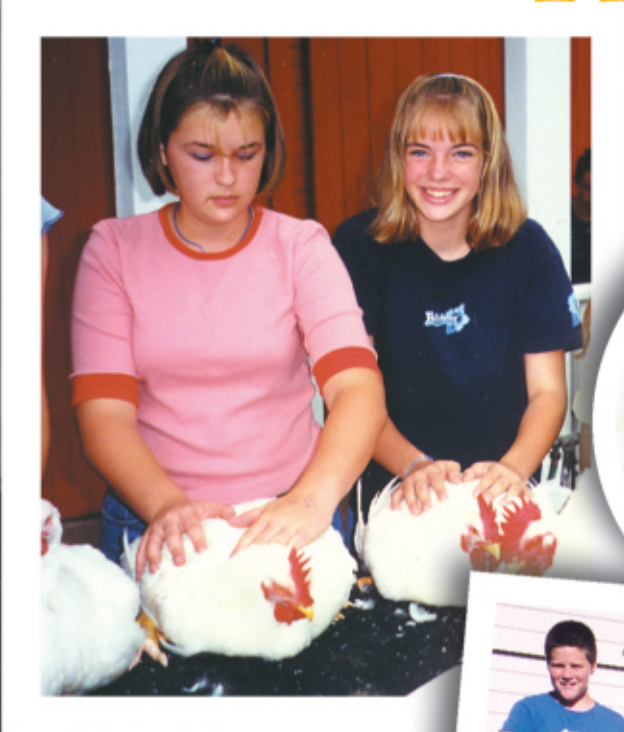




National 4-H Curriculum
BU-06364



Testing your Wings



Poultry Project Activity Guide



Name _____

County _____



REVIEWED & RECOMMENDED
National 4-H Curriculum

If you were a project helper for one or more youth involved in completing Poultry 1 you know what a great experience this important role is. As a helper you are in a perfect position to help youth grow and develop in positive ways as they learn about poultry and themselves. You can nurture and cultivate their interest in this project by guiding their planning, helping them carry out their projects and recognizing them for a job well done.

Your Role

- Become familiar with the material in this activity guide and the *Poultry Helper's Guide*
- Support youth in their efforts to set goals and complete each achievement program
- Date and initial the activities on the Poultry Achievement Program as they are completed and the two of you discuss them
- Help youth to get to know themselves, including their strengths and weaknesses
- Encourage the use of the experiential learning cycle described on this page

The Poultry "Skills for Life" Series

This guide, *Testing Your Wings*, is the second in the series of three for youth that also includes Poultry 1 *Scratching the Surface*, Poultry 3 *Flocking Together* and the *Poultry Helper's Guide*. The three youth guides have been designed to be developmentally appropriate for grades 3-4, 5-7 and 6-9 respectively, but may be used by youth in any grade based on their project skills and expertise.

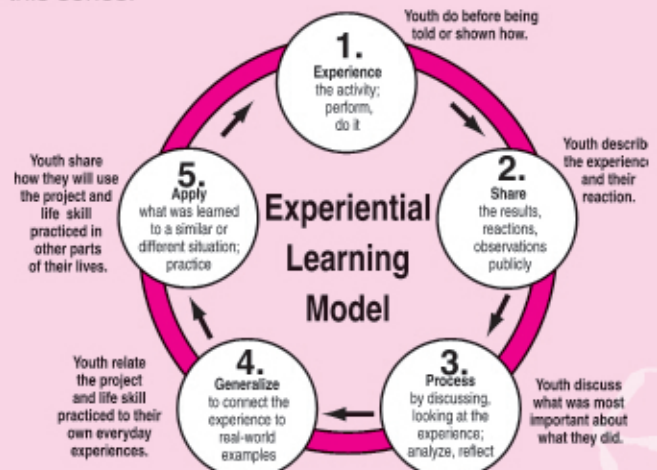
All activities in the guides have several parts: A description of the skills to be practiced; discussion questions; suggestions for additional activities; and additional helpful information. The Success Indicator listed for each activity is an excellent way to evaluate the youth's success. Each of the guides also includes an achievement program to encourage youth to learn more about poultry while developing important life skills. In the *Helper's Guide* you will find another evaluation piece titled "Evaluating the Impact." Review this before the youth begins each level and after completing each level.

Each activity is designed so the young person has an opportunity to learn by doing before being told or shown how. Your challenge is to "sit on your hands" while the youth explores the activity and learns from the experience, even when it doesn't work the way it's expected to. You can most effectively help by listening as the young person considers the questions and draws conclusions. At times the activity may call for you to be a resource person for content or ideas.

The fourth publication in this series, *Poultry Helper's Guide*, provides additional learn-by-doing activities that can be adapted to the family, the classroom, after school child care, 4-H project groups, clubs or other groups. You'll also find helpful hints about characteristics of youth, life skill development, teaching experientially, meeting ideas as well answers to many of the activities in the youth guides.

Experiential Learning Model

This five-step model is included in each activity in this series.



Pfeiffer, J.W., & Jones, J.E., "Reference Guide to Handbooks and Annuals" © 1983 John Wiley & Sons, Inc. Reprinted with permission of John Wiley & Sons, Inc.

As you can see, the youth first attempt the activity without assistance. After the youth do as much as they can you then meet together and discuss: What did they do? What was important about what they did? How does what they did relate to their lives? And finally, how might they use the life and project skills practiced in the future? Sample questions are included following each experience. Your ability to

ask additional thought-provoking questions and to clarify and expand the youth's ideas will add to the educational experience.

Acknowledgements

Revision Team: This revision of the four poultry activity guides was accomplished by the Poultry Design Team comprised of Susan Kerr, DVM, PhD, WA, Coordinator; Phillip J. Clauer, PA; Richard Reynnells, PhD, WA, DC; Dennis Jeney, WA; Linda J. Williams, WA; Emily Troyer, KY; Francine Bradley, PhD, CA; David Owen, WA; Carl Richards, PhD, PA; Fred Zillich, MO; Lynanne DeGarmo, KS; Jeff Buhr, GA; Jesse Lyons, PhD, MO; Mary Delany, CA; and Tom Zurcher, PhD, MI.

Design Illustration and Production: Northern Design Group, MN.

Photographs: Travis Cleveland, CA; Kate Veristain, CA; Sylvia Holly, WA; Tom Zurcher, MI.

Word Processing: Sue Teeters, MI.

Original Design Team: Jim Adams, PhD, Chairperson, KS; Cindy Siemens, KS; Sam Varghese, MI; Al Adams, PhD, KS; Jeanette Johnson, MO; John Struwe, NE; Mel Hamre, PhD, MN; and Tom Zurcher, PhD, MI.





Testing Your Wings

Note to the Project Helper.....	Inside Front Cover
Bird's Eye View.....	1
Having Fun with the Poultry Project	2
Testing Your Wings Planning Guide	3
Testing Your Wings Achievement Program.....	4

Chapter 1 Raising Poultry

First Impressions	5
Lay It on the Line	6
Just a Cotton Pecking Minute!	8
Check the Tag.....	10
More Than Eggs	12

Chapter 2 Selecting and Judging Poultry

Bony Bird	14
Making the Grade	16
Telling Layers from Liars	18
Is Your Breed Up to Speed?	20

Chapter 3 Investigating Poultry Products and Careers

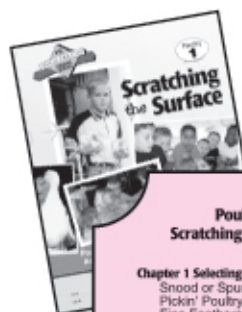
Eggsactly Where Do Eggs Come From?	22
Eggsamining Eggs.....	24
New and Improved... ..	26

Chapter 4 Keeping Poultry Healthy

Fair or "Fowl"?	28
Sick Chicks	30
Down the Hatch	32

Bird Talk 2 (Glossary)	34
Poultry Resources	36

For more on poultry...look for these other guides in this set.



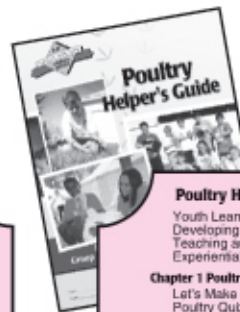
Poultry 1 Scratching the Surface

Chapter 1 Selecting and Judging Poultry
Snood or Spur?
Pickin' Poultry
Fine Feathered Fowl
Most PotHENTial
Chapter 2 Investigating Poultry Products
This Is No Yolk!
Green Eggs and Ham
Light As a Feather
Chapter 3 Raising Poultry
Coming Home to Roost
Talk the Talk
Chicken Feed
Chapter 4 Showing Poultry
A Bird in the Hand
It All Comes Out in the Wash
Starting in Showmanship



Poultry 3 Flocking Together

Chapter 1 Judging Poultry
Surfing the Web
Here Comes the Judge!
No Bones about It
Chapter 2 Raising Poultry
No Scrambling Allowed
All in the Genes
Lab to Coop
All Cut Up
Chapter 3 Investigating Poultry Products
Meat of the Matter
Dying to DeEGGorate
Cook 'em with Care
Tackling Cacklegories
Chapter 4 Issues and Careers
Investigating Issues
Right On!
Higher and Hirer
Are You for the Birds?



Poultry Helper's Guide

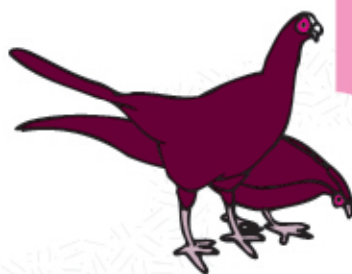
Youth Learning Characteristics
Developing Life Skills
Teaching and Learning
Experientially
Chapter 1 Poultry Activities
Let's Make Plans
Poultry Quiz Bowl Excitement
Poultry Fun Day
Conducting a Poultry Skillathon
On Stage
Chapter 2 Poultry Games
Talking Turkey
Playing Poultry Pyramid
Playing B-I-R-D-S Bingo
Six O'Clock News
Chapter 3 Raising Poultry
Hatching Chicks
Scratching for Feed
Fun with Records
Chapter 4 Eggs and Embryology
Egg to Chick
Grading Eggs
Poultry Meeting Ideas
Poultry 1, 2 and 3 Answer Key
Evaluating the Impact



Let's get started! This guide is an important part of the poultry project. *Testing Your Wings* offers you new challenges and opportunities to explore a wide range of activities related to poultry. You'll also have fun meeting new people, becoming better acquainted with your community and expanding your interests and goals. Like in *Scratching the Surface*, an achievement program is included to guide your efforts and provide you with an opportunity to be recognized for meeting your goals. Here are some of the many activities you can choose to do:

- Develop a poultry budget
- Discover your birds' pecking order
- Explore retail poultry products
- Investigate a bird skeleton
- Grade poultry carcasses
- Judge poultry
- Make and use an egg candler
- Use the APA *Standard of Perfection*
- Identify parts of a hen's reproductive tract
- Critique advertisements
- Describe poultry careers
- Recognize the signs of a healthy bird
- Research common poultry diseases
- Identify parts of a bird's digestive system
- Explain a poultry feed tag

You'll be surprised how many fun and interesting things you'll learn. Don't be afraid to jump right in, and don't give up if the activity doesn't work out the first time. You're still learning, right? The most important thing is to try. Once you try, then think or talk about what happened or didn't happen and why.



Testing Your Wings Project Guidelines

1. Do a minimum of seven activities in *Testing Your Wings* Poultry Achievement Program each year and complete it within three years.
2. Practice and develop the life skills of making decisions, leading self and others, relating to change and planning and organizing.
3. Participate in a minimum of five of the learning experiences listed on the Planning Guide each year.
4. Keep the Planning Guide current by setting project goals and recording project highlights you experience.
5. Increase your poultry knowledge and skills.

Poultry Achievement Program

The activities will challenge you to explore areas of the project you haven't experienced before. Do your best to complete each activity and answer the questions. Work with your helper to complete each experience. You may need additional resources to complete some of the activities. Poultry magazines, Internet sites, books, tapes, commodity groups, feed and equipment manufacturers and marketing groups are good resources.

Remember, this is your own personal project activity guide. As you complete the activities, answer the questions and record your project highlights you'll realize how much you have accomplished in this project. Have fun!

Your Project Helper

The choice is yours! The person you choose to be your project helper needs to be willing to support your efforts to complete the *Testing Your Wings* Achievement Program. Your helper will meet with you to set goals, plan activities, suggest resources to use, discuss each activity with you and date and initial your achievement program each time you have successfully completed an activity. Write the name, phone number and E-mail address of your project helper here:

My Project Helper _____

Phone # _____

E-mail address _____

**Good luck and have fun with Poultry 2 –
*Testing Your Wings***



My Poultry Project Goals

Name_____

Breed(s) _____

What I want to do and learn in
Poultry 2 *Testing Your Wings*

1. _____
2. _____
3. _____
4. _____

Learning Experiences

Complete at least five of these activities each year.

			Activity
Year	Year	Year	
			Give a demonstration or speech
			Attend three poultry project meetings
			Help organize a poultry show
			Recruit a poultry project member
			Exhibit at a fair
			Participate in a poultry judging contest
			Help conduct a poultry skillathon
			Participate on a poultry quiz bowl team
			Help organize a poultry showmanship contest
			Help a younger project member
			Write your own activity

Poultry Project Highlights

Date and list the exciting things you do and learn.

Place a picture of you
with your poultry here.

Level 2 Completion

Testing Your Wings Completion Certificate

I certify that _____ has completed
all requirements of the *Testing Your Wings* Achievement Program
in the 4-H "Skills for Life" series.

Project Helper's Signature _____

Date _____



1. Do at least seven of the *Testing Your Wings* and Eggstra Challenges activities each year.
2. Complete at least 21 of the *Testing Your Wings* and Eggstra Challenges activities within three years.
3. Have your project helper date and initial the activities as you complete and discuss them.

Date Completed	Helper's Initials
----------------	-------------------

More Than Eggs

Is Your Breed Up to Speed?

New and Improved!

Down the Hatch

Select and do any of the Eggstra Challenges activities in *Testing Your Wings* or make up your own. Record the page, number and date of each one you complete and ask your helper to initial.

Write your own activity here.

Date _____ Helper's Initials _____

Write your own activity here.

Date	Helper's Initials
------	-------------------

Write your own activity here.

Date	Helper's Initials
------	-------------------



First Impressions

Life Skill:

Reasoning

Poultry Project Skill:

Chick imprinting

Success Indicator:

Explains imprinting and describes how it occurs.

Have you ever heard about imprinting? You will be quite familiar with it after you watch the movie "Fly Away Home". This movie is about a young girl who

befriends and cares for a small flock of geese. There is an interesting twist, though... Ready? Lights, camera, action!

Take Off!

This activity will be more fun if done with at least one other youth. Rent the movie "Fly Away Home" and watch it. Pay close attention to how the newly hatched geese act. Record what you observe and discuss your observations with others.

Notes on the Movie

Share with your helper

Open your beak

- Give a brief summary of the movie.
- Describe why you liked or didn't like the movie.

Talk Turkey

- Why did the baby geese bond to the young girl?

Feather your nest

- Do you think imprinting occurs in humans? If so how and why?

Take flight

- How could you use imprinting to manage your flock?

Q: What well known fairy tale centers around imprinting?

A: The Ugly Duckling!

Bird Words • Imprinting

Eggstra Challenges

1. Arrange to be present when some chicks hatch and have them imprint on you. Keep a notebook that records their behavior and interactions with you.
2. Write a letter to the author of the book *Fly Away Home* and ask him about his experiences. Also check the website for the movie.



Fowl Facts Imprinting

Imprinting is a natural instinct in birds. It occurs when newly hatched birds bond to the first thing they see. They usually imprint on their mother. This strong bond encourages the baby birds to follow the mother to food, water and safety. Imprinting is a beneficial phenomenon because it makes baby birds stay close to their mother, who can help track and protect them.

Note: If a bird imprints on humans it may never socialize with the flock and may require being raised separately for life.



Lay It On the Line

Life Skill:

Poultry Project Skill:

Success Indicator:

Managing resources

Making a budget

Completes a one-month poultry budget for your poultry project.

Sometimes what starts as a hobby or a 4-H project may grow into a real business! Being able to accurately estimate income and expenses is important to any successful

enterprise, whether it's raising poultry, running a small business or planning a trip. In this activity you'll learn to manage your resources as you create a simple budget.

Take Off!

Working with a parent or your helper, complete the budget outlined below. Either estimate what you will need to budget for one year in your present poultry situation, or figure the cost to raise 100 broilers from chicks to sale. Finally, use the expense ledger to record all your expenses for at least one month.

How close was your budget?



Expenses for One Month

Date _____

Birds

Feed

Bedding

Housing

Electricity

Feeders

Waterers

Fencing

Medication

Advertising

Exhibiting

Organization Dues

Veterinary Services

Phone, e-mail

Taxes

Postage

Labor

Fuel/mileage

Education/resources

Other

Total

\$

My Poultry Business Budget for One Year

Budget from _____ to _____

Yearly estimate _____

	Income	
	Estimate	Actual
Eggs (doz. x \$/doz.)		
Laying Birds (sale price X #)		
Broilers (sale price X #)		
Chicks, Ducklings, Goslings, Poults		
Hatching Eggs (doz. x \$/doz.)		
Show Birds		
Manure		
Feathers		
Show and/or Judging		
Other		
Total		

Bird Babble! Don't count your _____ before they're hatched.

Open your beak

- What are your projected income and expenses?
- How difficult was it to make a budget? Why?

Talk turkey

- Why is it important to make budgets?
- What are the consequences if expenses are greater than income?

Feather your nest

- Besides your poultry project, what other activities of yours could benefit from a budget?

Take flight

- What are the major budget categories you will have in high school?

[illegible]

Enterprise Budget for a 100 Hen Laying Flock

Annual Cash Operating Costs for 100 Hens

1. Operating Cost for Raising 100 Pullets

100 Sexed chicks at \$1.70–2.50 each . . .	\$170 to \$250
Feed to 22 weeks (about 17# of feed per bird at 16–18 cents per pound)	\$272 to \$306
Brooding (gas, electricity, litter)	\$30
Taxes, Insurance, Interest, etc.	\$30
Total cost for 100 pullets	\$502 to \$616

Cost per pullet	\$5.02 to \$6.16
-----------------------	------------------

2. Operating Costs for a 100 hen laying flock

Feed (about 90# of feed per bird at 16-18 cents per pound)	\$1440-\$1620
Miscellaneous (lights, litter, etc.)	\$80
Storage, grading, cartoning, delivery of eggs (1900 dozen at 10 cents per dozen)	\$190

Total cost \$1710–\$1890

3. Fixed Investment Costs

Housing (15 year life)	\$500
Equipment (7 year life)	\$400
Total	\$900

Figures quoted above are estimates only and may vary greatly depending on your area and type of management.

The above figures do not include any adjustment for mortality. Assume annual production is 1900 dozen eggs.

For good layer flock management, invest in good housing and ventilation to keep other costs (such as feed, replacement birds and medications) low.

To calculate broiler flock costs, figure 2–3 pounds of feed per pound of growth.

Most producers charge \$1.00–1.25 per dozen eggs, or more for specialty eggs.

Making a budget first helps me plan.



Eggstra Challenges

1. Help another youth develop a budget for a poultry enterprise.
2. Meet with your family and together make a one-month budget that includes all family income and expenses.

Just a Cotton Pecking Minute!

Life Skill:

Acquiring and evaluating information

Poultry Project Skill:

Determining a flock's pecking order

Success Indicator:

Identifies the top and bottom bird in a flock's pecking order.

Top Dog. King of the Hill. Alpha Wolf. Queen Bee. Top Banana. All these phrases describe "the leader of the pack". How does a flock know who its leader is? How does the leader achieve and maintain his/her

place at the top? How can you tell which bird is at the top of the pecking order? In this activity, you will learn how to determine a flock's pecking order. Now get to work—that's an order!

Take Off!

Observe a group of five to twenty easily-identifiable birds that are well acquainted with each other. Place a small amount of desirable feed on the ground and observe and record what happens. Now add one or two new birds and repeat the experiment. By watching the birds interact, determine which bird is "the boss", which is second in line and so on until you have determined where each bird is in the flock's pecking order. Record your observations.

Pecking Order Behavior



Easy to tell who is at the top of the pecking order!

	Bird Name or Number	Pecking Order	Behavior Observed
First Situation			
Second Situation			

Open your beak

- What is a pecking order?
- Describe the behavior you observed that helped you determine the pecking order.

Talk turkey

- How does a well-established pecking order benefit a flock?
- How do birds learn where they are on the pecking order?
- What factors could make a pecking order change?

Feather your nest

- How and where have you experienced a "pecking order" as a human?

Take flight

- How will you change how you manage a flock based on what you learned about pecking order?

Bird Banter

- The expressions "playing chicken" and "don't be such a chicken" come from peck order squabbles.
- When two evenly matched birds try to decide which one is higher in rank, they may face each other and remain motionless for several minutes. The one who turns away loses.



Bird Words • Hierarchy

In other words...
"Don't be a chicken"
means
"Don't be a fraidy cat!"



Fowl Facts

Pecking Order

Birds are quite social. This means that they prefer to be part of a group with other birds. A well-adjusted flock has a well-established pecking order. Once established, this hierarchy keeps squabbles at a minimum. The result is less fighting and less stress on birds in the flock. The most dominant and aggressive bird is at the top of the pecking order. This bird pecks or even attacks other birds below it in the pecking order when they come too close to him, try to eat his feed or otherwise aggravate him. Depending on the amount of space available, other birds may not be able to eat until the top bird has finished eating.

When there is a pecking order dispute, birds can exhibit a variety of behaviors. If the birds are not near each other in rank on the pecking order, the more aggressive bird will extend its head and neck toward the other bird, run at it and chase it away. The more timid bird will flee without a struggle. The more evenly ranked or evenly matched two birds are, the longer the confrontation will last. Evenly matched birds may freeze and enter a "stare down" that can last several minutes. The first bird to move is the "loser". Occasionally, birds can get into all-out fights and injure each other. This is most common with roosters.

Pecking order disputes are most common when there is not enough space or feed for the birds, when new birds are added or removed or when the top bird becomes old or ill. A bird's size, age, health, gender, breed and personality influence pecking order rank.

Sometimes experimenting helps make decisions easier.

The one who moves first loses.

Eggstra Challenges

1. Make a videotape of birds establishing a pecking order.
2. Make a videotape of bird behavior.
3. Create a skit where humans act out various roles in the pecking order.

Check the Tag

Life Skill:

Poultry Project Skill:

Success Indicator:

Making decisions

Reading a feed tag

Studies a feed tag and identifies sources of nutrients.

Understanding the information included on a poultry feed tag will help you identify the ingredients and their use in a ration, understand the nutrient requirements of a bird and be able to

select the best feed for your birds. You'll also learn what information is included on the labels of the food you eat.

Take Off!

Carefully check the poultry feed tag shown. Answer the questions about the tag in the space shown. If you have a different feed tag to use, tape it over the tag shown and answer the questions based upon your tag.



Did you know a laying hen will consume 75 to 80 pounds of feed a year?

50 Pounds Net Weight **BROILER STARTER MEDICATED** Poultry feed

As an aid in prevention of coccidiosis in broiler chickens where immunity to coccidiosis is not desired.

Active Drug Ingredient

Amprolium 0.0125 %

Guaranteed Analysis

Crude Protein, Not less than 22.0 %
Crude Fat, Not less than 2.2 %
Crude Fiber, Not more than 5.0 %

Ingredients

Ground Grain Products, Plant Protein Products, Processed Grain By-Products, Animal Protein Products, Forage Products, DiCalcium Phosphate, Calcium Carbonate, Roughage Products, Monoammonium Phosphate, Choline Chloride, Salt, Methionine Supplement, Sodium Selenite, Manganous Sulfate, Zinc Sulfate, Ferrous Sulfate, Mineral Oil, Niacin Supplement, Vitamin E Supplement, Riboflavin, Calcium Pantothenate, Menadione Dimethylpyrimidinol Bisulfite, Biotin, Copper Sulfate, Vitamin B₁₂ Supplement, Vitamin A Acetate, Vitamin D₃ Supplement, Folic Acid, Ethoxyquin (A Preservative), Pyridoxine Hydrochloride, Thiamine, Ethylenediamine Dihydrochloride

Feeding Instructions

One Feed Feeding Program

Feed this feed continuously to broiler chickens as the sole ration from day-old until market.
This feed requires no withdrawal prior to marketing.

Caution

This feed is not to be used as a treatment for outbreaks of coccidiosis.
Exposure to one or more species of coccidiosis may overwhelm the drug in some flocks and prompt treatment will be required.
If losses exceed 0.5% in any 2 day period, obtain an accurate diagnosis and follow the directions of your veterinarian or poultry pathologist.

Feed Tag Information

Type of poultry _____

Purpose _____

Pounds _____ % Protein _____

Three major ingredients: _____

Nutrients

Major energy ingredients (carbohydrates and fats) _____

Major protein ingredients _____

Major mineral ingredients _____

Major vitamin ingredients _____

By-products present _____

Medication included _____

Water source _____

Feeding Instructions

☐ Cautions

☐ Medication withdrawal



Open your beak

- What does a feed tag tell you?
- What happens if a bird does not receive adequate amounts of each of the nutrients to meet its requirements?

Talk turkey

- What can you learn about differences in feed by comparing feed tags?

Feather your nest

- Why is comparison shopping important in learning to make good decisions?

Take flight

- How can you use what you learned about making decisions?



Feed Nutrients

- All rations include five basic nutrients: protein, energy (carbohydrates and fats), minerals, vitamins and water
- **Protein** supplies the materials to make body tissues like muscle, internal organs, bones, blood and feathers
- **Energy** from carbohydrates and fats enhance movement and produce heat to keep the body warm. Excess energy from feeds is stored as fat
- **Minerals** help build bones and form egg shells
- **Vitamins** are required for healthy eyes, nasal passages, lungs, blood and strong bones
- **Water** is the most important nutrient. It is necessary for digestion, carrying food nutrients and waste products, cooling the body and lubricating the joints
- A broiler can gain one pound for every 1.6 pounds of feed eaten

Bird Babble! She _____ him on.

Eggstra Challenges

1. Visit a local feed mill to see how the ingredients are weighed and mixed together to make a complete ration. Report what you find to your group.
2. Compare the Nutrition Facts food labels on three brands of cereals for calories, total fat, cholesterol, fiber, and sodium contents. Report the differences to your family.
3. Give a presentation on how a deficiency of a nutrient affects the growth or productivity of a bird.