one year of age.

**Comb**—The fleshy protruding part on top of the head of a fowl.

**Condition**—The state of a bird's health, including sufficient fleshing and cleanliness and brightness of plumage.

**Cornish Game Hen**—An immature chicken, usually processed at 5 to 6 weeks of age, from one of the Cornish meat-type crosses. Cornish game hens weigh no more than 2 pounds ready-to-cook.

**Coverts**—The feathers covering the base of the primary and secondary wing and main tail feathers.

**Crest**—A round tuft of feathers on the top of the head of some chickens and ducks.

**Crop**—The enlarged part of the gullet, between the neck and body, in which food is stored temporarily and softened for digestion.

**Crossbreed**—The offspring of parents of different breeds.

**Crow Head**—A narrow, shallow head with an abnormally long beak.

**Culling**—Removing unproductive or inferior birds from the flock.

**Cushion**—A mass of feathers over the back and base of the tail of a chicken, giving it a rounded effect.

**Cuticle**—A protective covering over the shell of the egg which partially seals the pores and makes the shell more water-resistant.

**Debeak**—The removal of part of the beak of birds to reduce picking and egg eating.

**Defect**—A fault that is considered in judging poultry.

**Disqualification**—A serious deformity or a defect which prevents a bird from receiving an award.

**Down**—The soft, fine, fluffy covering of a young bird.

**Dubbing**—Trimming the comb and/or wattles.

**Earlobe**—A round, fleshy patch of bare skin on each side of the head, varying in size, shape, and color according to the breed.

**Embryo**—The developing bird within the egg.

**Eviscerate**—To remove the contents of the body cavity when processing poultry.

**Fowl**—A collective term applying to chickens, ducks, geese, turkeys, and sometimes other avian species. Also a marketing term used for mature chickens.

**Fryer (Broiler)**—A young, meat-type chicken, usually processed at 7 to 10 weeks of age.

**Giblets**—The heart, liver, and gizzard of poultry when use for meat.

**Gizzard**—A thick, muscular organ of the digestive tract for grinding feed.

**Hackle**—The rear and side neck feathers of a bird.

**Hen**—A female of many avian species. Also a female chicken over one year of age.

**Hen-Feathered**—A male having oval instead of pointed sex feathers in the hackle, saddle, wing bow, and sickles.

**Hock**—The joint between lower thigh and shank.

**Horn**—A term used to describe the various shades of dark color in the beak of some breeds such as the Rhode Island Red.

**Incubation**—Applying heat to eggs to cause them to hatch.

**Keel**—The lower portion of the breast bone.

**Lacing**—A narrow border of contrasting color around the entire web of a feather.

**Leg**—The upper and lower thigh and shank in the live bird. The thigh and drumstick in processed poultry.

**Lopped Comb**—A comb which falls over to one side.

**Luster (Sheen)**—A glossy appearance to the feathers, due to the reflection of light rays.

**Molt**—The process of shedding old feathers and regrowing new feathers.

**Mottling**—Spots of a color or shades different from the base color of the feather.

**Oil Gland**—A gland on the back at the base of the tail that secretes an oily fluid used in preening the bird's feathers.

**Ovary**—The part of a hen's reproductive system that produces the female germ cell and the yolk of the egg.

**Oviduct**—The part of the hen's reproductive system that produces the white, shell membranes, and shell of the egg.

**Plumage**—The collective term for the feather covering of a bird.

**Poultry**—A general term applied to all domesticated fowl.

**Primaries**—The long stiff feathers growing from the outer segment of the wing.

**Pubic Bones**—The thin, rear portion of the hip bones that form part of the pelvis.

**Pullet**—A female chicken less than one year old.

**Roach Back**—A deformed, humped back.

**Roaster**—A young, meat-type chicken, usually processed at 3 to 4 months of age.

**Saddle**—The rear of the back of a male fowl.

**Scales**—The thin, horny growths covering the shanks and feet.

**Secondaries**—The long, stiff wing feathers growing from the wing segment next to the primaries.

**Sex Feathers**—The pointed feathers in the hackle, back, saddle, sickles, and wingbow of a male fowl. In the females, sex feathers are oval.

**Shank**—The portion of the leg between the hock joint and the foot.

**Sickles**—The long curved feathers of a male chicken's tail.

**Side Sprig**—A pointed growth on the side of a single comb.

**Slipped Wing**—A wing that is carried so that the primary feathers do not overlap properly when folded.

**Split Wing**—A wing with a distinct gap between the primary and secondary feathers, due to the permanent absence of a feather.

**Spurs**—A bony growth from the rear inner side of the shanks.

**Standard Fowl**—The large or regular-sized breeds of poultry.

**Strain**—Fowl of any breed or variety that have undergone a breeding and selection program for a number of years so they reproduce with uniform characteristics.

**Stub**—A short feather, usually found on the shanks, or on or between the toes.

**Texture**—The condition or size of the grain and quality of the skin of the comb, face, wattles, and earlobes.

**Thumb Print**—A disfiguring indentation on the blade of a single comb.

**Ticking**—Specks or small spots of color in contrast to the base feather color. Ticking can be required on some portions of some breeds, but it may cause disqualification in others.

**Type**—The general shape and form common to all fowl in a breed.

**Undercolor**—The color of the lower or fluff portion of feathers.

**Variety**—A subdivision of a breed, distinguished by color, color pattern, or comb type.

**Vent**—The single body opening in birds, used to both discharge the waste products of digestion and the eggs or sperm from the reproductive tract.

**Wattles**—The fleshy, red growths which hang below the side and base of the chicken's beak.

**Wry Tail**—The tail of a fowl permanently carried to one side.

## Domestic Waterfowl and Turkey Terms

**Bean**—A raised, hard, bean-shaped swelling on the end of the bill of waterfowl.

**Beard**—A small cluster of coarse black hairs growing from the upper part of the breast of adult male turkeys.

**Bill**—The horny mouthparts of waterfowl.

**Caruncles**—The fleshy growths on naked portions of the head and neck of the turkey and Muscovy duck.

**Dewlap**—A growth of skin hanging from under the upper bill and throat of some breeds of geese (a dewlap-like skinfold in turkeys is usually called a wattle or throat wattle).

**Drake**—A male duck.

**Duck**—Name for many smaller species of the waterfowl family; also female duck.

**Duckling**—A young duck.

**Fryer-Roaster**—A young turkey usually processed at 12 to 14 weeks.

**Gander**—A male goose.

**Goose**—Name for many larger species of the waterfowl family; also female goose.

**Gosling**—A young goose.

**Knob**—A knob-shaped growth at the base of the upper bill in African and Chinese breeds of geese.

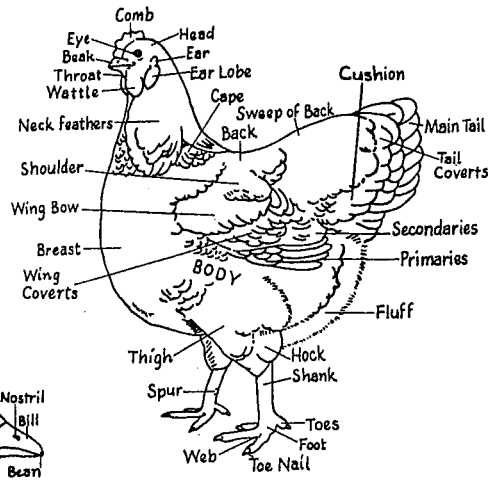
**Poult**—A young turkey.

**Sex Feathers**—The feathers in the tail of a male duck (except Muscovy breed) which curl upward and forward.

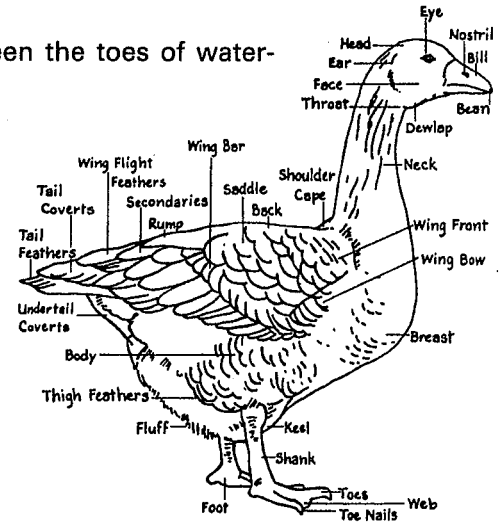
**Snood**—A tube-like fleshy growth near the front of the top of the head in turkeys.

**Tom**—A male turkey.

**Web**—The skin growing between the toes of waterfowl.




Chicken




Duck

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4-H Animal Science
Project Meeting Guide, AS-90, '83

# POULTRY

# CONDUCTING A 4-H POULTRY SKILLATHON

MELVIN L. HAMRE
Extension Poultry Specialist
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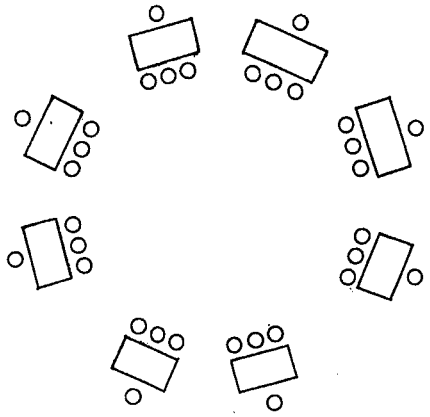
## WHAT IS A 4-H SKILLATHON?

A skillathon is an excellent method of involving your 4-H'ers and their parents in challenging, noncompetitive, learn-by-doing activities. This method of helping 4-H'ers develop both their life skills and project skills is designed as a series of mini-learning stations with a facilitator at each one (see illustration below). The participants rotate from station to station, attempting to perform the specific tasks given at each station. The station facilitator allows all team members to test their own knowledge and abilities before giving them any hints. This technique is referred to in 4-H as experiential learning or learning by doing before being told or shown how.



A skillathon works well not only during project meetings, but also at the 4-H community club. It is an excellent way to involve several project groups in the program at once. By asking various project groups to set up one or two learn-by-doing stations, the entire club can be actively involved at once. In addition, you can use a skillathon to give recognition to the project groups and their leaders.

The skillathon approach has also been successfully used to strengthen the educational value of county and state fairs. Both adults and youths enjoy the challenge which each situation and task offers.

This project meeting guide briefly outlines how to set up and conduct a 4-H poultry skillathon. Included are a checklist for the planning committee, advice for the facilitator, and suggested supplies, situations, and task for each station.


## WHAT YOUR 4-H'ERS WILL ACCOMPLISH

By participating in a skillathon your 4-H'ers will accomplish the following:

1. Given a situation and a task, they will be able to evaluate their abilities to solve the challenge presented and discover for themselves what they need to know to do the activity.
2. They will learn to work as members of a team.
3. The will practice making decisions and speaking before others.
4. They will receive recognition and praise for their efforts.

## CHECKLIST FOR THE SKILLATHON COMMITTEE

_____ Decide on the stations wanted, considering time and resources available.

_____ Make up a realistic situation and task for each station.

_____ Decide who will be in charge of each station.

_____ Decide on the equipment or supplies needed at each station.

_____ Delegate responsibility for gathering supplies.

_____ Depending on the size of the group and the number of stations, group the members into teams of 2 to 4, assigning each team to a station and moving them to the next station every 10 minutes or so.

_____ After all teams have rotated through the stations, have each team select a station and give a short presentation to the entire group on how the team solved the task at a particular station. Let teams choose which station they want to present.

_____ Praise everyone's efforts.

## RESPONSIBILITIES OF THE STATION FACILITATOR

You will find it challenging and rewarding to be a helper at one of the stations. The extent to which the participants develop project skills and life skills depends largely on how successfully you relate to them. Here are suggested steps:

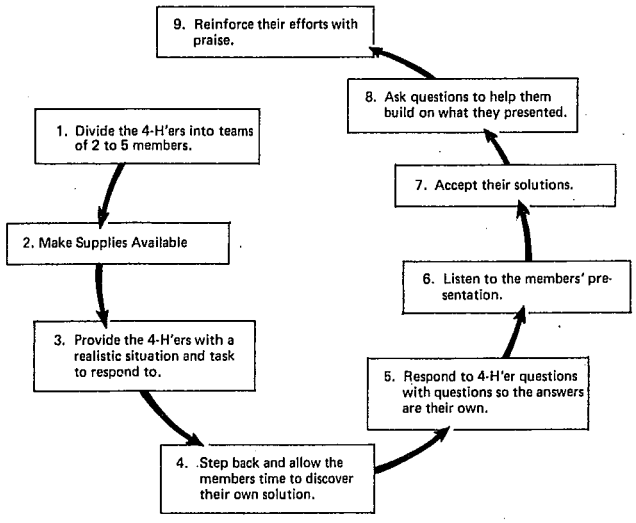
_____ Familiarize yourself with the topic and available project meeting guides, supplies, and training aids.

_____ Compile a list of questions to ask each team.

_____ Set up your station to include a stand-up situation and task sign, and necessary supplies.

_____ Allow the team members to discover for themselves how to accomplish the task, instead of first telling or showing them how.

_____ Facilitate the learning situation for each team in the following suggested manner:




_____ Ask the 4-H'ers how they would set up and conduct this same activity at a 4-H project meeting.

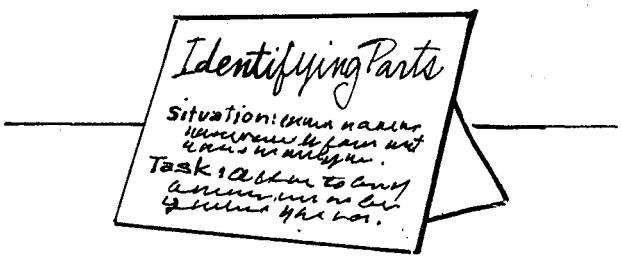
_____ Mark the team's participation card if one is used.

_____ Prepare your station for the next team.

_____ Following the skillathon, inventory and pack up all equipment, materials, and signs.

## STATION INFORMATION

Some possible topics and suggestions for presenting each topic at individual stations are included here. Station topics are limited only by your imagination and interest. The model hen made from the Minnesota 4-H hen pattern can be a very useful training aid for several of the suggested topics. At all stations try displaying the situation and task information on an 8 x 11" a stand-up so that the teams can start solving the task immediately.




You will need the following supplies for each station described: project meeting kit containing the project meeting guide "Conducting a 4-H Skillathon," stand-up situation and task sign as previously described, a project meeting guide about the topic, and a station sign.

### 1. Identifying Parts of a Chicken

**SUPPLIES:** Minnesota Chicken Parts Chart, parts T-pins, sponge for pins, cardboard for chart.

**DIRECTIONS:** Provide pins with part names on them for the team members to match with chart numbers. Let them check their answers.

**SITUATION:** You have been asked to help the younger 4-H'ers in your 4-H poultry project group learn the parts of the chicken.

**TASK:** Work together to match the names with the numbers on the chart.

### 2. Identifying Breeds of Poultry

**SUPPLIES:** Pictures of 15 poultry breeds, chips with breed names, supplementary information sheet on "Identifying Breeds of Poultry."

**DIRECTIONS:** Let teams match chips with breed names with the breed pictures. Let them check their answers. Follow up with questions.

**SITUATION:** You are showing one of the new members of your 4-H project group the various breeds at the fair.

**TASK:** Identify the breeds and tell something about each breed.

## 3. Judging Laying Hens

**SUPPLIES:** Judging placing cards, oral reasons cards, Poultry Fact Sheet AG-FS-1182 "Judging Egg Production Classes". 4 pictures of chickens, 4 cages, 4 chickens.

**DIRECTIONS:** Set up four cages with one laying hen in each for the teams to judge. Assist as necessary and ask questions.

**SITUATION:** Your neighbor has asked you to select the best layers from her egg production flock. You decide to sharpen your skills on a few birds first.

**TASK:** Judge and place this class of four hens in order of egg production ability, ranking them in order of most eggs laid. Explain how you judge chickens for egg production, based on the number of eggs laid.

## 4. Giving Oral Reasons

**SUPPLIES:** 50 Oral reasons notecards.

**DIRECTIONS:** Refer to information on the oral reasons notecard in the kit. Provide each team member a notecard and assist as needed. Let each one give a complete or partial set of reasons (e.g., one pair).

**SITUATION:** Your neighbor and younger members in your 4-H poultry project group want to know why you placed the class of egg production hens as you did.

**TASK:** Using the oral reasons notecard as a guide, give your reasons.

## 5. Scoring a Judging Class

**SUPPLIES:** Project meeting kit, Hormel computing slide, paper, pencils.

**DIRECTIONS:** Provide teams with the official placings, cuts, and the project meeting guide to figure their score. If they are still completely confused after a few minutes, walk them through an example using the six steps. Let them check their score on the Hormel computing slide.

**SITUATION:** An expert poultry judge also judged the class of hens and presented his placings and cuts.

**TASK:** Using the expert's decision as the "official" placing, figure your score for the class.

## 6. Identifying Feed Ingredients

**SUPPLIES:** Packet of 9 to 12 feed ingredients, chips with ingredient names and human food names, paper plates with the words PROTEIN, ENERGY, VITAMINS, WATER, MINERALS, written on them.

**DIRECTIONS:** Let the teams match the chips to the ingredients. Then have them put all chips on the plate specifying the nutrient category. Ask questions and discuss.

**SITUATION:** Your poultry 4-H group has decided to study the feed ingredients in a poultry ration. You volunteer to learn them so you can help the members.

**TASK:** Match the chips with the ingredients and then indicate the type of ingredient each one is.

## 7. Understanding a Feed Tag

**SUPPLIES:** Poultry feed tags.

**DIRECTIONS:** Provide the team members with feed tags and let them explain what they read. Ask questions and discuss. Refer to the project meeting guide.

**SITUATION:** You are in a feed store and a customer sees your 4-H t-shirt. The customer asks your help in understanding a feed tag.

**TASK:** Explain to the customer what information the tag contains and how this will help in choosing a feed for a flock.

## 8. Washing Your Project Bird

**SUPPLIES:** Three washing and rinsing containers, thermometers, soap (Ivory liquid), towels, rags, old toothbrushes, 2 or 3 birds, table with cage and clean straw.

**DIRECTIONS:** Provide the supplies and the bird and let the members demonstrate what they would do. Encourage them to refer to the direction sheet.

**SITUATION:** Two days before the show you decide to wash your project bird.

**TASK:** Demonstrate how to wash the bird.

## 9. Showing Your Project Bird

**SUPPLIES:** Project meeting kit, 4 birds, 2 cages, a table.

**DIRECTIONS:** Give the team a copy of the showmanship outline for reference. Play the role of a judge and ask the members to take turns showing the bird. Ask questions.

**SITUATION:** You are in your first 4-H poultry showmanship content.

**TASK:** Demonstrate to the judge how you would display the various parts of your bird.

## 10. Grading Eggs

**SUPPLIES:** Project meeting kit, egg candler, cloth cover, eggs of differing quality, 4 candlers, Poultry Fact Sheet AG-FS-1184 "Egg Grading".

**DIRECTIONS:** Let the team members candle the eggs and discuss what they learn. Follow up with questions.

**SITUATION:** You are selling eggs to your neighbors from your 4-H poultry flock. One called this morning to report a blood spot in one of the eggs.

**TASK:** Demonstrate how to check your eggs before selling them.

## 11. Talking Like a Poultry Raiser

**SUPPLIES:** Set of notecards with terms and definitions.

**DIRECTIONS:** Let the team members match the terms with the definitions.

**SITUATION:** Somehow your glossary of poultry terms has been mixed up.

**TASK:** Match the terms with the definitions.


## Acknowledgment

Special thanks go to the Minnesota Livestock Breeders' Association, which provided funding for the development of the training aids and materials used for the seven species skillathons conducted at the Minnesota State Fair as well as for the printing of this project meeting guide.

4-H ANIMAL SCIENCE
PROJECT MEETING GUIDE, AS-109, '85

# POULTRY

# PREPARING FOR 4-H POULTRY SHOWMANSHIP

Larry Peterson
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## IMPORTANCE OF THE TOPIC

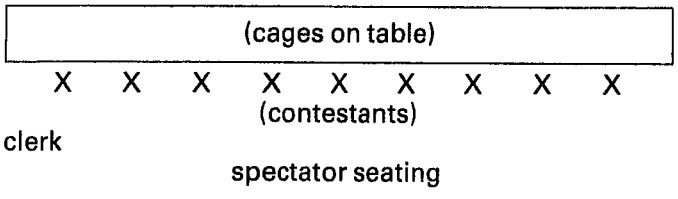
Poultry showmanship provides 4-H members with an opportunity to exhibit their skills in raising, selecting, conditioning, evaluating, and handling poultry. In the process the 4-H'ers learn to express themselves and develop self-confidence and sportsmanship.

## WHAT YOUR 4-H'ers WILL ACCOMPLISH

1. Further develop self confidence, the ability to express themselves and good sportsmanship.
2. Practice preparing themselves and their poultry for a showmanship event.

## PREPARE FOR THE MEETING

This guide will help you involve your members in a learn by doing activity as well as prepare them for what takes place in an actual contest. All you need to prepare ahead of time is a table covered with shavings, a cage or two, and some birds. At the actual show the set up will usually look like the following:




Additional resources which will help you and your members prepare for this activity are included at the end of this guide.

## INVOLVING YOUR 4-H'ers

Practicing showmanship procedures gives each 4-H'er an opportunity to develop important life skills. This is especially true if the members are allowed to learn by doing before being told or shown how. One method is to simply set up a practice contest with a 4-H'er as judge and the members showing their birds. If the group is inexperienced a team of two often has more success and can learn from each other. You and the junior leaders will be in a position of coach rather than an up-front teacher.

After the 4-H'ers have attempted to perform each of the routines listed under Showmanship Hints, ask each team to demonstrate one of the routines for the entire group. Follow up with questions to help them build on what they know.

The poultry terms can often be learned with matching exercises, project bowls, short demonstrations, or skillathon activities.

## SHOWING PROCEDURE

To help your members more fully understand what takes place in an actual contest a procedure is outlined:

Move to judging area with bird and stand at attention in front of cage with bird in basic hand position.

↓

When requested by the judge, show the following and answer any questions asked:

↓

Holding and Carrying

↓

Examining the head and face, wings, undercover, width of body, breast, vent, depth of abdomen, pubic bones, feet, and legs

↓

Place bird in cage

↓

Show bird in cage

↓

Remove bird from cage

↓

Hold bird in basic hand position while final placings and reasons are given

↓

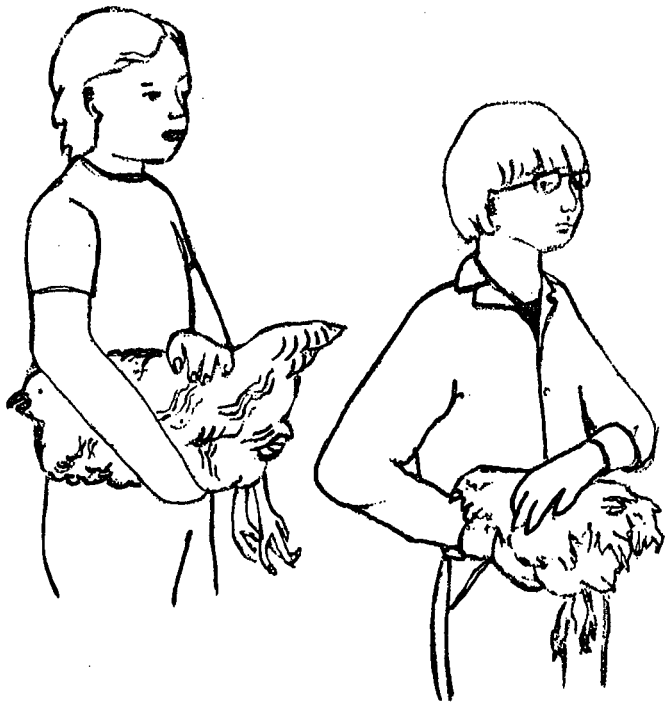
Leave ring after name is announced.

*Vent*—To examine the vent area, tilt the bird forward so the abdomen can be observed easily. Using the thumb and fingers of free hand, expose the vent—note its color, moistness, and pliability.

## SHOWMANSHIP HINTS

The judge will evaluate each contestant primarily in seven areas:

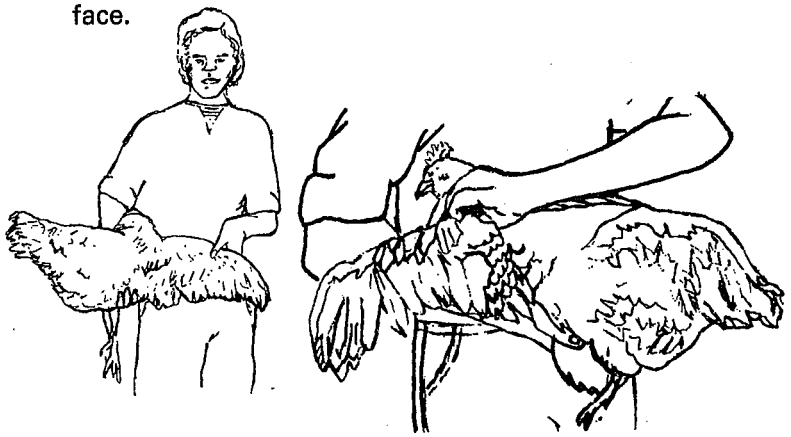
1. *4-H'ers Personal Appearance—10 points*
   Each contestant should be neatly dressed in clean, well-pressed clothes. No uniform is required and no shorts or cut-offs should be worn. Personal grooming is particularly important.
2. *Quality and Condition of Bird—10 points*
   When selecting a bird, whether it's a male or female large fowl bird, a bantam, a duck, a goose, or a turkey, the following characteristics should be considered:
   —Pleasing appearance—bright eyes, good fleshing, free from defects
   —Good, smooth plumage—shiny appearance, clean and washed if appropriate for species
   —Breed and varietal characteristics
   —Free from diseases and parasites
   —Gentle and not flighty—usually a bird which is worked with over a period of time will become accustomed to the showmanship routine and will show its strongest characteristics while being judged. A radio played near the bird will also help familiarize it with show conditions. Short practice session just before the contest is also suggested to help calm both bird and exhibitor.



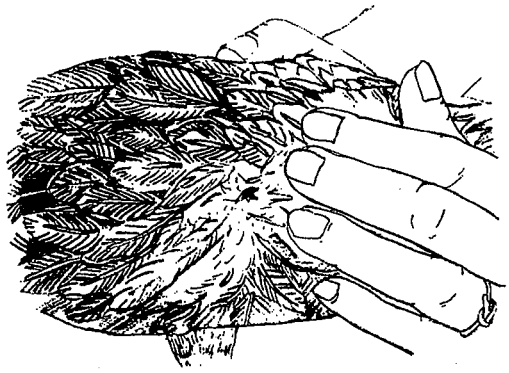
3. *Examination and Handling of Bird—30 points*
   *Carrying and Holding*—To carry a bird, body should be kept balanced and upright on the palm of the same hand which was used to remove the bird from the cage. The head and neck may extend between the arm and body of the person carrying it or, with a small bird, against the carrier's body and above the arm on which it is carried. The other hand should rest on the bird's back

Birds should be held upright to give the judge a side view of the body. The bird should rest comfortably on the palm of the holder's hand. The strengths of the bird should be emphasized; tails fluffed, head and beak raised, feathers smoothed, wings tucked in normal position. In this basic hand-posed position the 4-H participants will be asked to show the judge several parts of the bird.

*Head*—The bird should be raised to shoulder height and turned so that the head and face can be examined. The hand supporting the bird should remain in place, while the free hand moves the head. Complete the examination by turning the bird to examine the other side of the head and face.



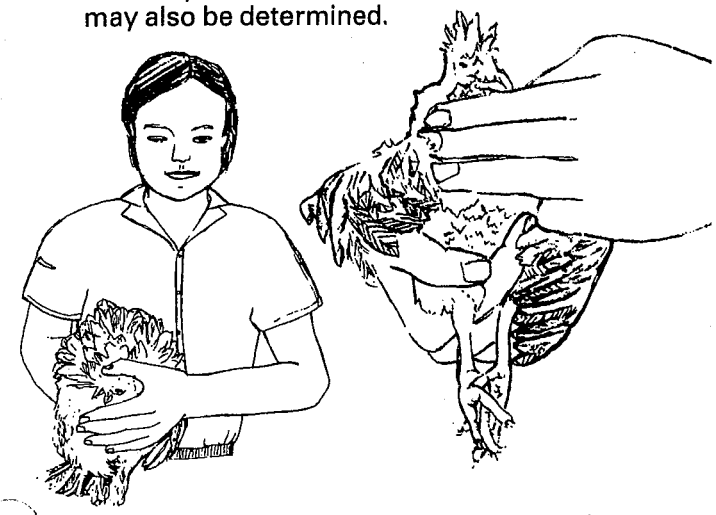
*Wings*—Spread wings to examine condition and pattern of the feathers. To extend the first wing, grasp wing tip with free hand and pull. To examine second wing, place free hand across body of bird and apply pressure to last wing joint with thumb and fingers of free hand to extend the wing.



*Undercolor*—The undercolor of the back and body fluff of the birds will be examined. Use finger tips to gently pull tops of feathers "against the grain." This action exposes portions of feathers normally hidden from view.

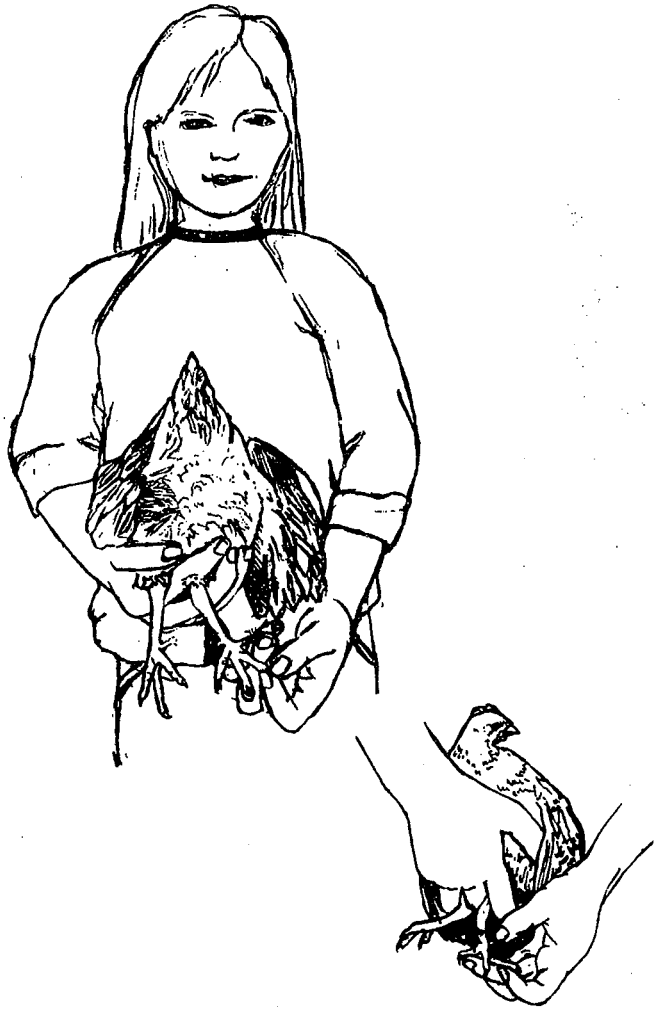
*Width of Body*—Width of body is determined by placing the thumb and index fingers of free hand across the bird's body directly behind the base of the wings. Gently push the measuring arch, thus formed downward to the tail, to determine the width and shape of the body.

*Breast*—Without changing the grip, examine the breast by holding the bird so that its head is downward and its back is directly against the body of the showman. The showman's free hand should be used to measure the breast bone and examine the keel for straightness, breast blisters, indentations, or other defects. In this position the depth of the body or distance between the keel and back may also be determined.



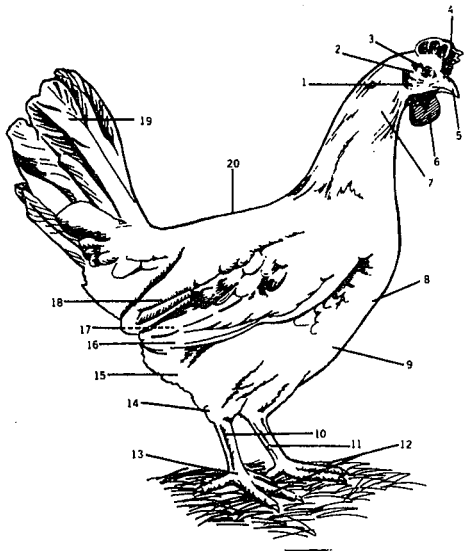
*Depth of abdomen*—After examining the vent, measure the depth of the abdomen by placing as many fingers of the free hand as possible between the tip of the keel and the public bones.

*Pubic Bones*—The width between the pubic bones is determined by placing as many fingers of the free hand as possible between the tips of these bones.



*Feet and Legs*—To examine the feet and legs, the bird is held against the showman's body. The free hand should be used to manipulate feet and legs so all parts can be examined. Swivel the bird to examine the front of the feet and legs.

4. *Knowledge of Poultry Terms—20 points*
The judge will ask the participants to explain various poultry terms and their relationship to the bird and the poultry project. Parts of the bird are popular terms.

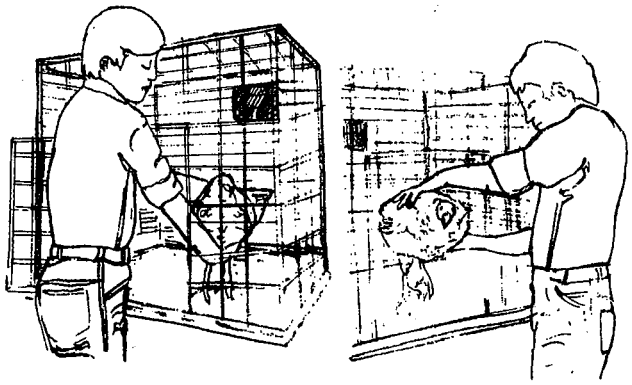



**CHICKENS**

**Key for Chicken Chart**

1. Ear lobe
2. Ear
3. Eye
4. Comb
5. Beak
6. Wattles
7. Hackle feathers
8. Breast
9. Keel bone
10. Shank
11. Spur
12. Toes
13. Foot
14. Hock joint
15. Abdomen
16. Primary wing feathers
17. Pubic bones
18. Secondary wing feathers
19. Main tail feathers
20. Back

5. *Placing Bird in Cage—10 points*
Hold the bird in the basic hand position, open the cage door, turn the bird, put into cage head first, place it gently on the cage floor, and close the cage door.
6. *Showing Bird in Cage—10 points*
Be alert to the judge. Stand at a relaxed attention facing the judge. Allow the judge to have full view of bird at all times. Contestants must listen and follow the judge's directions carefully. Consistent showmanship of a bird is important until class is dismissed.
7. *Removal of Bird from Cage—10 points*
Open the cage door. Reach across the bird's back; grasp the far wing; turn the bird so it faces the cage door. Slide second hand beneath the bird's body, placing one or more fingers between bird's legs and grasping them so that the bird, when lifted, can be balanced on the palm of that hand. Place first hand on bird's back. Remove bird from cage, head first. Come to attention and watch judge for further direction.



Stand at attention by the case with the bird held in the basic hand position. Final placings will be made and reasons will be given.

## TURKEY AND WATERFOWL SHOWMANSHIP HINTS

Turkey and waterfowl are shown similar to chickens. The only major difference occurs when waterfowl are taken out of the cage. The correct procedure is as follows:

Open cage door. Grasp large duck's or goose's neck (loosely) and turn bird toward cage door. Pull out of cage, head first. At the same time slide second hand beneath the bird's body, placing fingers between the bird's legs and grasping them so the bird, when lifted, can be balanced on the palm of that hand. Place first hand on bird's back and wings.

All other procedures will be the same as for chickens. When taking out very small ducks, such as bantam ducks, the same procedure as for chickens may be used. Ducks or geese should *never* be caught by the legs.

## ADDITIONAL RESOURCES

Member manuals and several additional project meeting guides are available to support the showmanship activity. AS-39 Identifying Poultry Breeds, AS-40 Catching and Handling Poultry, AS-41 Telling Layers from Lyers, AS-45 Washing Your Project Bird, AS-83 Talking Like a Poultry Raiser, AS-110 Using the Poultry Standard of Perfection, and AS-4 Identifying Parts of Farm Animals.

## ACKNOWLEDGEMENT

The authors thank Ralph A. Ernst, Extension Poultry Specialist, University of California, Davis, for permission to use copy and photos from his "4-H Poultry Showmanship" bulletin.

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# POULTRY

## USING THE POULTRY STANDARD OF PERFECTION

Melvin L. Hamre
Extension Animal Scientist, Poultry

## IMPORTANCE OF THE TOPIC

The Standard of Perfection of the American Poultry Association describes the breeds recognized by the Association. A knowledge of the Standard is essential to the identification and judging of standardbred poultry. Members raising standardbred poultry should be familiar with the specifications for breeds in which they are interested so they can do a better job of bird selection and understand how their birds are judged. Anyone having a knowledge of the Standard will better understand terms used by breeders and be aware of how poultry are classified into a system of classes, breeds, and varieties.

## WHAT YOUR 4-H'ers WILL ACCOMPLISH

By participating in this hands-on learning activity, your 4-Her's should be able to do one or more of the following:

1. Define a minimum of ten new terms and use each properly.
2. Evaluate a bird using the standards for the appropriate breed and variety.
3. Be able to correctly identify a bird using the breed and variety descriptions in the Standard.
4. Gain experience in making decisions and judgments.

## PREPARE FOR THIS MEETING

Preparation for this meeting depends on the type of activities you select. Read the activities and select those that fit the age and experience level of your 4-H'ers .

You will need at least one copy of the Standard of Perfection. If you do not have a copy see if you can obtain one from an exhibition poultry breeder in your area or through your county extension office. A number of editions of the standard have been printed. Any one of them can be effectively used for parts of this activity.

Some of the activities suggested and others that you can develop on your own can be done without live birds. If facilities permit and birds are available a real experience for the members can be by handling live birds.

## SUGGESTED ACTIVITIES

*Matching*—Make up two sets of cards with a term on one side and its definition on the other. Use one set with the terms showing and the other set with the definitions showing. Use terms from the glossary of technical terms of the Standard of Perfection so members can become familiar with this part of the Standard. Select terms that relate to the particular emphasis you are trying to teach or an interest of the members. Give each group of two or three 4-H'ers about ten terms and definitions to match. Have them check their matchings by turning the cards over. Ask each group to discuss one or two terms and tell how they would use the terms in a sentence.

*Quiz Bowl*—Definitions make excellent questions for quiz bowl use. Use terms from the glossary of technical terms of the Standard and let them look up terms they are not familiar with. To hold a quiz bowl, divide the 4-H'ers into two teams, read a definition or term to the teams, and give the team answering it most correctly a point. See 4-H PMG AS-8 "Conducting a 4-H Project Bowl" for additional information.

*Breed Identification*—Using colored pictures, photographs, or live birds let members use the Standard to help determine the breed and variety of birds. See 4-H PMG AS-39.

*Checking for Disqualifications*—Familiarize members with the common disqualifications by matching, quiz bowl, or other means. Then have members examine live birds looking for specific disqualifications. Acquaint members with section on disqualifications and defects in the Standard.

*Judging for Breed Characteristics*—Have members look up the characteristics for a specific breed and variety in the Standard. After discussing these characteristics have members judge some birds according to breed characteristics and place them in the order of their merit.

## SUMMARIZING THE ACTIVITY

Help your members understand what they have learned. Questions from the group will expand their learning experience. Explain how the Standard can be used to better evaluate birds in breeding projects and preparing for exhibiting in the breeder classes.

## SUPPORTING ACTIVITIES

Topics for other activities that would be helpful if conducted prior to this meeting follow:

1. Identifying parts of poultry. AS-4
2. Conducting a 4-H Project Bowl. AS-8
3. Identifying poultry breeds. AS-39
4. Catching and handling poultry. AS-40
5. Talking like a poultry raiser. AS-83

## REFERENCE

Standard of Perfection, published by American Poultry Association. Contact Extension Poultry Specialist if you are interested in obtaining a copy.

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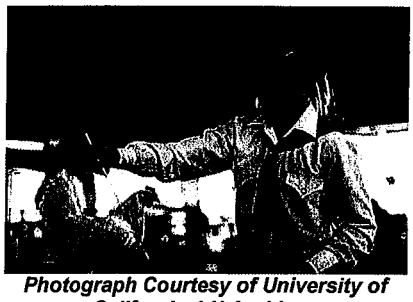
# CLOVER SAFE

AGRICULTURE AND NATURAL RESOURCES
ENVIRONMENTAL HEALTH AND SAFETY

#68

# SAFE CARE AND HANDLING OF CHICKENS

***Clover Safe notes are intended primarily for 4-H volunteers and members nine years and older.***



*Photograph Courtesy of University of California 4-H Archives*

Chickens are believed to have been domesticated first in China and India about 3,000 to 5,000 years ago. Later, chickens were brought to North America by Spanish and English explorers.

In the United States and Canada, adult male chickens are called roosters. Female chickens older than one year are called hens while those younger than one year are known as pullets.

## Safe Care and Handling of Chickens

- Approach your chicken in a calm and deliberate manner. Quick movements may startle your bird and cause it injury as it flees from you.
- Always protect your chicken(s) from potential predators such as dogs, raccoons, foxes, skunks, and hawks.
- Chickens are omnivores, meaning they eat plants and animals such as seeds and insects.
- Make sure your chicken is able to easily reach fresh feed and water at all times.
- To remove a chicken from a pen, cage, or coop, turn the bird so it exits the enclosure while facing the enclosure door. Likewise, return a chicken to its pen, cage, or coop so it enters the enclosure while facing the enclosure door.
- Be aware that chicken pens, cage, and coops often have sharp edges and enclosure doors can act as pinch points.
- If scratched or seriously pecked by a chicken, notify your group leader, parent, or guardian. Wash the wound with soap and water and cover with a clean bandage. Seek medical attention if the wound is large/deep or appears to be infected.
- To avoid slipping or falling, wear shoes with slip resistant soles and step carefully when feeding and watering your chicken(s) or while cleaning a chicken coop.
- During hot weather, assure your chicken has access to shade and/or areas of good air circulation. Alternatively, during cold weather assure your chicken has access to shelter.
- When showing your chicken at a poultry event, wear appropriate clothing such as a long-sleeved shirt, long pants, and closed-toed shoes. Always tuck your shirt in and tie your shoe laces.
- Be alert for vehicular traffic and follow safe pedestrian rules when attending poultry events.
- Always wash your hands with soap and water after handling a chicken or any other animal.

# I'm a 4-H Project Leader: Now What Do I Do?

**How do I know who is in my project?**

- Your club organizational leader will provide you with the names, addresses and phone numbers of the members enrolled in the project for which you are the leader.
- If you are working on the county level, contact the UCCE for the list of project members.
- The organizational leader may indicate to you if any of the youth have special needs. At your first project meeting, note any other youth that may have special needs.
- You may wish to consult with the parent or your 4-H Youth Development Agent as to how to work with a special needs child.

**How often should I hold project meetings?**

It is recommended you hold 4-6 meetings that each last 1½ to 2 hours in length. Some projects require more meetings or a longer meeting time to accomplish your goals. Some projects, such as leathercraft, may lend themselves to individual project work as members progress on their projects. In this case, you should hold several introductory meetings for all members and then set up a schedule of time for them to sign up for individual help.

**When do I start?**

Get started as soon as possible! Members' interest in a project is most keen when they are signing up for a project and when they get their project books.

**How do I cover the cost of project meetings?**

- There is a wide variety of means for covering the cost of project meetings. Some methods used include:
- Each member pays for their share of the expenses or provides a portion of the supplies.
- The club agrees to cover expenses using funds from their treasury. Approval in advance is needed for this.
- Members and leaders can solicit donations/supplies from area businesses.
- Sometimes funds from sources outside your club may be available to cover your project meeting costs.

**How do I establish a project meeting schedule?**

First, determine when you are available to work with project members. Then determine an initial project meeting date by consulting with your project members.

*Thanks to 4-H Youth Development Programs, UW-Extension, Cooperative Extension for use of these materials.*

Publicize the date using one of the following means:

- County and/or club newsletter
- Club meeting or leader association meetings
- Postcards or phone calls to project members

You may not be able to schedule an initial meeting that everyone can attend. Establish a time to meet with those unable to attend before you hold your second project meeting.

**Where do I hold project meetings?**

Typically project meetings are held at project leader homes, schools, or community buildings. For more information on facility adaptability and liability concerns contact your 4-H Youth Development Agent.

**What safety precautions do we need to consider?**

Consider the type of safety issues your particular project involves. Request and secure necessary safety items such as ear protection, eye protection and head protection.

**How do I let others in my club or other clubs know I am a project leader?**

Prior to enrollment ask for time on your club's meeting agenda to let families in your club know you're a project leader and to share some things the kids could do in the project if they enrolled in it. When the project materials are handed out, take the opportunity to inform or remind members that you are their project leader and set an initial meeting date with the group. If no one in your club is in your project, you may wish to offer your services to a neighboring club. Talk to your club organizational leader or county 4-H Youth Development agent about this opportunity.

**How do I prepare for the first meeting?**

You may want to establish a 4-H resource box where you keep your project materials and any additional resources you will be using. Take time to become familiar with your project literature and talk to others who were project leaders for this project to find out what activities the members enjoyed.

**What should I do at the initial project meeting?**

- At the initial project meeting, here are some ideas of what you might want to cover:
- Find out what the members want to learn and accomplish in the project. The project literature is an excellent source of ideas.
- Review the safety practices that members will need to follow.

*Thanks to 4-H Youth Development Programs, UW-Extension, Cooperative Extension for use of these materials.*

- Do an introductory activity related to the project so the members get to know one another
- Have a small project the members can complete and take home
- Talk about how the project meeting supplies will be paid for. Experienced leaders have found it easiest to charge a small fee to cover the cost of the expenses.
- Assess when members are available for additional meetings. You may wish to ask the parents or members to bring along their calendars of family activities.
- Encourage parents to participate in project meetings, especially the initial meeting.

**What does a typical project meeting look like after the initial orientation?**

Use the experiential learning model (found in the introductory pages of your Helper's Guide) to plan your project meeting. The project helper's guide will provide suggestions for designing a project meeting. Here are some suggestions for each section of the model:

Do

- Plan an activity to focus the project members on what they'll be doing today. Work on the project for that meeting.

Reflect

- Review the process completed
- Discuss what worked and didn't work.
- Talk about how any problems that arose were solved.
- Assist members in documenting their project work for inclusion in their record books/portfolios.

Apply

- Ask the project member the following questions:
- What else have you seen that is similar to this?
- How can you apply what you learned today to other situations?

**What resources are available to help me?**

- 4-H Project Literature – You will receive project literature through your 4-H club or the UW-Extension office. Typically there is a helper's guide and member literature for three to four levels.
- Other People in my Club & County – There are a number of people in your county who would be willing to share project ideas and tips with you.

*Thanks to 4-H Youth Development Programs, UW-Extension, Cooperative Extension for use of these materials.*

These include:

- Project leaders in other clubs
- County Staff
- Older youth who have been involved in the project

- Media Collection & Public Libraries – Additional resources can be obtained from the Cooperative Extension Media Collection. They have videos, skillathons, displays and resource packages available to support a variety of projects. There is a user fee per item you or your club will be responsible for. You can view their catalog at their website http://www.uwex.edu/ces/media/. Check with your local public library to find out what resources they may have or that you can obtain through inter-library loan.
- 4-H Website – Wisconsin 4-H is continually adding more information and activities to their website. Visit this site at www.uwex.edu/ces/4h/onlinepro/. You may wish to check out websites from other state 4-H programs also.
- Volunteer Leaders Conferences – Review each issue of your county's newsletter to learn about training sessions for project leaders offered by your county, district or at statewide events. Sessions focusing on new project literature are typically offered at the State 4-H Volunteer Leader Conference held every other year. Periodically statewide conferences focusing on specific project areas are offered in addition to sessions at the volunteer conferences. You can also exchange ideas with other leaders at statewide Field Day.
- Field Trips – Youth always enjoy the opportunity to see firsthand how things are done and how they work. Consider taking your project group on a field trip or tour of a local business or company to enhance their project experience. An example would be taking your dairy members to a cheese factory or your foods group to a local bakery.
- Local Experts – Bring in a local "expert" to share their ideas and experiences with your group. One example would be asking a Master Gardener to share information on choosing perennial or trimming shrubs at one of your project meetings.
- Magazines – Many leaders have found creative ideas to supplement those in the project literature in magazines they have or those at the public library.

*Thanks to 4-H Youth Development Programs, UW-Extension, Cooperative Extension for use of these materials.*

**How can I incorporate activities not included in the project guide?**

We encourage you to use the ideas in the project literature as they have been successfully used with youth. If you have some additional activities you would like to incorporate, consider the following criteria:

- Of interest to kids
- Developmentally appropriate
- Incorporate the experiential learning model
- Youth and adults are involved in determining what will be done
- Enhances the development of member life and project skills
- Research based source of content utilized

**What is the relationship between project work and the county fair?**

The County Fair is an opportunity for an independent evaluation of life and project skills a member learned through completing a project. County fair entries typically match the activities included in the project literature and may include other activities that are being emphasized in your county. One of your roles is to help maintain the focus of members and parents on the goal of 4-H, which is to develop blue ribbon kids. Talk with members about what they learned about each of their fair entries from the judging process. Help members celebrate their accomplishments regardless of the color of ribbon each project member received at the fair. This may be done through individual encouragement or at a meeting following the fair. While entering and displaying a project at the County Fair is the traditional method of public affirmation, there may be other means of exhibition such as a club tour, open house, community celebrations or others.

**Who can I go to if I need someone to help me during the project meetings?**

If you are leading beginning level project meetings, ask older members in the project to help you. This is a great leadership experience for them! Parents are another excellent source of help. Don't hesitate to ask them to stay for the meeting and be actively involved in their child's project work.

*Thanks to 4-H Youth Development Programs, UW-Extension, Cooperative Extension for use of these materials.*

*Introduction to*

# Poultry For Youth

## Ages 5 to 8


Francine Bradley
Pamela Emery
Jan James
Marianne Bird
Sherry Paukert



University of California
Agriculture and Natural Resources
Publication 4-H-2061

# MINNESOTA 4-H PROJECT MEETING GUIDES

# POULTRY

. . . .to develop
project and life skills

*Introduction to*

# Poultry For Youth

## Ages 5 to 8

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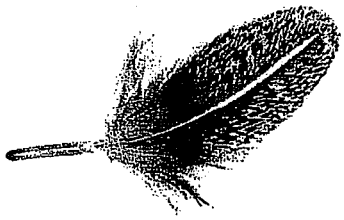

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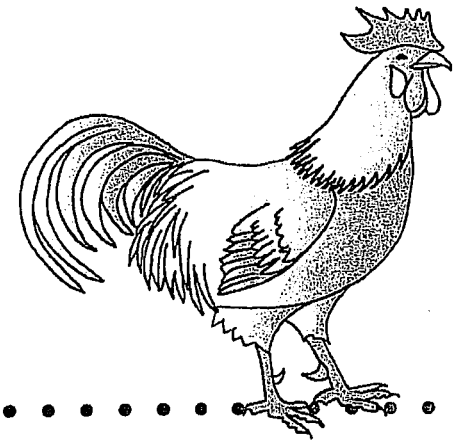
# Contents

*Introduction to*

# Poultry For Youth

## Ages 5 to 8



Welcome to *Introduction to Poultry for Youth Ages 5 to 8*. This is the first in a four-unit series of instructional materials designed to teach youth about poultry. The subsequent units provide lessons for youth ages 9 to 11, 12 to 14, and 15 to 18.

For 4-H programs, the goals of this series are twofold. The first is to introduce 4-H members to poultry. The sessions in this unit educate youth about birds and provide opportunities for them to learn about poultry without having to own birds themselves. Concepts include learning how to identify wild and domestic birds, exploring eggs, and understanding numerous human-poultry connections. The second goal is to provide 4-H leaders with supplementary materials they can use with youth who do have their own birds. The sessions provide opportunities for experimentation and exploration that can be intermingled with the more practical lessons needed to successfully raise a bird. If your participants are interested in raising a bird, the bibliography section "Raising a Bird" on page 52 may assist in getting you started.

For the classroom or after-school educator, this series provides numerous learning opportunities through experiential learning and practical application. Studies have shown that when youth can apply what they are learning to the world around them, the concepts they are exposed to are retained more permanently. Each session

provides opportunities for the children to connect an activity or experiment to a part of their everyday lives. Reading, writing, mathematics, and science are a part of each session, so curriculum content standards are reinforced.

Each session is designed to encourage participants to think about what they already know about a topic, test their thinking through various investigations, and apply what they have learned to a new situation. This sequential process encourages youth to think scientifically through observing, hypothesizing, comparing, organizing, and communicating. Background information and assessment activities are provided for each session. Although facts and terms are not the focus of this unit, the proper use of terminology is encouraged. The glossary on page 51 provides definitions of terms used throughout the sessions; these terms are printed in bold type the first time they appear.

Before beginning the unit, read through all of the material. Review the background information for each session; it should contain enough information to answer basic questions. Keep in mind, however, that leaders are not expected to know everything and should be willing to discover new things with their youth and allow opportunities for the children to explore and discover. The best teachers are those who teach people how to question and find answers, not those that know everything and tell it to their students.

Allowing time for exploration and discovery is a crucial component of education, especially for young children. Strategies for developing and promoting this type of learning environment are described on page 4; other successful techniques can be incorporated as well. Use techniques that are successful for you and the youth with whom you work.

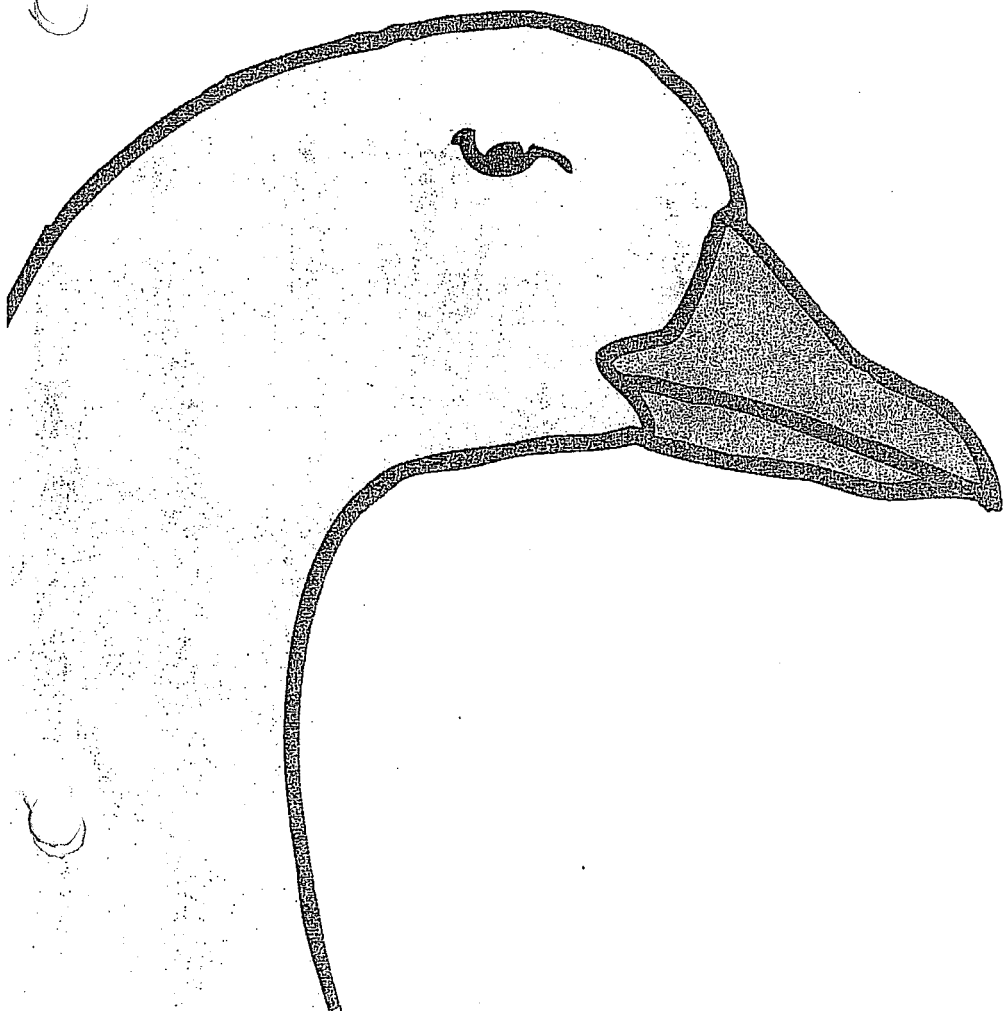
Encourage older youth and parents to become involved in the sessions. Most lessons benefit from having 1 adult for every 3 to 6 participants. The sessions are most enjoyable when youth and adults share learning experiences together.

The 4-H Youth Development Program understands that children learn in a variety of ways and at varying speeds, depending on their experiences as well as their developmental capabilities. If the sessions in this unit are on topics the children have already covered and more depth is required, you may find a session in Introduction to Poultry for Youth Ages 9 to 11 that may better meet their needs. These units can be obtained through the University of California Agriculture and Natural Resources catalog Web site, anrcatalog .ucdavis.edu.

Whether used in a poultry project or as a science supplement in a classroom, it is hoped that these sessions will teach everyone a bit more about poultry—what poultry are, how humans and poultry are connected, and how that relationship has changed over the years. With this knowledge, each participant can become an educated consumer of poultry products.

# Teaching Techniques and Tools

There are many ways to teach and many ways to learn. One of the best ways to learn is by doing. For example, suppose you watch a video on how to learn to swim. You can watch the video numerous times, but until you actually practice the sport, you won't master the techniques of swimming.



The 4-H Youth Development Program uses experiential learning to promote better understanding and retention. "Learning by doing" is the key.

This section presents strategies that can maximize the educational experience of the participants. Try some of these ideas as you teach, and combine them with other educational strategies you have found to be successful.

## EXPLORE AND DISCOVER

Provide opportunities for youth to explore and discover. Allow time for youth to fiddle and experiment with supplies in a safe setting. Create an atmosphere of exploration and discovery. Take participants to the zoo or a local county fair to see a chicken or turkey, as well as other birds. Provide experiences for youth so they can connect newly learned knowledge to something they already know. This approach is known as constructivist learning.

## QUESTIONS

Asking questions, as opposed to giving answers, is an effective teaching and learning method.

- Ask the children questions that encourage exploration and further thinking.
- Ask questions that do not have one clear answer (open-ended questions).
- Ask questions that require investigation.
- Provide time for the children to think before calling on them to answer questions.

The following types of questions encourage thinking:

- "What if . . .?"
- "What would happen next?"
- "What do you think?"
- "How would you do it?"

## ALLOW TIME TO MAKE CONNECTIONS

It has been proven that we retain information better if we can apply it directly to our experiences and lives. The sessions in this unit incorporate many opportunities for making connections. Here are some additional ways you can encourage children to make connections:

- Provide time for the children to think about what they already know.
- Provide opportunities for children to hypothesize about what will happen next based on their previous experiences.
- Perform the "Application" activities at the end of each session. These activities ask the children to apply what they have learned to a new situation.

## FACILITATE LEARNING BY USING OTHER PEOPLE

Many memorable educational experiences include lessons taught by older people—a sibling, grandparent, neighbor, or friend. Incorporate older youth and adults in your teaching.

- Ask older youth to assist younger children with procedures and directions.
- Invite a 4-H or FFA youth with poultry experience to lead one of the small-group stations.
- Ask parents to come with their children to specific meetings so they can learn about poultry together.
- Invite a parent who has a particular area of expertise to be a guest educator for a meeting.
- Assign a teen to work with a child who needs special attention.
- Assign a parent to be the person who gathers supplies prior to the meeting and/or distributes them during the meeting.

## INCORPORATE MOVEMENT

Children are growing and active people. Their bodies require movement and their minds need mental breaks. Throughout each session incorporate organized movement.

- Use hand and body motions while singing a song.
- Have children gather their own supplies in an orderly fashion.
- Serve a snack between the "Investigation" and "Application" activities of the session.
- Have a standard break activity that requires movement such as "Simon Says" or "Duck, Duck, Goose!"

Session 1

# Homegrown or on the Wild Side?

## DOMESTIC OR WILD?

TIME 50 TO 60 MINUTES

### SCIENCE LEARNING

- observing
- oral and pictorial communication
- comparing
- organizing through classifying and grouping

### VOCABULARY

- captive
- different
- domestic
- feral
- poultry
- similar
- tame
- wild

### OBJECTIVES

The children will

- explore and understand the basic needs of all living organisms.
- examine the similarities and differences between wild, captive, and domestic animals, specifically birds.
- classify animals as wild, captive, or domestic.

### MATERIALS

- black marker
- butcher paper or poster board
- cellophane tape
- color photos or drawings of the following, one set per small group (color photos of these items are preferred; however, black and white drawings on pages 38-45 are provided as an option):
  - wild turkey
  - domestic turkey
  - wild duck
  - domestic duck

- glue sticks (several)
- index cards (1 per child)
- photos or drawings of domestic and wild animals from magazines, newspapers, coloring books, postcards, or other sources
- scissors (1 per child)
- "Wild, Captive, or Domestic?" activity sheet (page 9)

## PREPARATION

- Prior to the activity date, ask children to bring in a few photos or drawings of their favorite animals. These will become part of a display and will not be returned.
- Obtain a collection of magazines, coloring books, and newspapers that have photos of animals in them.
- Locate large photos of a wild turkey, a domestic turkey, a wild duck, and a domestic duck, or photocopy and realistically color the illustrations on pages 38–45. **Laminating is suggested.**
- Copy and cut out the photos of the three animals on page 9.
- Write the designated words on index cards for the application activity on page 8.

## BACKGROUND INFORMATION

### Domestic or Wild?

People typically think of animals as wild, captive, or domestic. Wild animals live freely and are able to take care of their own needs, such as finding food, shelter, and mates. They also know how to avoid predators. Most types of animals, such as mammals, fish, birds, reptiles, amphibians, insects, and microorganisms, are considered wild. Sometimes people take wild animals captive (place them in zoos, wild animal parks, or game farms), and often successfully breed and raise them; but the animals still have the same instincts, colors, and shapes as their wild relatives. For this reason, captive animals and their offspring are usually able to return to living in the wild.

Domestic animals have been kept in captivity and are bred for special purposes. Examples of domestic animals include dogs, cats, cattle, and horses. Long-term domesticated animals such as sheep, pigs, chickens, and rabbits have been kept in captivity and selectively bred by humans over many generations (some for thousands of years). These animals depend on humans for protection from predators, shelter, food, and medical care. In turn, domesticated animals provide a source of food, fiber, or power for the humans who take care of them.

Domesticated animals cannot live successfully in the wild, but the ancestors of all domestic animals were wild. Ancestral species of some domesticated animals can still be found in the wild today. For example, the red jungle fowl of Southeast Asia is the ancestor of the modern chicken; and the wild turkeys of North and Central America are the ancestors of the modern turkey varieties, including the large white-meat turkeys.

### Similarities and Differences among Wild, Domestic, and Captive Fowl

Wild birds are typically much lighter in weight and leaner in appearance than their domesticated relatives. Their lighter weight allows them to move faster and, in most cases, to fly. Many wild birds, particularly the females, are colored to blend into their environment. This makes it more difficult for predators to find them, which is especially beneficial when the females are incubating eggs. Males are much more colorful, especially during the breeding season, when they are trying to attract a mate. Understandably, bright-colored males do not sit on eggs. In some bird species, the differences in feather colors and body shape are so extreme between males and females that early naturalists thought the males and females were from **different** species.

Domesticated bird species (particularly species of chicken, turkey, duck, and goose) tend to be larger and heavier than their wild relatives. Part of this is due to better diet and living

conditions. Also, humans, over thousands of years, selectively bred the bigger and meatier animals. Domesticated animals sometimes display different colors than their ancestors. For example, white feathering is common among domesticated chickens and turkeys because when these white birds are plucked, the fine, hairlike pinfeathers are nearly invisible. Consumers prefer not to see the small pinfeathers on their dinner plates, so producers raise white chickens and turkeys. In the wild, a white turkey or chicken would rarely survive long enough to reproduce, since it would be much easier for predators to see. In addition to the loss of their camouflage feathers, mature modern meat-type chickens and turkeys have become far too heavy to fly.

Some wild birds, such as pheasants and quail, can be successfully raised in captivity. Captive birds are typically hatched and raised in the wild and are not as **tame** as domesticated birds. Captive birds are **similar** to and essentially look the same as their wild counterparts and have not lost their ability to fly.

The term **poultry** refers to all domesticated fowl raised for their meat or eggs, including chickens, turkeys, ducks, and geese.

## INTRODUCTORY ACTIVITY

Invite a child to be an "actor." Without allowing the rest of the participants to see, show the child one illustration from page 9. Ask the child to pretend that she or he is the animal shown in the photo and act out what that animal would do. The actor may not talk. Encourage sounds, action, and enthusiasm. Have the rest of the children guess what animal the child is portraying. Repeat the procedure with the other two animals. After all three role-plays are complete, ask the following questions and allow time for students to respond thoughtfully.

- Which person was the wild animal? Why?
- Which person was the captive animal? Why?
- Which person was the domestic animal? Why?

## INVESTIGATION

- In small groups of three to four, have the participants gather a collection of animal photos. These photos should include ones the children brought as well as ones cut out from magazines, newspapers, and other sources. Ask each group to sort their photos into the categories wild, captive, and domestic. All group members should agree to the classification of each animal.
- Tape a piece of butcher paper on the wall and divide it into three sections with a black felt-tip pen. Write one category name (wild, captive, or domestic) at the top of each section. One by one have each child choose a photo; tell the class what the animal is, and what category the animal belongs to, and why; and then glue it onto the paper. An animal may fit into more than one category. If this is the case, allow the child to choose where to place it.
- Display this poster and refer to it throughout the rest of the sessions.

## APPLICATION ACTIVITY

- Divide the participants into two groups. Have one group look at the photos of the wild and domestic turkeys. Have the other group look at the wild and domestic ducks.
- Discuss the similarities and differences between the two animals and why these differences may exist. Share facts from the background information for this lesson with the children. Be sure to ask: Where does each live? What do they eat? How are they protected from predators? Which is the domestic animal? Which is the wild animal?
- Have the groups switch photos and compare and contrast the other two birds.

## ASSESSMENT

- Write the names of the following animals on index cards, one animal per card: pig, jellyfish, cow, wolf, boa constrictor, chicken, horse, duck, bee, bat, goat, dog, panther, humpback whale, lizard, jackrabbit, and lion. Each child should have one card.
- Have the children divide themselves into two groups, wild and domestic, based on the cards they have. Could any of the animals named on the cards be captive?

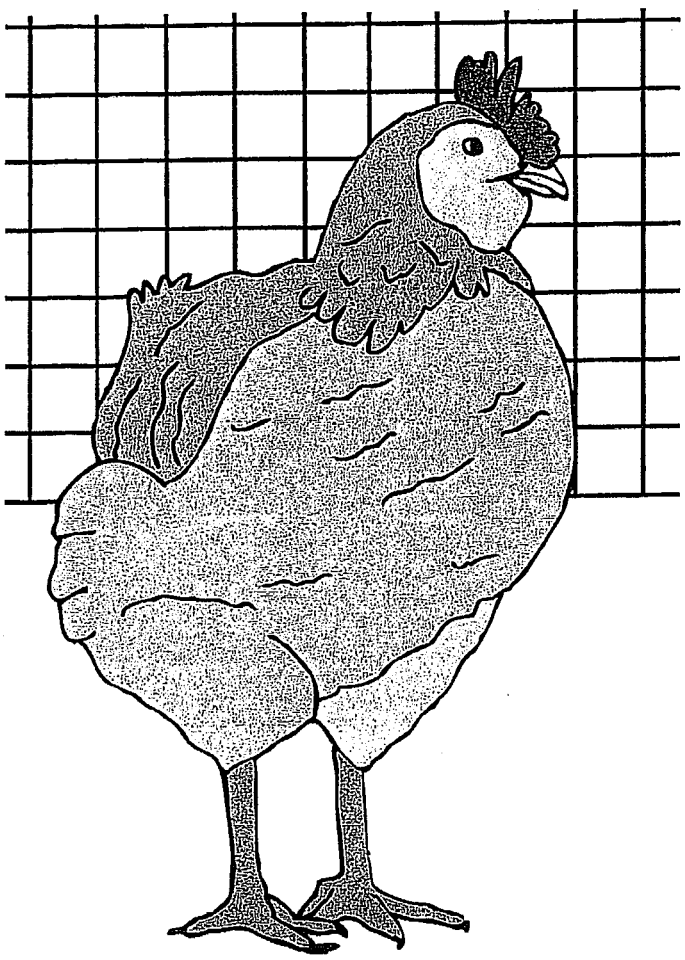
## EXTENSION

- Read a story about an animal. Discuss whether the animal is wild, domestic, or captive.

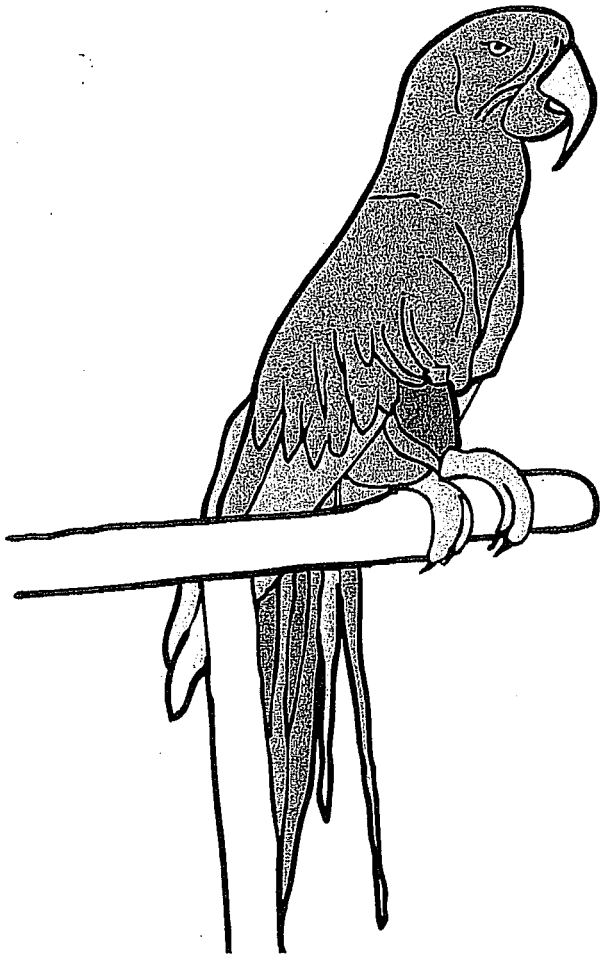
## NOTE BOXES

- An animal may be domestic if it is
  - found living with people and depends on people for care
  - bred by people for food, fur, leather, or work
- An animal may be captive if it
  - is not tame but is cared for by people
  - has the instincts of its wild ancestors
  - has the body shape and color of its wild counterparts
- Some domesticated animals, such as the horse, can become **feral**. This means that although its ancestors may have been domesticated, it can live and reproduce successfully on its own.
- Once an animal has been domesticated, neither it nor its offspring can become wild, but it can become feral.

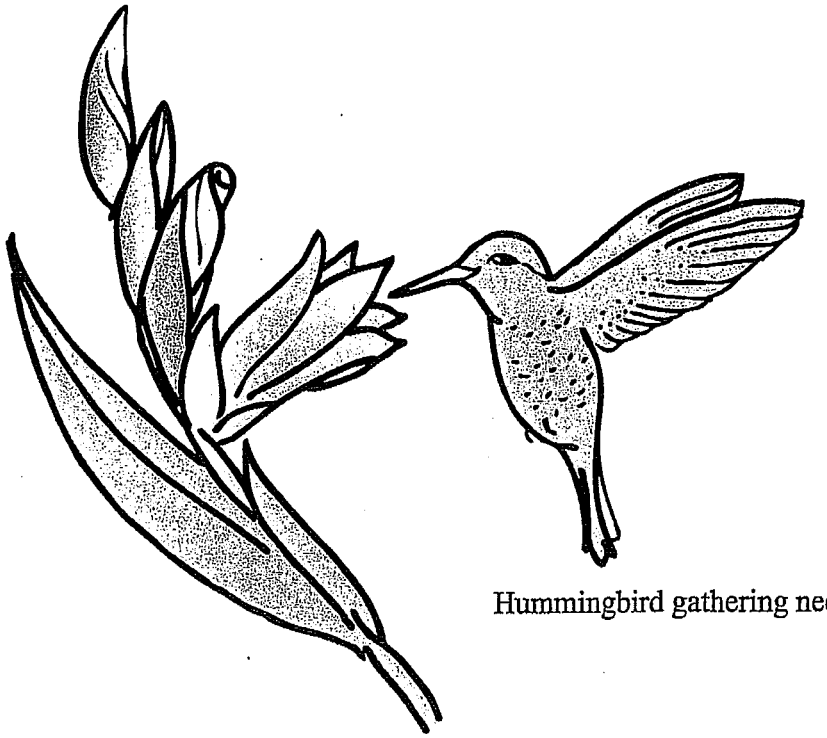
# WILD, CAPTIVE, OR DOMESTIC?



Leghorn chicken in a cage.



Parrot on a tree limb in a zoo aviary.



Hummingbird gathering nectar from a flower.

Session 2

# Homegrown or on the Wild Side?

## WHERE DOES IT LIVE ?

TIME: 30 MINUTES

### SCIENCE LEARNING

- observing
- oral and pictorial communication
- comparing

### VOCABULARY

- environment
- fowl
- granivore
- habitat
- omnivore

### OBJECTIVES

The children will

- understand the basic needs of living organisms, including themselves
- create models of wild and domestic bird habitats
- compare the habitats of wild and domestic animals

### MATERIALS

- crayons or markers (for each child)
- drawing of Canada goose (page 48)
- drawings or photos of domestic poultry in their environment
- drawings or photos of wild animals in their native habitat
- string, bowls, paper towel tubes, paper, seeds, straw or dried weeds, feathers, and other items that can be used to make an imaginary habitat
- white paper (1 to 2 sheets per child)

### PREPARATION

- Gather the supplies needed for the children to make a habitat for a leghorn chicken or a mallard duck.
- Obtain drawings or photos of wild animals in their native habitat, or use the drawings on pages 38–49.

## BACKGROUND INFORMATION

### What Makes a Habitat?

Humans and all other animals, including pets and farm animals, have the same basic needs. One of the most basic needs is home. A home is not just a place of shelter; it is a place where all basic needs are met. The scientific term for a wild animal's home is its habitat. For a domestic animal, its home is referred to as its environment.

All animals have four basic needs: water, food, shelter, and space. The habitat or environment in which the animal lives must provide these four elements. Animals in the wild depend on their surroundings to meet these needs. Animals' existence is threatened when these needs are not met, for example, during a drought, after a fire, or when their habitat is encroached upon by human development. Domestic animals such as chickens and turkeys depend on their caregivers to ensure that they stay healthy by providing them with water, food, shelter, and space.

### Care of Poultry

All types of poultry need some form of shelter that protects them from the sun, rain, and wind. Ideally, the shelters should also provide protection from predators. Most poultry are raised in a confined area such as a barn for meat chickens and turkeys, or wire cages for laying hens.

Domestic birds need proper nutrition, which includes balanced feed and clean water. Most domestic birds are fed premixed food that contains a variety of ingredients such as grains (corn, soybeans, wheat, milo, and oats) and added vitamins and minerals. For the most part, poultry are omnivores, which means that they eat both plants and animals, but they can also be granivores, which means they eat only seeds. The birds' owners are responsible for determining the best diet for their birds.

## INTRODUCTORY ACTIVITY

Ask the children to draw a picture of where they live and items they require to survive. For example, children need a place to sleep and food to eat. After the drawings are complete, lead the children in a personal exploration of their thoughts by asking questions such as the following.

- What are some things in your drawing that you need for survival?
- If you were really going to live there, would you need to add anything to your drawing?
- A home is a shelter. What other things do people need to survive?
- What are some things that all living things need in order to live?

Allow children to share their drawings and display them, if time and space allow.

## INVESTIGATION

- Divide the children into two groups. Designate one group as the "Laying Hen" group and the other as the "Mallard Duck" group. Ask the children to create a life-sized model habitat for their animal using the supplies available (string, bowls, plates, grass, seeds, etc.). Be sure to set ground rules for participation and cooperation. Allow 8 to 10 minutes for the children to create the habitat. They must be creative, using the supplies available, and show how the animal will have everything it needs to survive.
- Once the habitats are complete, have one person from each group act as the bird to show how the bird lives in the habitat model.
- After both groups have described their habitats, ask the children the following questions and allow time for answers.

  How are the two habitats alike?

  How are the two habitats different?

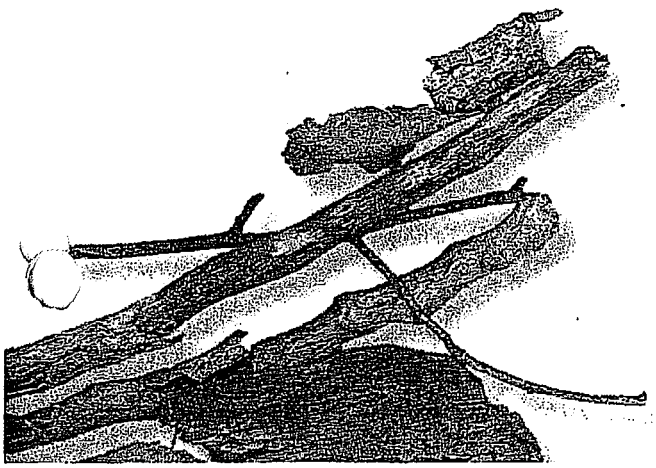
  If you were to able to change the habitat you made or add other items, what would you change or add? Why?

## APPLICATION ACTIVITY

- Have the children suppose that they are going to raise a bird. What kinds of things would they need to consider prior to getting the bird? What kinds of things would they need while raising the bird? Why would they need to provide these things?
- Have an older youth who owns a bird describe the healthy environment that is provided for it. If possible, have the guest bring in a bird and some supplies that are used to care for it.

## ASSESSMENT

- Show the children a drawing of a Canada goose (page 48). Ask them what this wild waterfowl needs to survive. The children should be able to explain its four basic needs: water, food, shelter, and space. If appropriate, discuss where the children have seen Canada geese.
- Have the children list three reasons people need homes and three reasons why birds need homes. Compare the reasons.



## EXTENSIONS

On a large piece of paper, write lines in the following sequence to form a cinquain template. A cinquain is a five-line poem written in a specific way. Ask each child to give you a word that describes something an animal needs to live. Place the word on an appropriate line of the poem. As a group, read the poem aloud.

One word_____
(*noun, the title of the poem*)

Two words_____
(*adjectives that describe the title*)

Three words_____
(*adjectives that describe actions of the title*)

Four words_____
(*a statement of feeling*)

One word_____
(*noun, a synonym of the title*)

Example:
*Kittens*
*furry, young*
*frisky, playful, nocturnal*
*enjoyable pet and companion*
*felines*

## NOTE BOXES

- *Optional:* While the children are drawing, play appropriate songs from Banana Slug String Band science education CDs. Titles include Goin' Wild, Everything Needs a Home, and Ecology. **See page 54 for ordering information.**
- For a twist to one of the drawing activities, have the children use gel pens to draw their pictures on black construction paper.

# Session 3

# Poultry

## INTRODUCTION TO COMMON DOMESTIC BIRDS

**TIME: 45 TO 50 MINUTES**

### SCIENCE LEARNING

- observing
- organizing by sequencing and graphing
- assembling
- hypothesizing

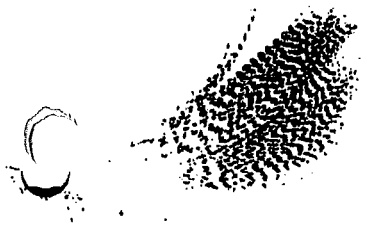
### VOCABULARY

- beak
- bill
- caruncle
- chicken
- cock
- comb
- duck
- hen
- roost
- rooster
- snood
- turkey
- wattle
- webbed feet

### OBJECTIVES

The children will

- identify the types of poultry humans use for meat
- assemble models of poultry
- compare the anatomy of chickens, ducks, and turkeys
- explore the adaptations of birds
- predict the functions of the anatomical features of some birds



## MATERIALS

- 60-pound white paper (approximately 2 sheets per child)
- bathing cap
- broad-tipped marker
- butcher or chart paper (one sheet)
- cellophane tape (optional)
- goggles
- inflatable inner tube
- "Let's Make A Bird!" masters (pages 19–24)
- photos of domestic ducks, chickens, and turkeys large enough for the whole group to see (if photos are not available, use the drawings provided on pages 38–49)
- raincoat
- scissors (1 per child)
- swimming fins (1 set)
- yellow and red crayons (1 each per child)

## PREPARATION

- Photocopy the "Let's Make a Bird!" masters (pages 19–24) onto the 60-pound paper. Make enough copies so each child will get one type of bird. Make a few extras of each page to allow for participant error.
- Locate photos or drawings of domestic ducks, chickens, and turkeys or photocopy and color the drawings provided on pages 38–49.

## BACKGROUND INFORMATION

Poultry is a major source of food for people. In the United States, chicken and turkey are the most common types of poultry eaten. Duck and goose are also consumed, especially in certain ethnic communities.

### Ducks

Ducks are large-bodied birds that swim in the water. They get their food with their shovel-shaped **bills** by picking up mud along the edge of the water and straining it through their bills using lots of water. They have **webbed feet,** which means they have skin between their toes to help them swim. Their feathers are closely packed together and have natural waterproof qualities. Short tails and simple heads distinguish ducks from other types of birds and allow them to swim and dive easily.

### Chickens

Chickens find their food in or on the ground or growing close to the ground. They have short, powerful **beaks** to help them eat small insects, fruit, seeds, and green plants. They often scratch in the dirt to find food. Chickens like to sleep on **roosts,** such as tree limbs, above the ground. Chickens have red appendages called **combs** on top of their heads. Chickens are the only birds with combs. Red skin called a **wattle** hangs down below each chicken's beak. A female chicken is called a **hen;** a male chicken is called a **cock.** Cocks usually have longer tails, bigger combs, and larger wattles than hens. Cocks are known for their distinct crowing noises.

### Turkeys

Turkeys are much larger than chickens and have several distinct features. They have big legs and feet to hold up their weight. The head of a turkey is different from a chicken's head. It has a long piece of red skin that hangs down on one side of its beak. This is called a **snood.** A turkey also has many bumps on its head that are called **caruncles.** Turkeys are able to change the color of their snoods and caruncles from red to blue—it is thought the color change indicates a change in mood. Female turkeys are called hens; male turkeys are called toms. Toms have big, fan-shaped tails, which they display when they want to impress a hen.

Like chickens, turkeys find their food in or on the ground or growing close to the ground. They have short, powerful beaks, which help them eat insects, small animals, seeds, fruits, and green plants. Turkeys prefer to roost aboveground at night.

## INTRODUCTORY ACTIVITY

- Invite three children to the front of the room. Ask one child to act like a duck, one to act like a chicken, and one to act like a turkey.
- Ask the rest of the group what they observed.
- Show the children the drawings of the duck, chicken, and turkey. Ask them to identify the animals and then name the parts they see. If appropriate, have them discuss the functions of the parts they see. Take note of misconceptions and be sure to cover them in the investigation activity.

## INVESTIGATION

- After describing each bird, have the participants choose one bird to assemble.
- Give each child one set of bird parts, one pair of scissors, one red crayon, and one yellow crayon.
- Instruct the children to color their bird parts as realistically as they can, cut them out, and assemble the bird. After the birds are complete, assist children in identifying their birds and the bird's characteristic anatomy. Taping is optional; bird parts may be assembled on a flat surface without taping them together.
- As a group, create a chart that describes the animal parts and their functions. Ask the children to list the parts and explain their functions. You may assist by asking questions such as: What is this? (Point to your head, your feet, your abdomen, etc.). What do you think it is for? A sample chart is shown below.

| Animal Part | What We Think It's For! |
|---|---|
| Head | |
| Legs | |
| Feet | |
| Wings | |
| Comb | |
| Wattle | |
| Caruncle | |
| Snood | |
| Breast | |
| Back | |
| Tail | |

## APPLICATION ACTIVITY

- Gather the fins, raincoat, inflated inner tube, and goggles. Set them in front of the room. Have the children sit in a circle.
- Discuss the idea that animals have certain adaptations that help them survive in their surroundings.
- Invite one child to the front of the room. Explain that this person is a duck.
- Ask the children to name one adaptation the duck has that helps it survive. As the children state their answers, listen to them. If you have an appropriate prop to place on the child, do so. Continue to listen to ideas and dress the child with the appropriate items that show an adaptation. Examples include:
  - fins: webbed feet
  - raincoat: waterproof feathers
  - inner tube: feathers and body structure that help the bird float
  - bathing cap: small, smooth head feathers for ease in diving and swimming
  - goggles: a second eyelid (nictitating membrane) that allows birds to see underwater
- Ask the children about the adaptations chickens have that allow them to be successful in their environment. Answers may include long claws to scratch and dig, a pointed beak to peck open its shell during hatching, and the instinct to swallow pebbles to help in food digestion.
- Ask the children what they think would happen if ducks did not have webbed feet? If a cock was not colorful? If poultry feathers were not waterproof?
- Provide time for all to respond.

## ASSESSMENT

Have children view photos or drawings of the animals they assembled. Ask each child to point to one part of the animal and explain what it does. Continue until each child has had a turn.

## EXTENSIONS

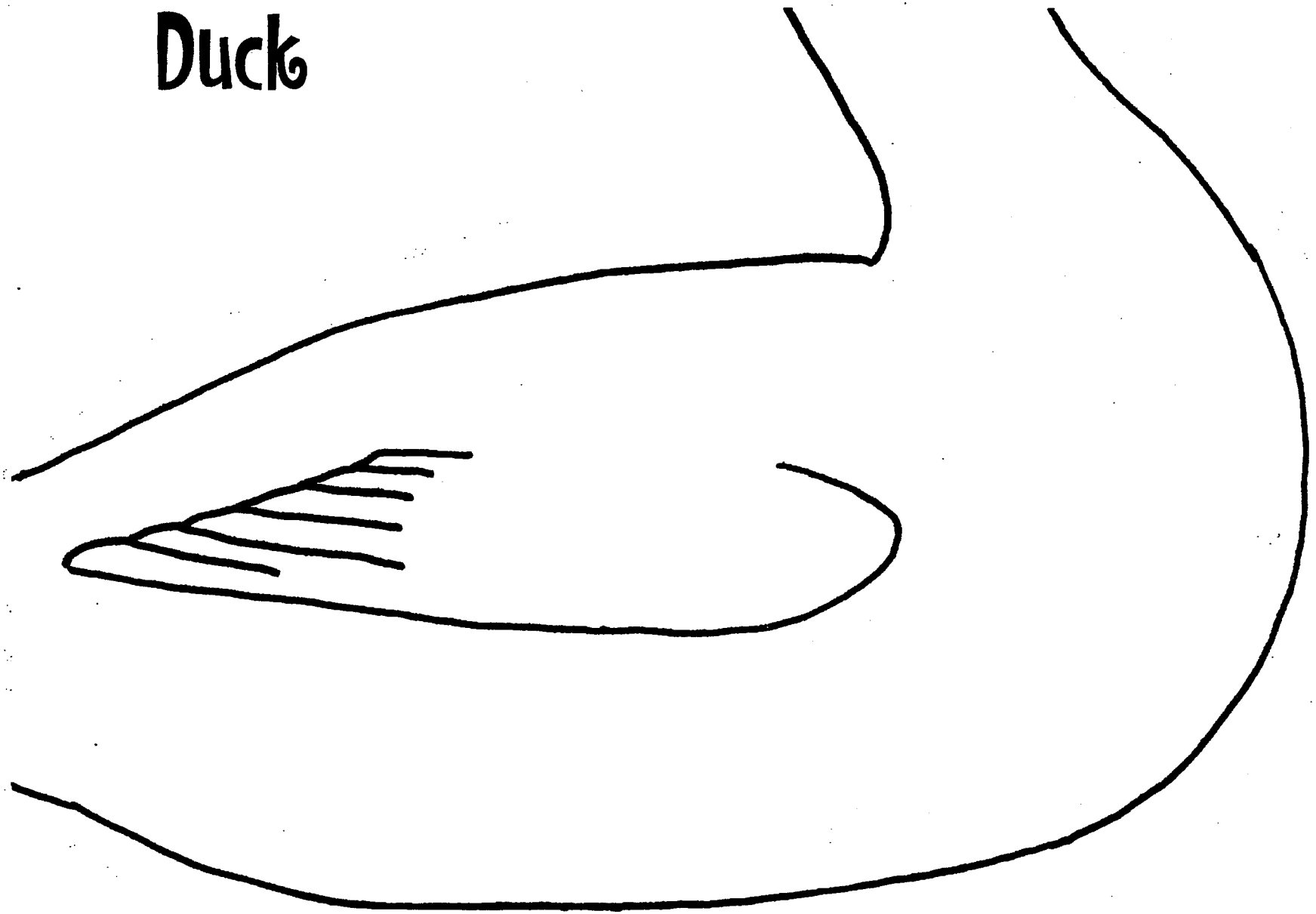
- Paste the completed animals on a piece of butcher paper and use it to write a thank-you note to an appreciated person or company.
- Have the children mix and match parts to create a bird of their own. Where would this bird live? What adaptations does it have?
- Have participants draw the head of a chicken or turkey and label its parts.
- Bring in a live cock and hen. Compare the wattles, combs, and other facial features.
- Show the participants a live chicken, duck, and turkey. Compare and contrast the animals.

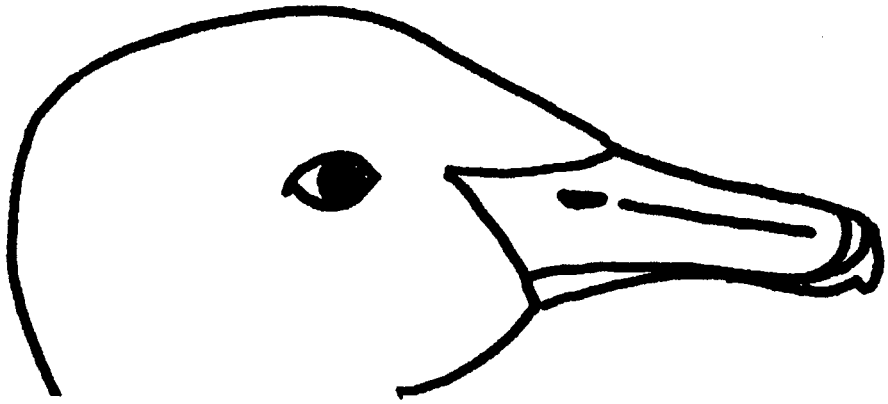
## NOTE BOXES

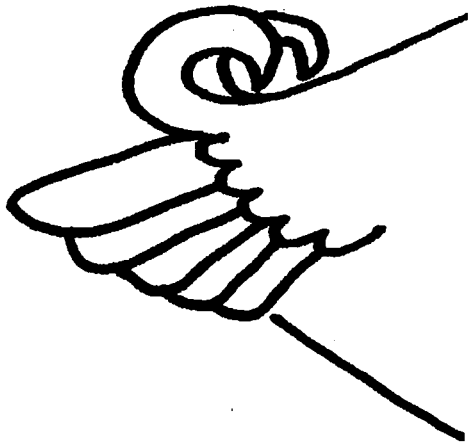
- After completing the activity, allow the children to tape their finished animal together and place it on a display.
- Save extra cutout poultry pieces for the extension activity in which children mix and match parts.

LET'S MAKE A BIRD!

# Duck

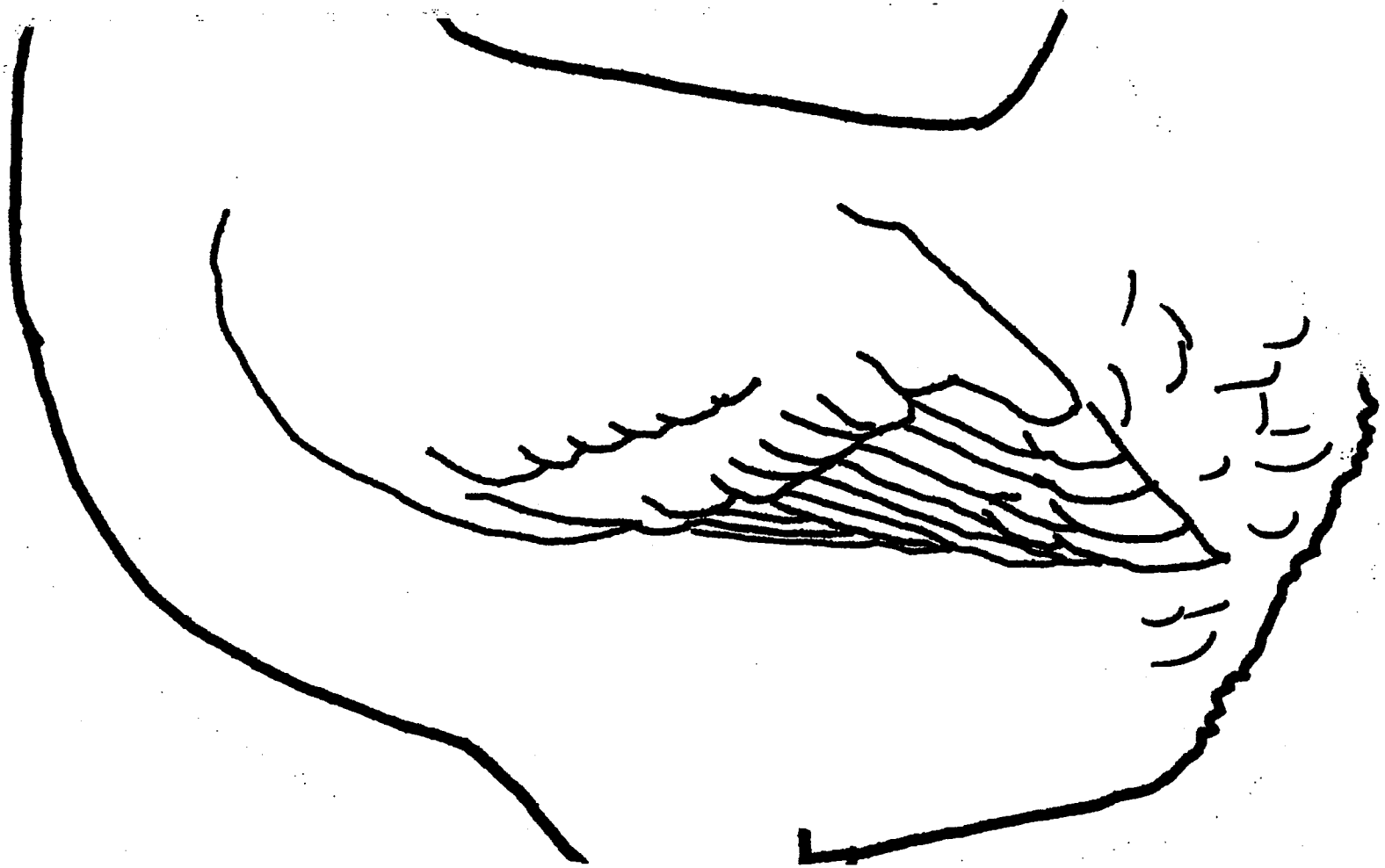


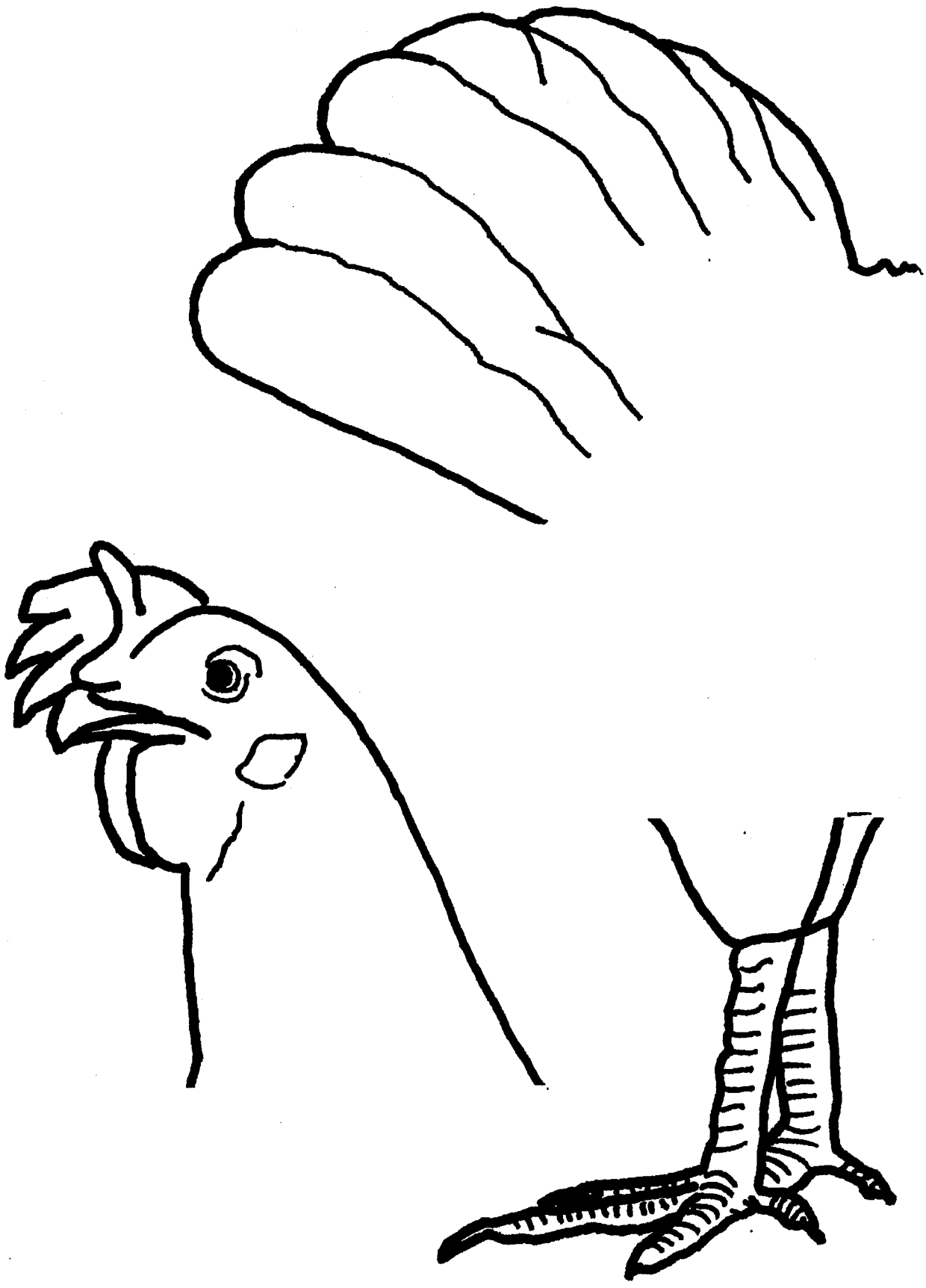




LET'S MAKE A BIRD!

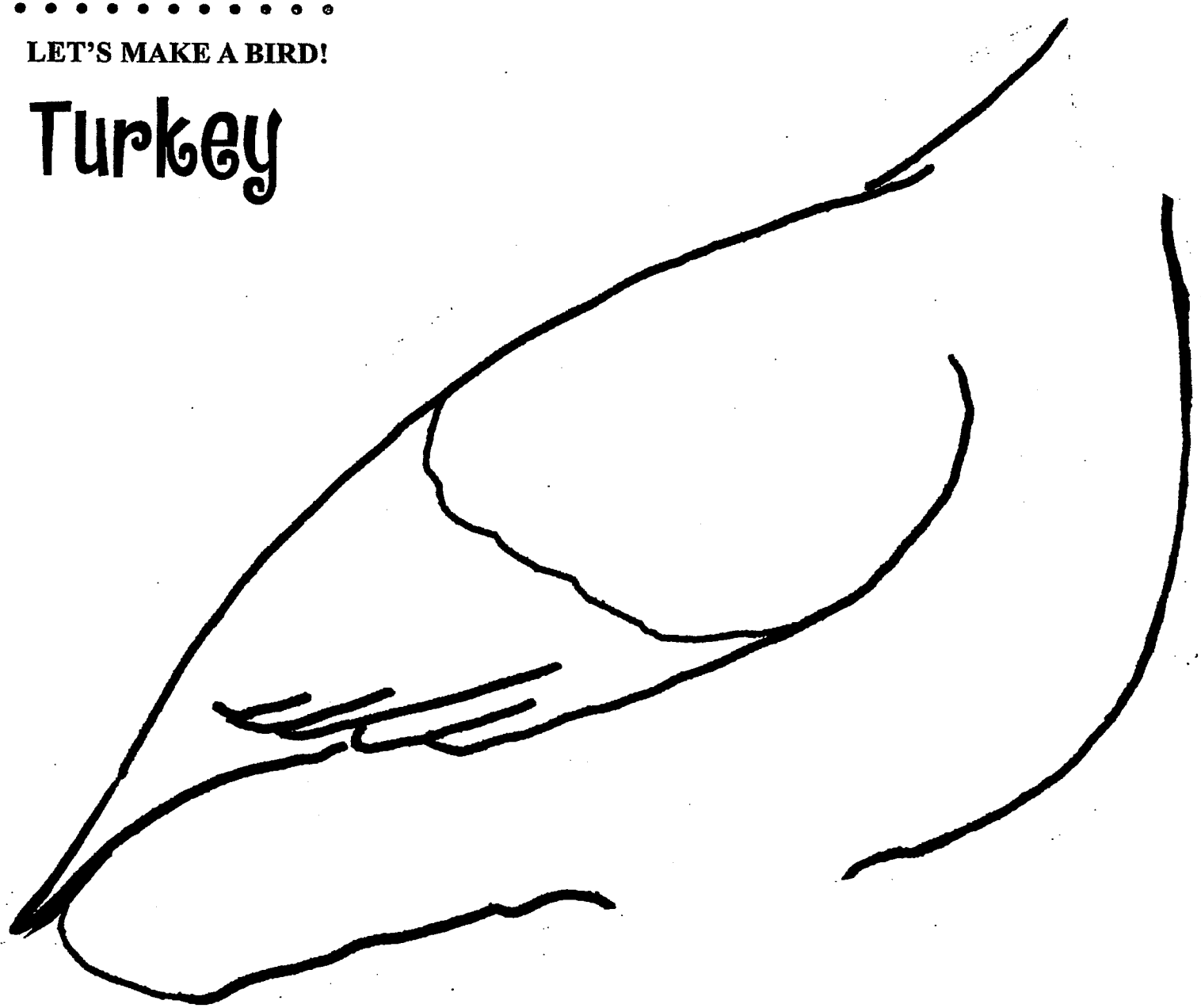
# Chicken

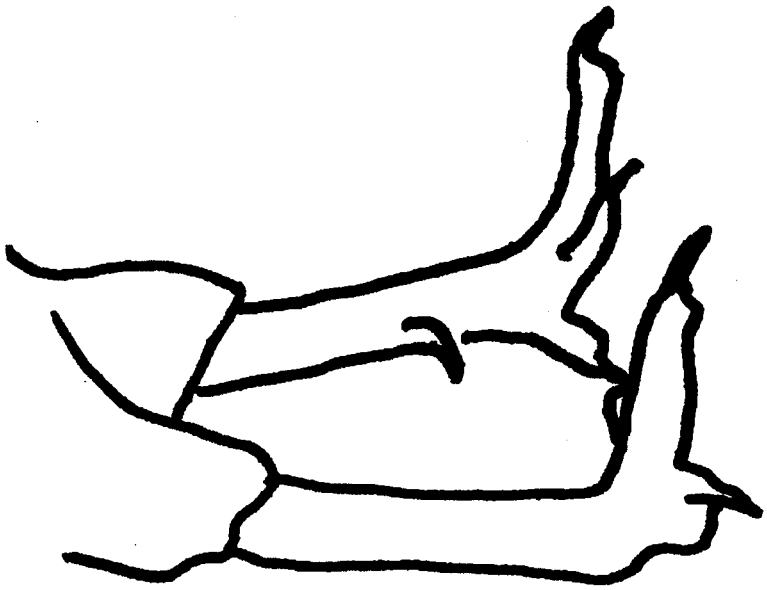




LET'S MAKE A BIRD!

# Turkey





Session 4

# When Did Your Family Go to the Birds?

## HUMAN–POULTRY CONNECTIONS

**TIME: 50 TO 60 MINUTES**

### SCIENCE LEARNING

- observing
- oral communication
- comparing
- organizing

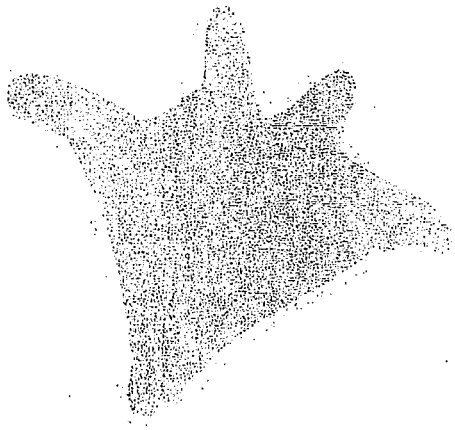
### VOCABULARY

Due to the nature of this exercise, a specialized vocabulary can be derived from the literature read aloud and the experiences shared.

### OBJECTIVES

The children will

- develop an appreciation for the historical uses of poultry
- understand by listening to stories the role that poultry plays in many holiday celebrations, recreational activities, and religious observances
- identify human-poultry connections in their families by sharing information and listening to others



### MATERIALS

- display of down pillows, Ukrainian eggs, feather headdresses, etc. (optional)
- fishing fly
- large feather
- drawings of poultry (pages 38–49)
- selected children's literature that shows a variety of ways poultry is used (see the "Literature for Children" section of the bibliography, pages 52–53).

## PREPARATION

- If appropriate, ask that one parent, guardian, or other relative of each child participate in this activity. Explain that family poultry stories will be shared at this meeting.
- Obtain copies of the books you will read to the children. Plan to read two or three of the books. Use other books that have photos or drawings that show various uses of poultry (see suggestions in the bibliography, page 52).

## BACKGROUND INFORMATION

### A Bit of History

Historically, poultry have been used for many reasons and in a variety of ways. Depending on the culture, poultry have been used for recreation, food, clothing, religious symbols, decorations, and medicines. Many traditions are carried on today.

Through the 1930s, most of the areas in the United States were rural. The majority of Americans lived on farms or ranches, and most farm wives kept poultry for eggs, meat, and down. As rural areas became more urbanized, fewer people were involved in food production. Today, less than 2 percent of the nation's population produces the food we eat.

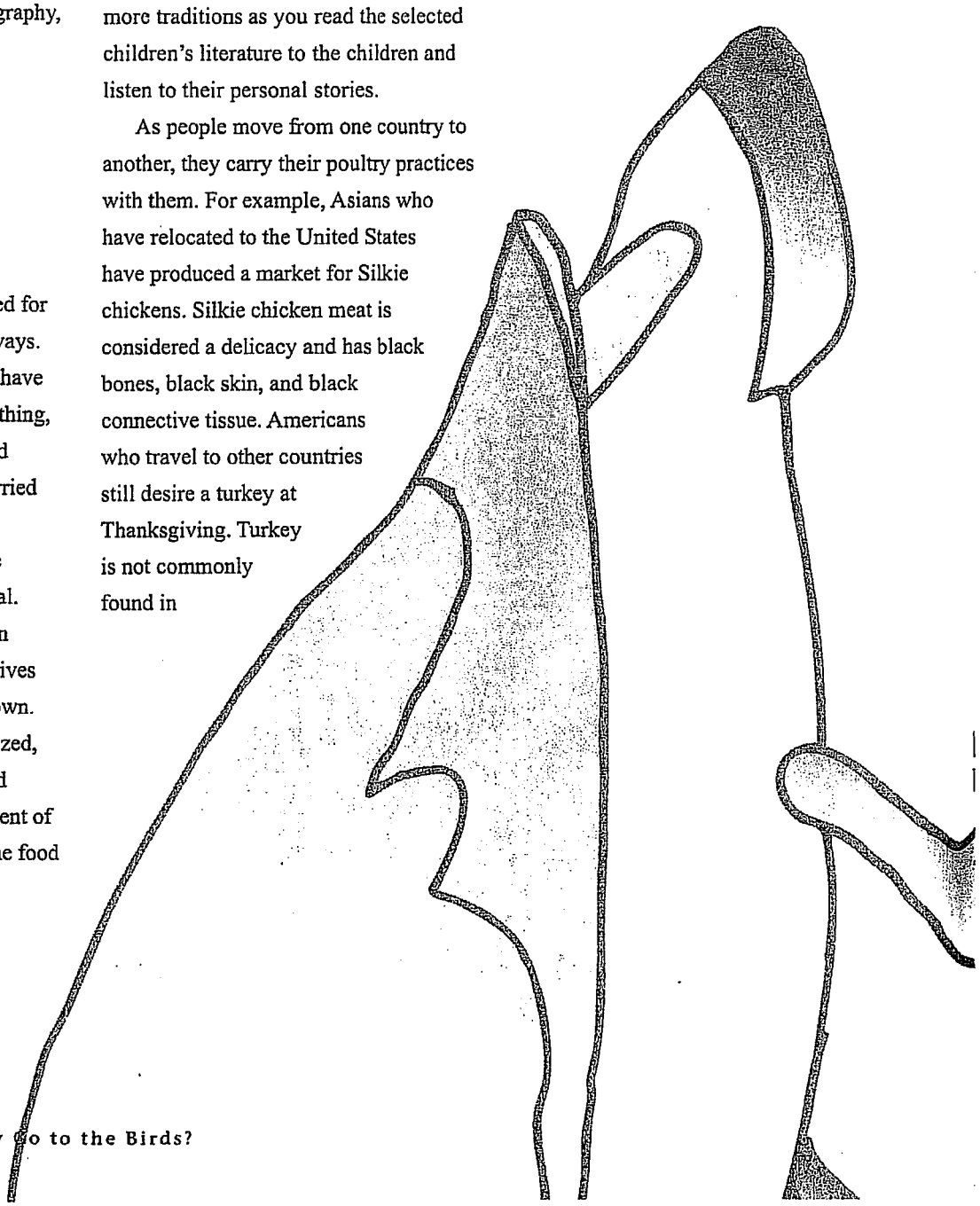
### Celebrations

Poultry is a part of many celebrations. In the United States, turkey is eaten for Thanksgiving; in Asia, duck is consumed on New Year's Day, and feathers are used to decorate Chinese New Year dragons. In Europe, it is common to serve a goose at Christmas supper. Feather headdresses are worn in many Native American celebrations, and feathers are used in religious ceremonies. You will find out about more traditions as you read the selected children's literature to the children and listen to their personal stories.

As people move from one country to another, they carry their poultry practices with them. For example, Asians who have relocated to the United States have produced a market for Silkie chickens. Silkie chicken meat is considered a delicacy and has black bones, black skin, and black connective tissue. Americans who travel to other countries still desire a turkey at Thanksgiving. Turkey is not commonly found in worldwide markets in November; however, the market for this bird is increasing internationally since Americans travel during the holidays.

### Religious Poultry Connections

A number of religions use birds or eggs as symbols. For many Christians, the egg is a symbol of new life, spring, and the Resurrection. Gold chicken statues can be seen on European church-tops as a symbol of the risen Christ. Roasted



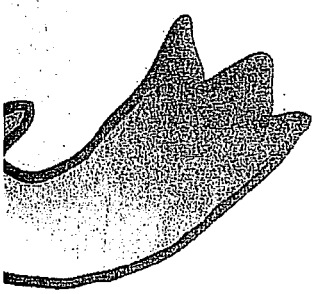
eggs are traditionally served at Jewish Passover. Animist religions incorporate chickens in religious ceremonies and feasts.

### Recreational Activities

Many recreational activities are associated with birds. Fowl such as turkeys, ducks, geese, and pheasants are hunted in season in many parts of the United States. Poultry feathers are used in fly-fishing. Cock fighting is a legal sport in many nations and in some states in our country.

## INTRODUCTORY ACTIVITY

- Show the children the photo of the man tying fishing flies made of chicken feathers (page 29). Show the children an actual fishing fly. Ask the children: What do you think the man is doing? Why is he doing it? Why are feathers put on the hook?
- Next, show the photo of the father and son displaying what they bagged after a day of turkey hunting (page 30). Ask the children: What did they do? Why did they do it? What are they going to do with the birds?



## INVESTIGATION

- Explain to the children that throughout history, people have used poultry in numerous ways. Discuss the idea that the purpose of this activity is to learn about some of the ways people have used poultry in the past and how people today are still connected to poultry.
- Read one or two stories that show some connection to poultry. Possible titles include Lion Dancer: Ernie Wan's Chinese New Year by Kate Waters and Madeline Slovenz-Low, Abuela's Weave by Omar Castaneda, and Rechdenka's Eggs by Patricia Polacco. After reading the stories, discuss the human-poultry connections evident in the stories.
- Ask participants to share an experience they or one of their family members has had with poultry. The experience may be about the participant, a grandparent, great-grandparent, uncle, aunt, cousin, or other family member. Have all of the children and adults sit in a circle. Seat adults between the children. Hold the large feather in your hand. Explain that the feather indicates that it is your turn to share, and that when you are finished sharing, you will pass the feather to the next person in the circle and it will be his or her turn to share. If a person does not have an experience to share when it is his or her turn, they may pass the feather to the next person in the circle.
- After listening to the experiences, you may wish to ask some questions that encourage participants to talk about human-poultry connections that were not mentioned. The background information in this lesson provides connections that may not come up in the discussion. You may wish to show the photo of the man holding the Japanese long-tailed fowl (page 31). This particular breed of chicken is considered a national monument in Japan, similar to the bald eagle in the United States.

## APPLICATION ACTIVITY

- Tell the children that they are going to play a game called "Thumbs Up! Thumbs Down!" Say: "I will say a phrase. If you think the statement is correct, put your thumb up. If you think the statement is false, put your thumb down."
- Proceed by reading the following statements, all of which are true. If all the participants do not agree, ask a child who used a "thumbs up" sign why they think the statement is true, and then ask a child who chose a "thumbs down" sign why they think the statement is false. Be sure to have established a setting where children feel comfortable to talk.
- Here are some statements to use. You may also choose to create a few statements of your own.

- People use poultry for food.
- People use poultry to make pillows and comforters.
- People use poultry for decorations.
- People use poultry for sports and hobbies.
- People use poultry for ceremonies.
- People use poultry in religious ceremonies or symbols.
- People use poultry for clothing.

- If you have items made from poultry or used with poultry, share them with the children.

## ASSESSMENT

Before the children leave for the day, have them line up in single file. One by one, ask them to share with you one new thing they learned about how poultry is used. After they do this, tell them one thing you liked that they did that day.

## EXTENSIONS

- Ask the children to draw a human-poultry connection they would like to have or continue to have in their family.
- Invite a few community members whose careers are linked to poultry to speak to the group. Have them share information about their occupations and show some tools they use on the job. Guests may include commercial egg producers, a butcher from a local grocery store, a veterinarian who works with poultry owners, or a research scientist.
- Ask children why some people have small poultry operations even though large commercial poultry operations exist. Some possible reasons may be:
  - They raise waterfowl or game birds for special markets.
  - They raise birds for specialty feathers needed for decoration or fly-tying.
  - They enjoy teaching youth about poultry.
  - They prefer to eat farm-fresh food produced on their land.

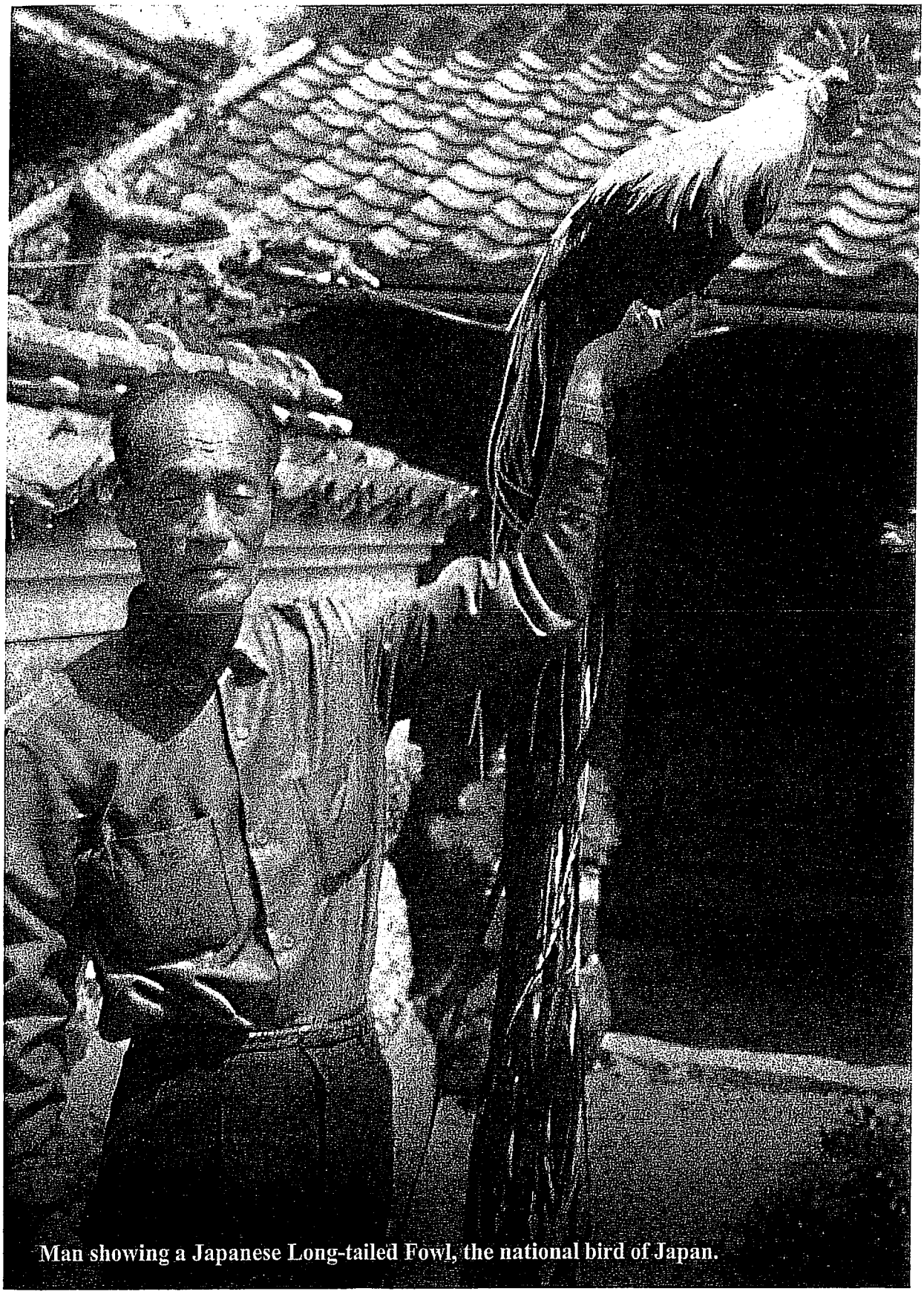
## NOTE BOXES

- Remind children that the word "poultry" does not mean just chickens and turkeys, but also includes ducks and geese.
- When you state your personal poultry connection, you may want to include some interesting connections such as an aunt who does chicken-hatching demonstrations at the zoo or a great-grandmother who made down quilts. This will encourage the children to think of uses besides food.
- Be sure that current careers related to poultry are included in part of the discussion.
- Create a list of human-poultry connections on butcher paper in the shape of a chicken. Title it "How We Use Poultry."

**Making a fishing fly with chicken feathers.**

How would you do it?

**Father and son after a day of turkey hunting.**



Man showing a Japanese Long-tailed Fowl, the national bird of Japan.

Session 5

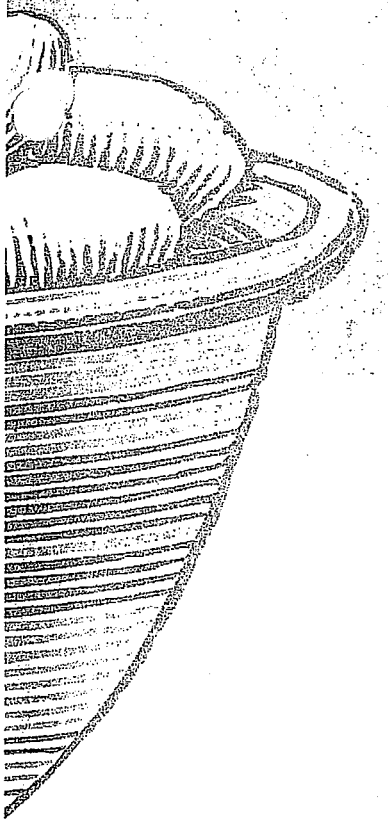
# Eggs Inside and Out

## LET'S TAKE A LOOK!

**TIME: 45 TO 50 MINUTES**

### SCIENCE LEARNING

- observing
- oral communication



### VOCABULARY

- air cell
- albumen
- chalaza, pl. chalazae (pronounced "ke-lay-zee")
- egg white
- exterior
- interior
- oval
- ovum
- shell
- shell membranes
- yolk

### OBJECTIVES

- The children will
- explore the characteristics of an egg
- gain a curiosity for learning more about eggs
- learn the basic components and functions of an egg

### MATERIALS

- chicken eggs (1 per 3 children)
- plastic dessert plates (1 per 3 children)
- butter knife (1 per group leader)
- 1-gallon resealable plastic bag (1)
- soap and hot water
- pump dispenser of hand sanitizer
- paper towels
- hand lenses (1 per 3 children)
- "Parts of an Egg" illustration (page 37)

## PREPARATION

Some of the eggs should be kept unrefrigerated for a week or more. Number the eggs ahead of time and keep a record of which eggs were not refrigerated. Make one copy of illustration "Parts of an Egg" (page 37) for each child. On newsprint or on the blackboard, start a "Parts Chart" like the one below. The information in the "What It Actually Does" column gives you the correct answers. At the end of the session you will fill in the information as the children think about what function the parts serve. Return each child's drawing from Session 6 so they can compare what they say when they made the drawing to what they see after they learn more about the parts of the egg.

## PARTS CHART

| Part | What I think it does | What it actually does |
|---|---|---|
| Shell | | Protects the embryo. It also provides calcium for the growing chick (some of the shell's calcium is dissolved for this use). The large end of the shell is very porous. It allows carbon dioxide to leave the egg and oxygen to enter. This is why the air cell gets larger in an older egg. |
| Shell membrane | | Keeps in moisture. There are two shell membranes. The air cell forms between them at the large end of the egg. |
| Albumen or egg white | | Provides liquid for the embryo. It contains one-half of the egg's protein and other nutrients. It's like a protein drink. |
| Chalazae | | Parts of the albumen that hold the yolk in place, like it's in a hammock. The more prominent they are, the fresher the egg. |
| Yolk | | The embryo attaches itself to the yolk, and this is where it grows. The yolk provides food, vitamins, fat, and protein for the embryo. The chick's stomach is formed around the yolk, and when it hatches, there is still a little bit of yolk left. It will feed the chick for about 3 days. This is a benefit in nature where all the chicks may not hatch at exactly the same time. The hen does not have to leave the nest immediately to find food for the first newly-hatched chicks. They can just snuggle up under her and wait for the other chicks to hatch. |

## INTRODUCTORY ACTIVITY

- Have the children sit in a circle and show them a chicken egg. Ask the following questions, one at a time. Go around the circle and let each child state an answer to each question. When ideas run out, ask the next question and continue soliciting answers in a circular motion. Remind the children to be good listeners and to not repeat what has already been said.
  - What can you tell me about this egg?
  - What do we know for sure about this egg?
  - How can we find out more about this egg?
- One of the children will undoubtedly say that the egg could be cracked open so they can see the inside. If not, encourage that response from the group.

## INVESTIGATION

- With the children, create a list of rules for working with eggs. Record them on butcher paper for all to see. Be specific. Be sure the rules include the following concepts:
  - Never eat a raw egg.
  - Do not put your hands in your mouth during an activity with eggs.
  - Wash hands thoroughly after handling eggs.
  - After working with eggs, clean all areas, including bowls, utensils, and counters exposed to eggs, with soap and hot water and dry thoroughly.
  - Do not handle an egg without permission.
- Divide children into groups of three, with one adult or teen leader in each group.
- Distribute one whole raw chicken egg on a dessert plate to each group. Each station should also contain a hand lens, paper towels, and pump dispenser of hand sanitizer.
- Invite each child to look closely at the exterior of the egg. They may also observe the eggshell with a hand lens. In each small group, have each child state one thing they observed. This might be the shape of the egg (oval), or its texture, temperature, or smell.
- Before cracking the egg open, ask the children what they expect to see. Allow the children time to hypothesize.
- Crack the egg open and put it on the dessert plate. Place the shell on a paper towel. Allow the children to make observations of the exterior and interior of the egg. They may notice the following parts:
  - air cell
  - shell
  - shell membrane
  - yolk (ovum)
  - egg white (albumen), four kinds
  - chalazae
- Allow the children to hypothesize and explain what they think each part is for. If appropriate, discuss with the children what the functions of the parts are. Remember, however, at this age level exploration is the most important process.
- When the examinations are complete, place the eggs in the resealable plastic bag and discard. Clean up using soap and hot water, and have the children wash their hands with hand sanitizer.

## APPLICATION

- Say: "Suppose you are in a grocery store and are going to buy a dozen eggs. Close your eyes and imagine what you would see and do." Allow time for the children to visualize the scene. If you would like, have one child role-play what was visualized.

- Ask a series of questions about what the children visualized. Have them give the "thumbs up" sign if they actually imagined what you state. Have them give a "thumbs down" sign if they did not imagine doing what you state. Here are some questions you can ask:
  - Did you go to the refrigerated section of the store?
  - Did you pick out the kind of eggs you wanted?
  - Did you price the eggs to see which were the best buy?
  - Did you check to see if any eggs were broken?
  - Did you pay for them?
  - Did you carry them carefully?
- Now ask the children what the farmer, shipper, grocer, and they themselves would have to do to make sure the eggs were safe to eat.

## ASSESSMENT

Have each child draw a cracked-open egg. Ask each child to explain what they can tell you about the egg.

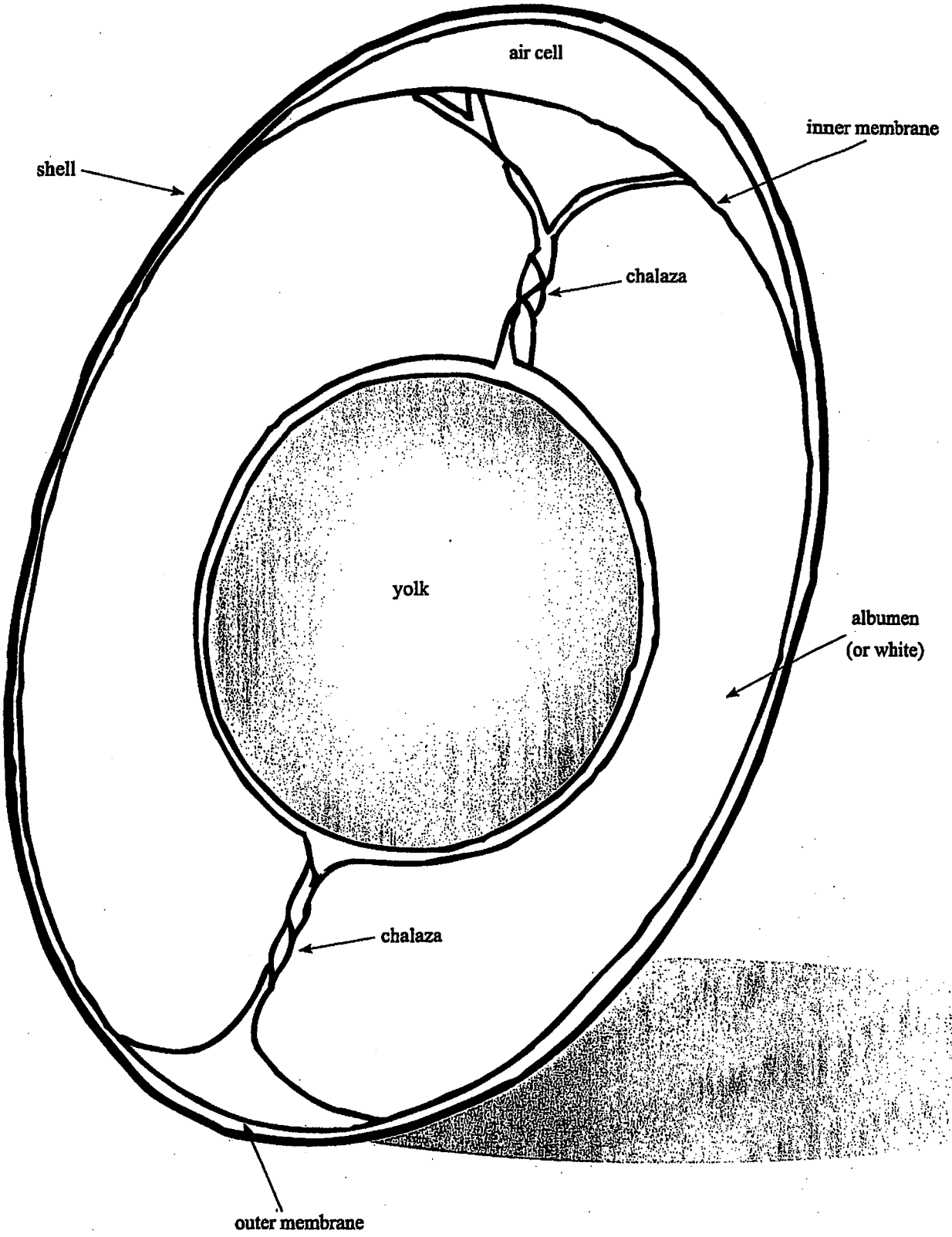
## EXTENSIONS

- Take a trip to the grocery store and have the store manager explain to the students how eggs are handled in the store.
- Let children examine an egg carton and discuss in small groups what they notice about the carton and why they think the carton is made the way it is.

## NOTE BOXES

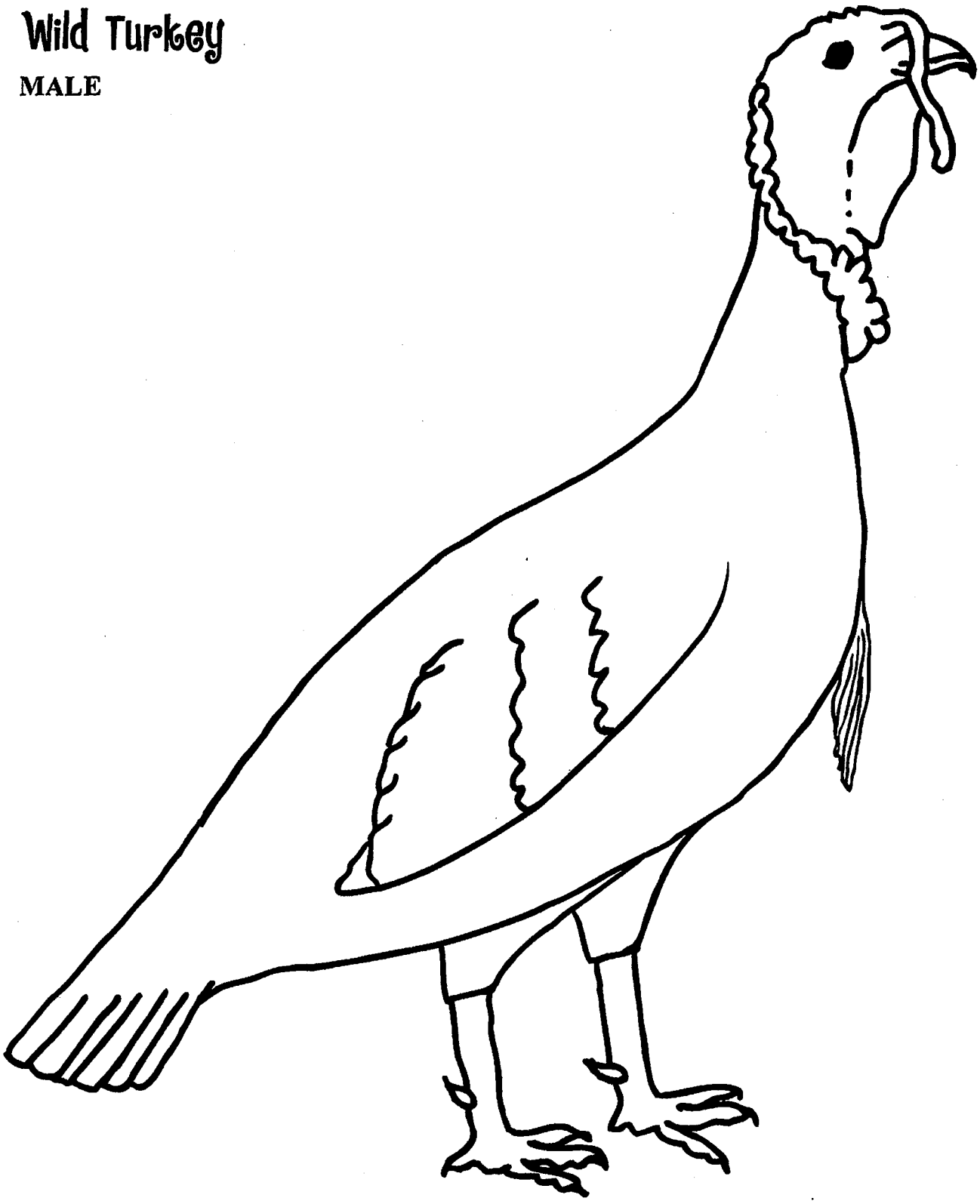
- Wash hands before and after handling eggs.
- The two chalazae anchor the yolk to the center of the egg white.
- There are two chalazae per egg.
- Poultry eggs have two shell membranes, an inner and an outer.
- The albumen has four layers: inner thin, middle thick, outer thin, and chalaziferous (made up of two chalazae).
- Eggs at commercial grocery stores cannot be fertilized.

# Parts of an Egg



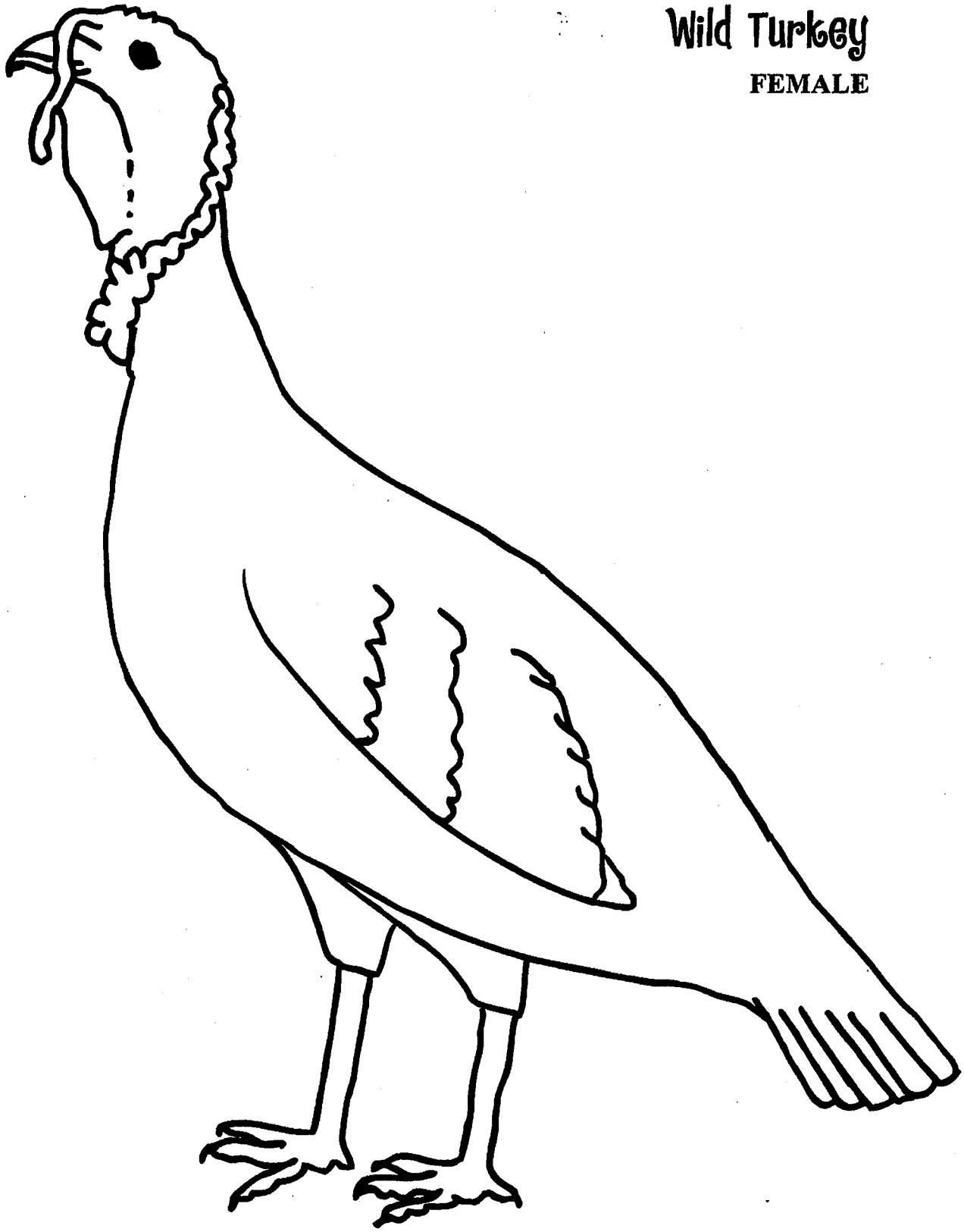
# Wild Turkey

**MALE**



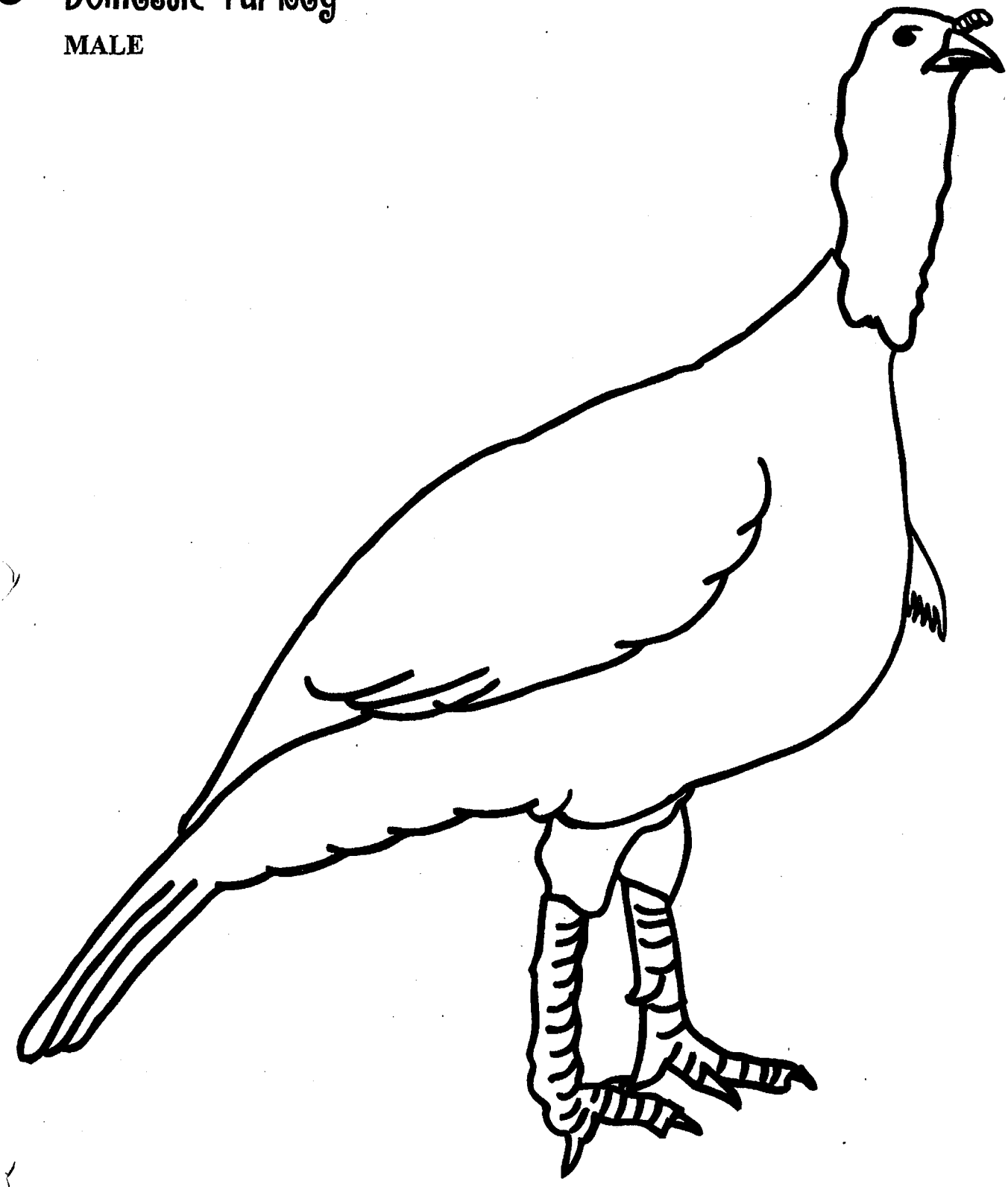
# Wild Turkey

**FEMALE**



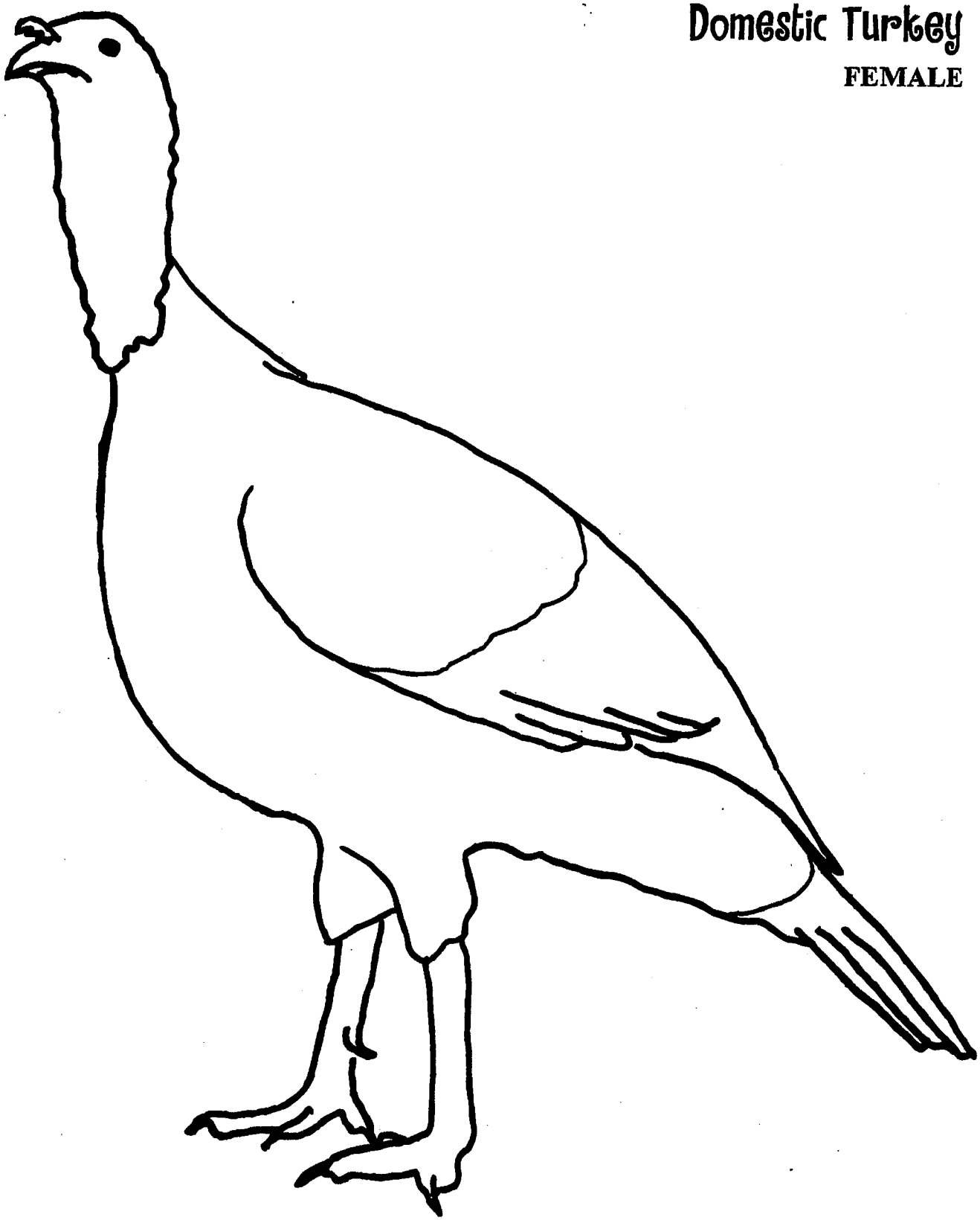
# Domestic Turkey

**MALE**



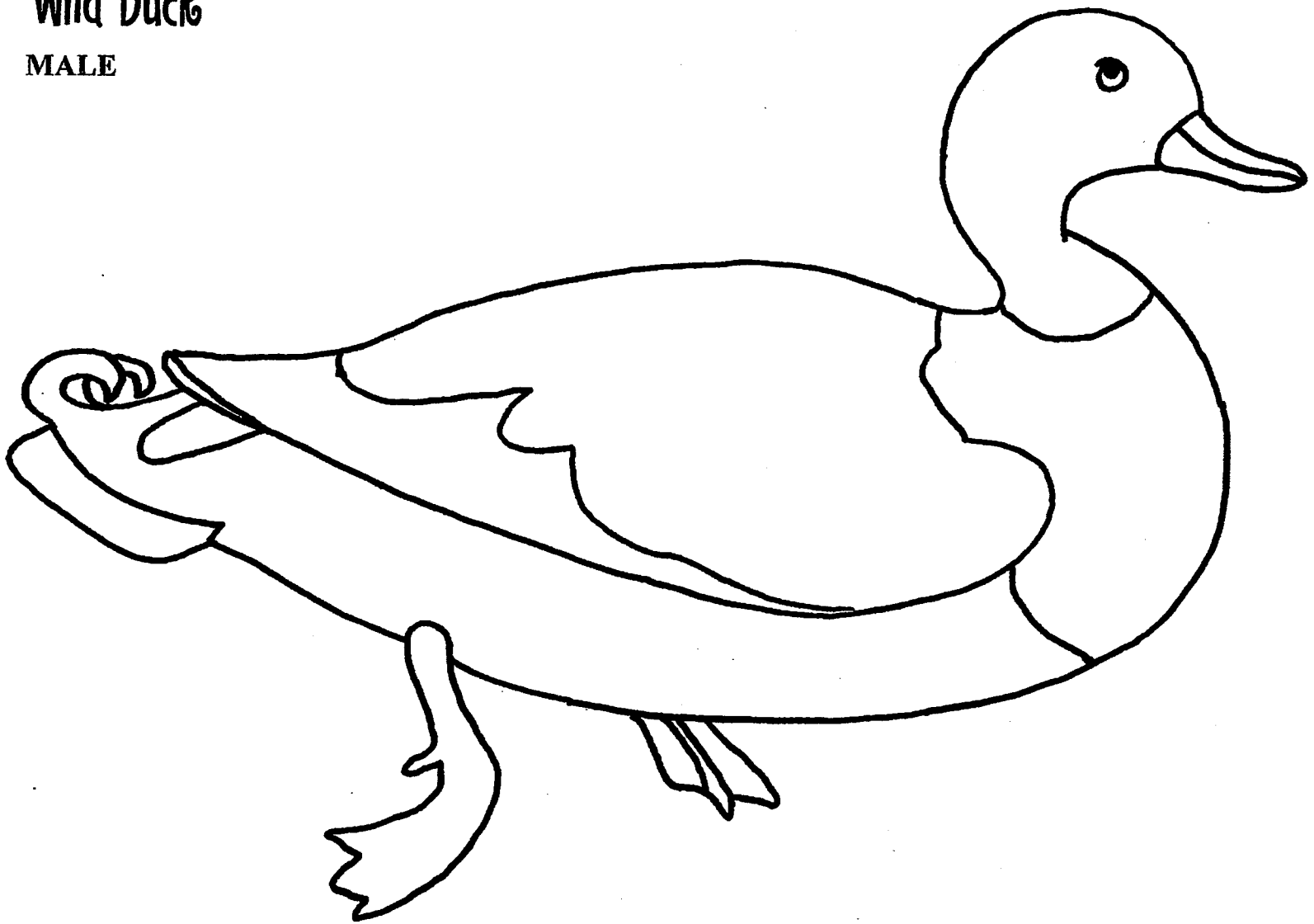
# Domestic Turkey

**FEMALE**



# Wild Duck

**MALE**

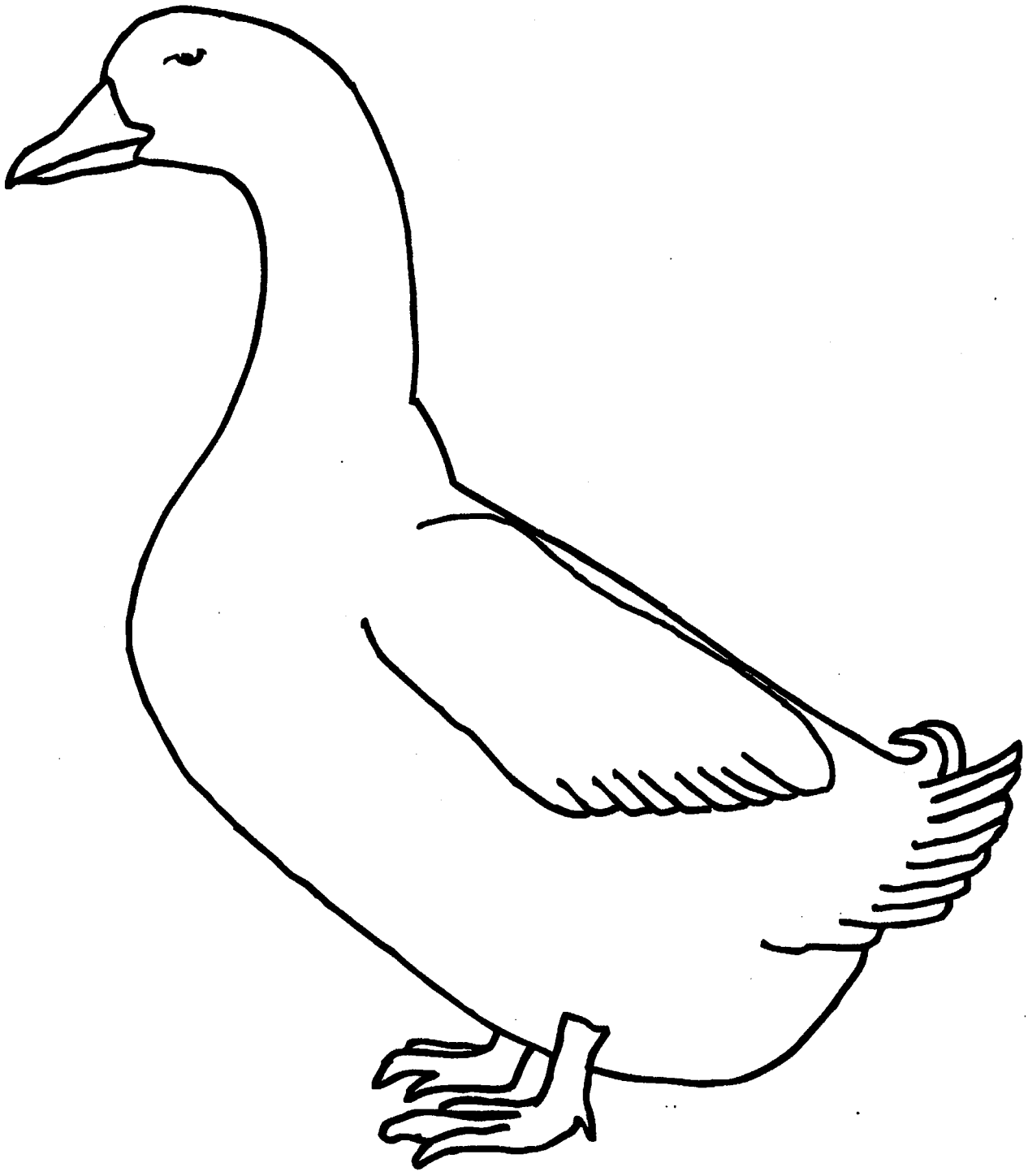


# Wild Duck

FEMALE

# Domestic Duck

**MALE**

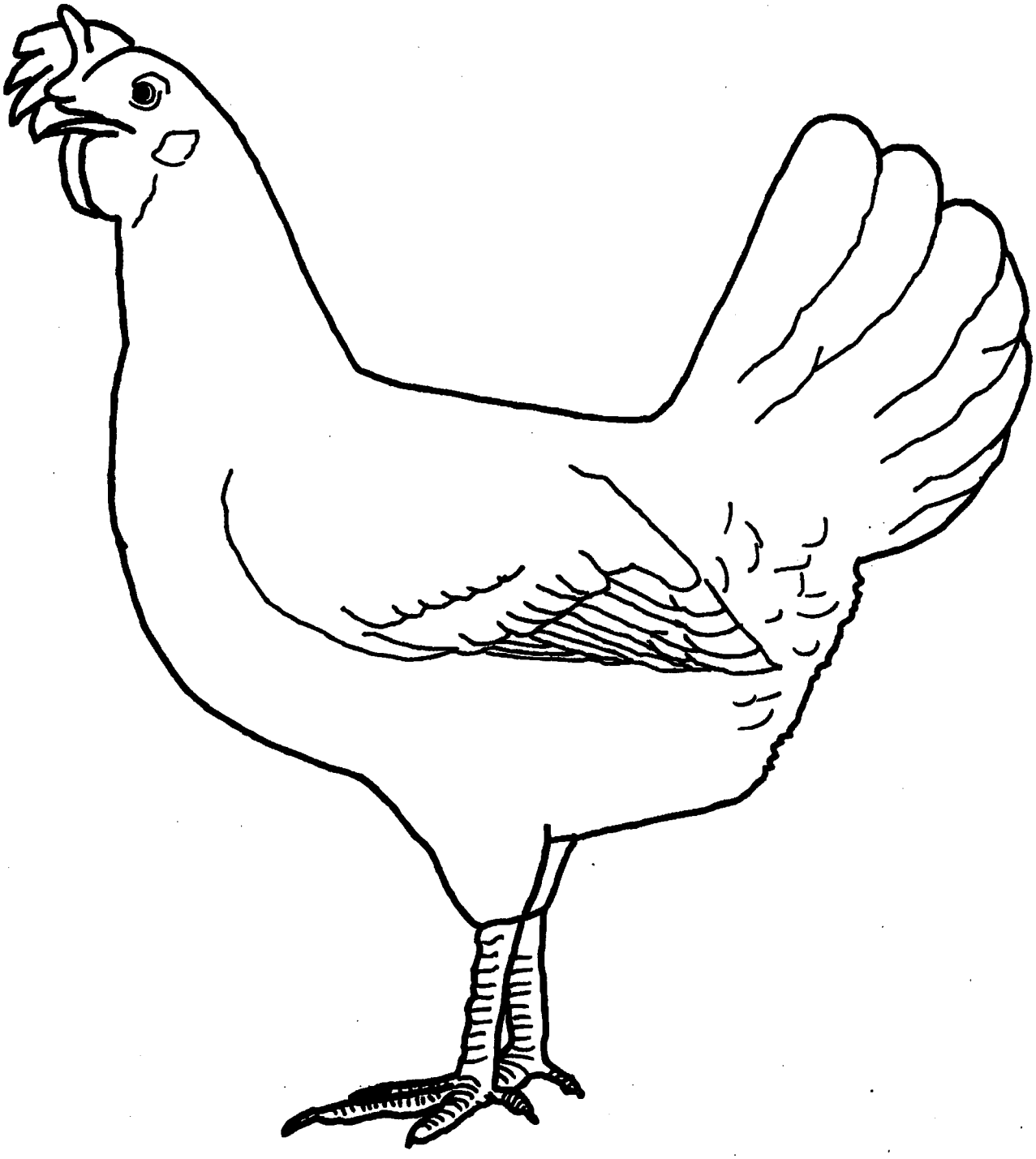


# Domestic Duck

FEMALE

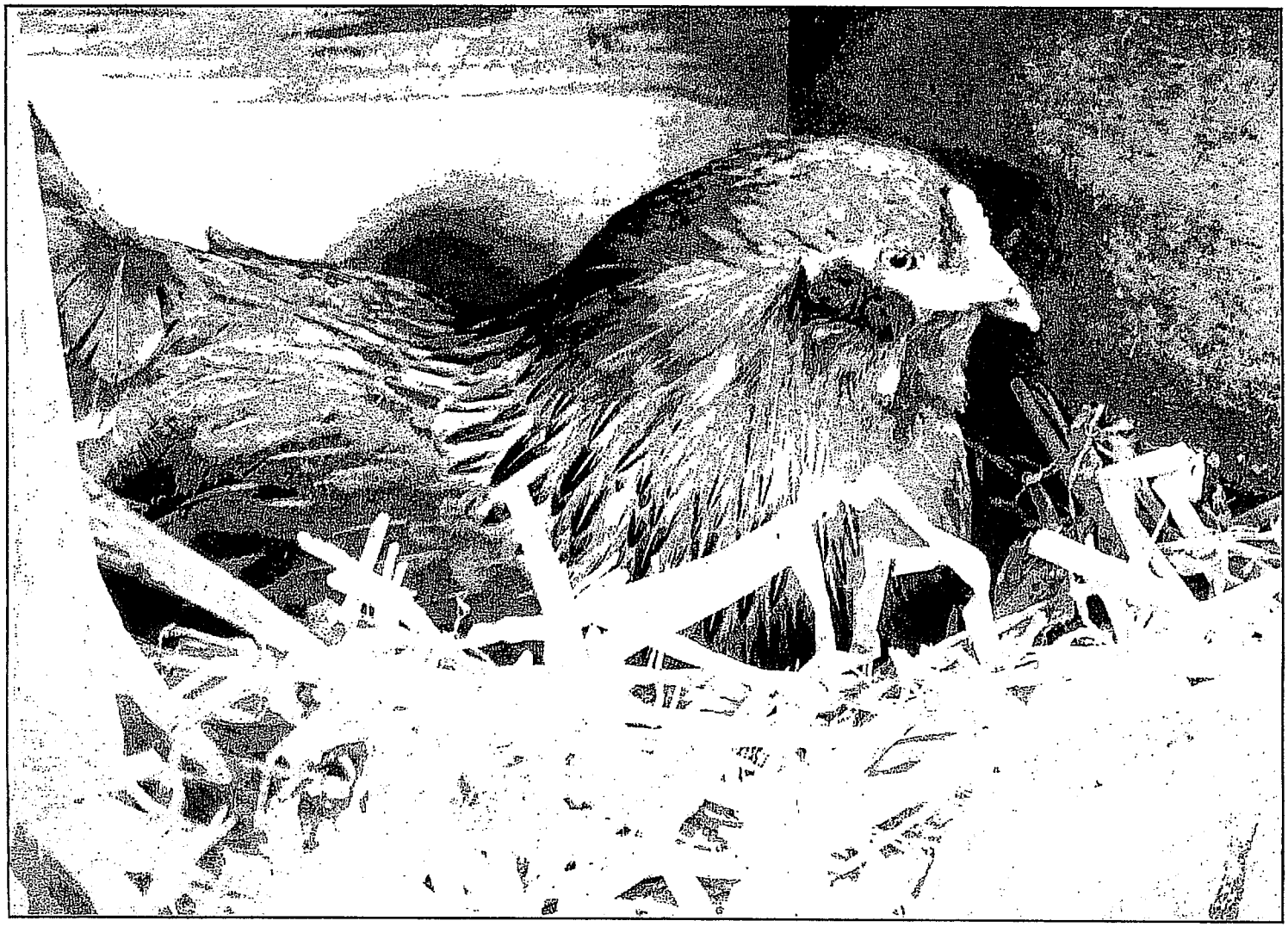
# Leghorn Chicken

**FEMALE**



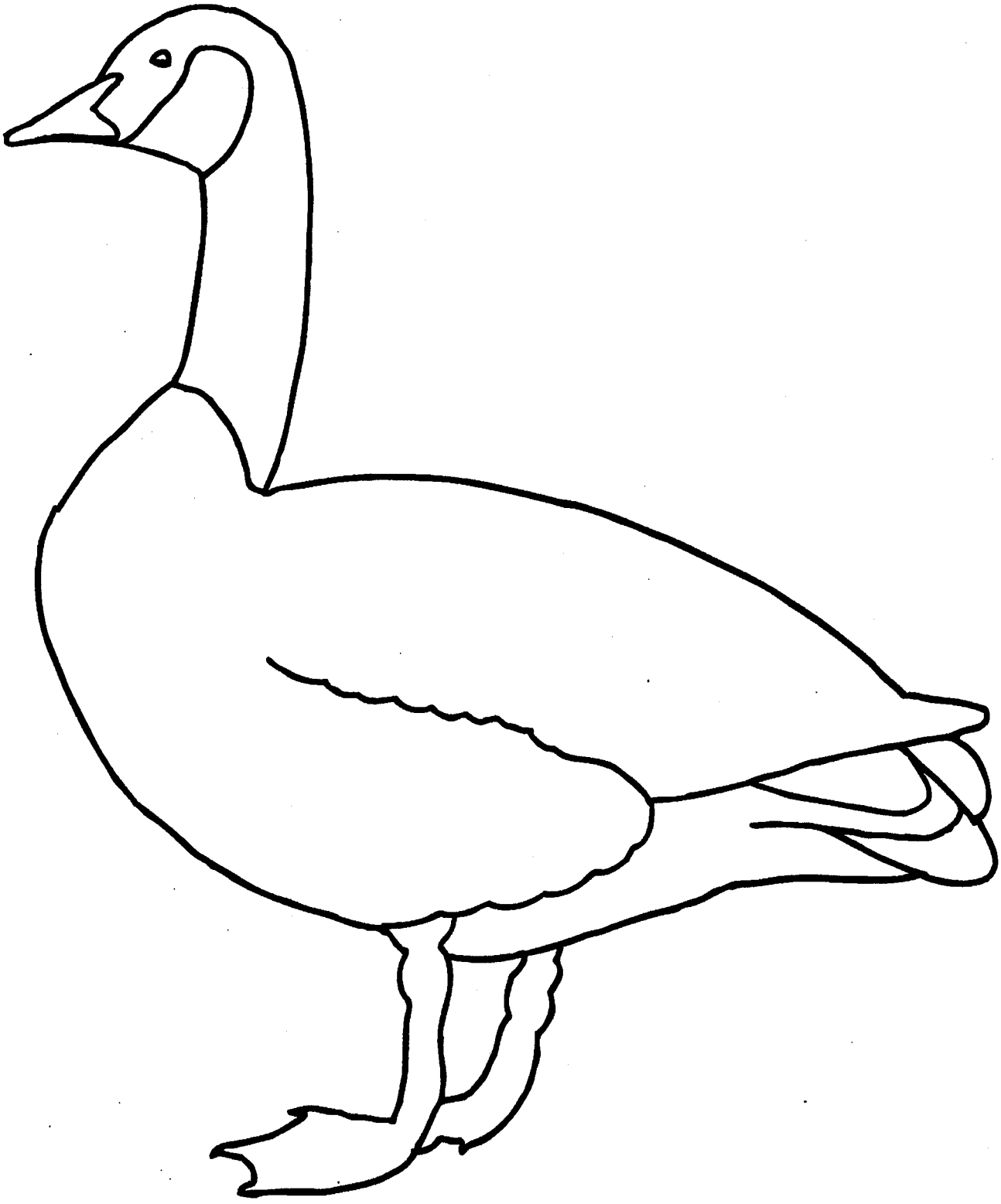
# Domestic Chicken

## IN ITS ENVIRONMENT



# Canada Goose

**FEMALE**



# Wild Bird

## IN NATIVE HABITAT

# GLOSSARY

**air cell.** The empty space between the two membranes at the large end of an egg.

**albumen.** The food source for growing bird embryos; it accounts for most of an egg's liquid weight and more than half of the egg's total protein. Also known as egg white.

**beak.** The upper and lower mandibles of a bird; a bird's mouthpiece.

**bill.** The upper and lower mandibles of a duck or other waterfowl.

**captive.** A wild animal that people have placed in a specific location such as a zoo, wild animal park, or game farm. Captives typically look like wild animal relatives and can often be successfully returned to the wild.

**caruncle.** A fleshy bump or spot on the head, face, or neck of a turkey; can also be found on certain types of ducks.

**chalaza (pl. chalazae).** Twisted strands of egg white that anchor the yolk in the center of the thick egg white; two per egg white.

**chicken.** A domestic fowl whose ancestry goes back to the jungle fowl of southeast Asia.

**cock.** A male chicken; also called a **rooster.**

**comb.** A fleshy appendage on the heads of fowl.

**different.** Not the same.

**domestic.** In animals, those kept in captivity for many generations. Domestic animals depend on humans for food, water, shelter, and health; they are generally bred for a specific use such as food, clothing, or to perform work.

**domestic duck.** A type of waterfowl bred for meat or eggs.

**egg white.** The food source for growing bird embryos; it accounts for most of an egg's liquid weight and more than half of the egg's total protein. Also known as albumen.

**environment.** The surroundings of an organism; all external conditions that influence its development or being.

**exterior.** Outside.

**feral.** Not domesticated or cultivated.

**fowl.** Larger birds that are used for food by people.

**game bird.** A wild bird that may be hunted for food in a manner consistent with wildlife regulations.

**granivore.** An animal that eats only seeds.

**habitat.** The place where an animal or plant lives and grows under natural conditions.

**hen.** A female fowl over 1 year old.

**interior.** Inside.

**omnivore.** An animal that eats both plants and animals.

**oval.** A broadly elliptical shape; the preferred shape of an egg.

**ovum.** The yellow portion of an egg that contains fat, protein, and other vitamins and minerals. If the egg is fertilized, the ovum is the attachment site of the embryo. Also known as the **yolk.**

**poultry.** Any or all domesticated fowl that are primarily raised for their eggs, meat, or feathers; includes chickens, turkeys, ducks, and geese.

**roost.** To rest above the ground on a limb or other surface.

**rooster.** Common term for a male chicken; also called a cock.

**shell.** In birds, the outer surface of an egg.

**shell membranes.** Inner and outer membranes inside the egg shell that provide physical protection for egg contents.

**similar.** Alike in some way.

**snood.** In poultry, a long piece of skin, generally red, that hangs down on one side of the beak of a turkey.

**tame.** To be calm enough for humans to handle.

**turkey.** A large native American bird now largely domesticated for its meat.

**wattle.** One or two leaflike structures suspended from the upper part of a neck of a chicken; made of the same kind of tissue as the comb.

**webbed feet.** Feet with skin between the toes, as in ducks.

**wild.** Animals that live freely.

**yolk.** The yellow portion of an egg that contains fat, protein, and other vitamins and minerals. If the egg is fertilized, the yolk is the attachment site of the embryo. Also known as the **ovum.**

# Bibliography and Resources

## RAISING A BIRD

This unit does not require that the participants own or raise poultry. However, many youth may be interested in raising a bird. The following Web sites and books may be useful for those interested in raising a small flock or bird.

*Cooping In: A Poultry Exhibitor's Guide to Successful Showing and Competition.* This booklet provides useful information for children who wish to exhibit birds. Chapter titles include "Exhibition Poultry," "Fitting Poultry for Show," "The Packing List," "Cooping In," "Advice from Judges," and "Show Etiquette." This booklet is available for purchase for $5 from Pat Rubin, c/o Talisman Press, P.O. Box 5485, Auburn, CA, 95604. Other information sheets are also available.

*Helping Poultry Breeders Raise Birds in an Urban Area.* This report written by Bart Pals provides suggestions and strategies on how to raise poultry successfully in an urban setting. The report can be viewed at the American Poultry Association Web site, *http://www.amerpoultryassn.com/.*

*Starting and Maintaining Home Poultry Units.* The University of California Poultry Web site (*http://animalscience.ucdavis.edu/Avian/interest.htm*) has this information sheet and others on many topics related to small-flock poultry. Titles include *Selecting Chickens, Raising Chickens, Feeding Chickens, Housing Chickens,* and *Portable Poultry Houses.*

*Your Chickens: A Kid's Guide to Raising and Showing.* In this detailed book, Gail Damerow describes breeds and discusses required bird care, health information, egg storage, and how to care for broilers.

University of California Agriculture and Natural Resources Catalog Web site. The ANR Communication Services catalog Web site (*http://anrcatalog.ucdavis.edu/InOrder/Shop/Shop.asp*) provides a variety of resources related to 4-H poultry and game. Titles include the *4-H Avian Science Leader's Manual, Growing Blue Ribbon Pullets,* and *Embryology: Hatching Classroom Fun.* These items, as well as a free catalog, can be ordered from the Web site or by calling ANR Communication Services toll-free at 1-800-994-8849.

University of California Cooperative Extension 4-H Program. Each county has a University of California Cooperative Extension 4-H Youth Development Program. Refer to the county government section of your local telephone book for the listing in your area, or visit the California 4-H Web site at *http://www.ca4h.org/.* If there is not a poultry leader in your region, contact poultry leaders in other counties for information.

## LITERATURE FOR CHILDREN

Brett, Jan. *Daisy Comes Home.* Putnam, 2002. Mei Mei cares for six hens at her Chinese home. One night Daisy the runt hen drifts down the river and has some interesting adventures. This story could lead into a discussion of pecking orders.

Castaneda, Omar. *Abuela's Weave.* Lee and Low Books, 1993. The story and drawings describe contemporary life in Guatemala, with depictions of a woman and her granddaughter feeding chickens and turkeys.

Fowler, Allan. *The Chicken or the Egg!* Children's Press, 1993. This book of photos shows the development of a chicken from an egg.

Hutchins, Pat. *Rosie's Walk.* Econo-Clad Books, 1999. A fox is after Rosie, a chicken, but Rosie doesn't know it. Unwittingly, she leads the fox from one disaster to another.

Johnson, Sylvia A. *Inside an Egg.* Lerner Publications, 1982. Photos and elementary-level text show how a chick develops from an egg.

Llwellyn, Claire. *Eggs: What's for Lunch?* Children's Press, 1999. Learn how to prepare and eat eggs in a variety of ways. Simple-to-follow ideas geared for children.

Pinkwater, Jill. *The Hoboken Chicken Emergency.* Simon and Schuster, 1999. A Polish family who has immigrated to the United States prefers chicken and duck to turkey. However, the father, passionate about his new country, insists that it would be un-American to eat anything other than turkey on Thanksgiving.

Polacco, Patricia. *Rechdenka's Eggs.* Paper Star, 1996. Preparing her eggs for the Easter Festival, Old Babuska takes in Rechenka, an injured goose, who shows her that miracles can really happen. The story is enhanced by drawings of Ukrainian painted eggs.

Selsam, Millicent Ellis. *Egg to Chick.* HarperTrophy, 1987. This book shows how an egg develops from the time it is fertilized until the baby chick hatches 21 days later.

Sing, Rachel. *Chinese New Year's Dragon.* Aladdin Paperbacks, 1992. A young girl's recollection of a special Chinese New Year's celebration is told in a narrative form that describes many of the traditions of her family, including eating roast duck for Chinese New Year.

Tildes, Phyllis Limbracher. *The Magic Babuska: An Original Russian Tale.* Charlesburg Publishing, 1998. Nadia longs to create beautifully decorated Easter eggs, called pysanky, but the intricate details are too difficult for her weak eyes. Nadia learns to rely on her own inner gifts to fulfill her dreams.

Waters, Kate, and Madeline Slovenz-Low. *Lion Dancer: Ernie Wan's Chinese New Year.* Scholastic, 1990. This story depicts the most important day in Ernie Wan's life. This Chinese New Year, he will perform his first Lion Dance on the streets of New York City! Contains color photos of whole roast ducks hanging in a restaurant window in New York, neon signs advertising Peking duck, and the Chinese lunar calendar and horoscope, which discuss the Year of the Chicken.

## LITERATURE FOR EDUCATORS

Damerow, Gail. *Your Chickens: A Kid's Guide to Raising and Showing.* Storey Books, 1993. This detailed book shows breeds, required care, and health information, as well as how to store eggs, and how to care for broilers.

Green-Armytage, Stephen. *Extraordinary Chickens.* Abrams, 2000. This book contains beautiful photos of various chicken breeds. Photos are large enough for a classroom full of children to see easily.

Hanke, O. A., and J. H. Skinner. *American Poultry History 1823–1973.* American Printing and Publishing Company, 1974. The photos and text clearly depict the evolution of poultry usage through this particular time period.

Lowry, Thea S. Empty Shells: *The Story of Petaluma, America's Chicken City.* Manifold Press, 2000. This book explains the history of one of America's most famous "chicken capitals" and shows how growth has impacted the industry. Contains illustrations of historical poultry.

Mercia, Leonard S., and Kimberly Foster. *Raising Poultry the Modern Way.* Storey Books, 1990. This resource provides information on raising small flocks, including selecting birds, housing and feeding requirements, and more.

Staples, Tamara. *The Fairest Fowl: Portraits of Champion Chickens.* Chronicle Books, 2002. Celebrate champion chickens through colorful photos. Includes details of the judging process, strategies for poultry farmers, and profiles of prize breeds.

Vorwald Dohner, Janet. *The Encyclopedia of Historical and Endangered Livestock and Poultry Breeds.* Yale University Press, 2001. Provides an in-depth history of a variety of animal breeds, many of which are endangered.

## RESOURCES

### Banana Slug String Band

The Banana Slug String Band provides music that helps children, teachers, and parents discover the magic and mysteries of the earth. Its unique blend of rock, rap, folk, and world beat offers something for every music lover. Cassettes and CDs are available. *Appropriate titles include Goin' Wild, Everything Needs a Home,* and *Ecology.* For a free catalog, contact

Banana Slug String Band
P. O. Box 2262
Santa Cruz, CA 95063
(888) 327-5847
Fax: (888) 327-5847
Web site: *http://www bananaslugstringband.com/*

### The ChickZone

This Web site has a variety of resources available for free as well as for purchase. Learning guides and movie clips of embryos show children the development of a chicken embryo. Information and references on using incubators in the classroom are also provided.

Avian Sciences Net, Purdue University
Web site: *http://ag.ansc.purdue.edu/poultry/*

### National 4-H Avian Bowl Manual

It is from this manual that each year's Avian Bowl study material is chosen. The manual is a general reference with selections on layers, backyard poultry, game birds, waterfowl, turkey, eggs, food safety, and more. It includes an extensive "EGGcyclopledia" with easy-to-understand descriptions. $12.00.

Bulletin Room
Clemson University
96 Poole Agriculture Building
Clemson, South Carolina 29634-0129
Fax: (864) 656-0742
Phone: (864) 656-3261

### National Poultry Judging Manual, 4H460

Describes 4-H poultry judging contests, including those on egg production, egg quality, and ready-to-cook poultry. Includes color photos of external and internal chicken anatomy. $4.50.

CIT Distribution
Warehouse #2
University of Nebraska-Lincoln
Lincoln, NE 68583-0700
Phone: (402) 472-9712
Fax: (402) 472-0542
E-mail: gnickels1@unl.edu

### Turkey Time

This educational activity kit comes in a folder that also serves as a turkey display. Includes information on food safety and turkey nutrition. Free.

California Poultry Federation
4640 Spyres Way, Suite 4
Modesto, CA 95356
(209) 576-6355
Fax: (209) 576-6119
Web site: *http://www.cpif.org/*

## WEB SITES

American Egg Board: *http://www.aeb.org/*

American Poultry Association: *http://www.amerpoultryassn.com/*

Avian Sciences Net, Purdue University: *http://ag.ansc.purdue.edu/poultry/*

California Poultry Federation: *http://cpif.org/*

California Waterfowl Association: *http://www.calwaterfowl.org/*

Ducks Unlimited: *http://www.ducks.org/*

Egg Nutrition Center: *http://enc-online.org/*

National 4-H Embryology Web site: *http://4hembryology.psu.edu/*

Pacific Egg and Poultry Association: *http://pacificegg.org/*

United Egg Producers: *http://www.unitedegg.org/*

University of California 4-H: *http://www.ca4h.org/*

University of California Agriculture and Natural Resources Catalog: *http://anrcatalog.ucdavis.edu/InOrder/Shop/Shop.asp*

University of California Poultry Web site: *http://animalscience.ucdavis.edu/Avian/interest.htm*

University of California Veterinary Medicine Extension—Poultry Programs: *http://www.vetmed.ucdavis.edu/vetext/po-progs.html*