

Unit A: Introduction to Poultry Science

Lesson 6: Raising Chickens

Student Learning Objectives: Instruction in this lesson should result in students achieving the following objectives:

1. Identify special characteristics of chickens.
2. Describe breeds of chickens raised in Afghanistan.

Recommended Teaching Time: 2 hours

Recommended Resources: The following resources may be useful in teaching this lesson:

- A PowerPoint has also been developed for use with this lesson plan
- <http://www.worldpoultry.net/>
- <http://www.fao.org/DOCREP/005/Y4628E/y4628e03.htm#TopOfPage>
- <http://www.globalfoodchainpartnerships.org/cairo/papers/TomFattoriAfghanistan.pdf>
- <http://www.ansi.okstate.edu/breeds/poultry/index.htm>

List of Equipment, Tools, Supplies, and Facilities

Writing surface
PowerPoint Projector
PowerPoint Slides
Copies of Student Worksheet

Terms:

There are no special terms presented in this lesson.

Interest Approach: Use an interest approach that will prepare the students for the lesson. Teachers often develop approaches for their unique class and student situations. A possible approach is included here.

Show a picture of chickens (PowerPoint Slide #2) or bring a couple of chickens into the classroom. Ask the class to brainstorm ideas about how important chickens are to the people of Afghanistan and how they are different and similar

to other poultry. Discuss items such as feed, housing and growth. Use this discussion to lead into Objective #1.

Summary of Content and Teaching Strategies

Objective 1: Describe Poultry as Organisms

(PowerPoint Slide #3)

- I. Chickens (*Gallus domesticus*) are domestic birds that cannot fly.
 - A. Although chickens are flightless birds, they do have a tendency to attempt flight.
 1. Chickens do this by running and flapping their wings.
 2. Unfortunately they are not capable of staying air borne.
 3. Chickens sometimes can fly for very short distances such as over fences.
 4. Chickens will sometimes attempt flight simply to explore their surroundings, however, they will especially fly in an attempt to flee when they perceive danger or pursued by a predator.

(PowerPoint Slide #4)

- B. There are over 150 different breeds of chicken that come in various colors, patterns and sizes.
- C. The chicken is believed to have descended from the wild Indian and south-east Asian Red Junglefowl which is biologically classified as the same species.

A picture of the Rooster and Hen of the Red Junglefowl breed is included in PowerPoint Slide #4.

(PowerPoint Slide #5)

- D. There are more chickens in the world than any other bird.
 1. Chickens can be kept as pets, for breeding, egg laying and a food product.
 2. Chickens provide two sources of food frequently consumed by humans.
 - a. Their meat, also known as chicken.
 - b. Their eggs which they lay may be of a variety of colors depending upon the breed and the type of feed fed.

A variety of chicken eggs are shown in PowerPoint Slide #6. Discuss with the students the different types of colored eggs raised in Afghanistan.

(PowerPoint Slide #7)

- E. Chicken Terminology.
 1. A female chicken is called a "hen".
 - a. Hens lay eggs that range in color from white to pale brown and other pale colors depending on the breed.
 2. A male chicken is called a "rooster".
 - a. Roosters can usually be differentiated from hens by their striking plumage, marked by long flowing tails and bright pointed feathers on their necks.
 - b. The rooster is larger and more brightly colored than the hen.
 - c. They also have a larger comb on top of their head.

- d. Roosters make a very loud crowing sound usually very early in the morning but they can crow anytime during the day.
- e. Their loud shrill is a territorial sign to other roosters.
- f. They can also be quite aggressive birds.

Have the students compare and contrast the differences between the hen and rooster in PowerPoint Slide #8. Be sure they notice the bright colors of the feathers on the rooster as compared to the colors of the feathers on the hen. Also have the students compare the comb and wattles of the rooster and hen in PowerPoint Slide #9).

(PowerPoint Slide #10)

- 3. Young chickens are called “chicks” or “poults”.

(PowerPoint Slide #11)

- 4. A group of chickens is called a “flock”.
 - a. Chickens are gregarious birds and live together as a flock.
 - b. Chickens have a communal approach to the incubation of eggs and raising of young.
 - c. Individual chickens in a flock will dominate others, establishing a ‘pecking order’, with dominant individuals having priority for access to food and nesting locations.
 - d. Removing hens or roosters from a flock causes a temporary disruption to this social order until a new pecking order is established.

A flock of chickens is shown in PowerPoint Slide #12. Discuss with the students how many chickens make up a flock in Afghanistan.

(PowerPoint Slide #13)

F. What do chickens eat?

- 1. Chickens have a varied diet.
 - a. Chickens are omnivores and will feed on small seeds, herbs, and leaves, grubs, insects and even small mammals like mice, if they can catch them.
 - b. Domestic chickens are typically fed commercially prepared feed that includes a protein source as well as grains.
 - c. Chickens often scratch at the soil to get at adult insects and larva or seed.
 - d. Chickens have a well-developed gizzard (a part of the stomach that contains tiny stones) that grinds up their food.

(PowerPoint Slide #14)

- 2. When a rooster finds food, he may call the other chickens to eat it first.
 - a. He does this by clucking in a high pitch as well as picking up and dropping the food.
 - b. This behavior can also be observed in mother hens, calling their chicks.
 - c. In some cases the rooster will drag the wing opposite the hen on the ground, while circling her.

- i. This is part of chicken courting ritual and has been called a "dance".
- ii. The dance triggers a response in the hen's brain, and when the hen responds to his "call", the rooster may mount the hen and proceed with the fertilization.

Pictures of chickens feeding can be found in PowerPoint Slides #15, #16 and #17. Have the students raise their hand if they can explain what they think the chickens may be eating and how it is possible for the chickens to pick up tiny stones that will help the chicken's gizzard grind up the food they will eat.

(PowerPoint Slide #18)

G. Chickens farmed for meat are called broiler chickens, whilst those farmed for eggs are called egg-laying hens.

Discuss with the students the difference between broiler chickens and egg-laying chickens. If possible bring examples of both types of chickens to class.

(PowerPoint Slide #19)

H. Roosters crowing (a loud and sometimes shrill call) is a territorial signal to other roosters.

1. However, crowing may also result from sudden disturbances within their surroundings.
2. Hens cluck loudly after laying an egg, and also to call their chicks.

(PowerPoint Slide #20)

I. Hens can also be extremely stubborn about always laying in the same location.

1. It is not unknown for two (or more) hens to try to share the same nest at the same time.
2. If the nest is small, or one of the hens is particularly determined, this may result in chickens trying to lay on top of each other.

(PowerPoint Slide #21)

J. Chickens are susceptible to several parasites, including lice, mites, ticks, fleas, and intestinal worms, as well as other diseases.

1. The life span of a chicken varies between 5-7 years although there have been cases of chickens living 20 years or so.

Objective 2: Describe Breeds of Chickens raised in Afghanistan.

(PowerPoint Slide #22)

II. Chickens are the most popular poultry raised in Afghanistan.

A. The following breeds of chickens can be found in Afghanistan:

1. Local Breeds:
 - a. Sabswary
 - b. Kolangi
 - c. Khask

(PowerPoint Slide #23)

2. Golden
 - a. Zarin
 - b. Minor
3. Leghorn
 1. White
 2. Black
 3. Gray
4. Tillahee
5. Fayoumi
6. Pitry
7. Decorative Breeds

(PowerPoint Slide #24)

- B. Limited information has been found on the three local breeds but what is known is they are raised for both meat and eggs.
- C. The two varieties of the Golden breed of chicken were imported from Pakistan and are the most common breed of chicken found in Afghanistan.
 1. They are adaptable to the Afghanistan climate and resistant to the local diseases.
 2. Both are raised for egg and meat production.
 3. Approximately 80% of the eggs will have a dark shell.

(PowerPoint Slide #25)

- D. The Leghorn breed of chicken was imported from France.
 1. Leghorns take their name from the city of Leghorn, Italy, where they are considered to have originated.
 2. The Leghorn has become the most important commercial egg producing breed in the world.
 3. They are good foragers and can often glean much of their diet from ranging over fields and compounds.

(PowerPoint Slide #26)

4. They are primarily used for egg production but they are also used for meat.
5. The three varieties raised in Afghanistan are:
 - a. White
 - b. Gray
 - c. Black
6. Although there are many color varieties of Leghorns, the White Leghorn, with its pure white plumage, is probably the most popular variety in the world.

A picture of a Black Leghorn and a White Leghorn are shown in PowerPoint Slide #27.

(PowerPoint Slide #28)

- E. The Tillahee breed of chicken was imported from Iran.
 - 1. They are primarily raised for their egg production.
- F. The **Fayoumi** breed of chicken is an ancient breed and originated in Fayoum, Egypt.
 - 1. Their primary purpose is egg production.
 - 2. Fayoumi Chickens are hardy and very precocious in early maturing.
 - 3. They are excellent at flying and tend to escape captivity.
 - 4. Technically they are a pencilled breed coming in silver or gold.

A picture of a Fayoumi chicken is shown in PowerPoint Slide #29.

(PowerPoint Slide #30)

- G. The Pitry breed of chicken was imported from France.
 - 1. They were primarily raised for egg production and breeding.
 - 2. However the breed has not adapted well to the Afghanistan climate and local diseases.
- H. The Decorative breeds of chickens are noted for their beautiful colored feathers.

Engage the students in a discussion about the different breeds of chickens raised in Afghanistan. Since there are limited pictures of the different breeds if the students have access to a digital camera have them take pictures so they can be added to this lesson and the PowerPoint Slides. Take the students to a poultry producer so they can learn more about the feeding, handling, and care of chickens.

Review/Summary: Use the student learning objectives to summarize the lesson. There are also Review Questions on PowerPoint Slide #31. Have students explain the content associated with each objective. Bring a couple of chickens to class or take the students outside to view a rooster and hen to discuss the different characteristics about chickens.

Application: Have the students pick a breed of chicken. The chicken can be common to Afghanistan or grown anywhere in the world. Provide them with books and internet access and have them write a report about their chicken breed. The two resources from the FAO listed in the resources will be very helpful as well as the website from Oklahoma State University on breeds of chickens. A rubric is attached to this lesson (WS: 6-1) for grading purposes.

Evaluation: Evaluation should focus on student achievement of this lesson's objectives. Use WS: 6-1 as an evaluation or ask the students questions over the lesson. A sample written test is attached.

Answers to Sample Test:

Part One: Matching

1. D
2. C
3. B
4. A

Part Two: True or False

5. T
6. F
7. T

Part Three: Short Answer

8. Broilers are raised for their meat and egg-laying hens are raised to produce eggs.
9. Chickens have a pecking order and tend to stay in a flock. When the dominant chicken is removed from the group a new social order must be established.
10. Chickens are susceptible to several parasites, including lice, mites, ticks, fleas, and intestinal worms.

Test

Unit A Lesson 6: Raising Chickens

Part One: Matching

Instructions: Match the term with the correct response.

- A. Golden B. Leghorn C. Fayoumi D. Kolangi
- _____ 1. This is a local breed of chicken raised in Afghanistan.
- _____ 2. Breed of chicken first raised in Egypt.
- _____ 3. This breed of chicken was imported from France
- _____ 4. Most common breed of chicken found in Afghanistan

Part Two: True or False

Instructions: If the statement is true write T in the blank, if it is false write F in the blank.

- _____ 5. Chickens are gregarious birds and live together as a flock.
- _____ 6. Chickens are excellent flyers.
- _____ 7. Baby chickens are called chicks.

Part Three: Short Answer

Instructions: Provide a short statement to correctly answer the question.

8. What is the difference between broiler chickens and egg laying hens?
9. Why will chickens go into stress when a dominant chicken is removed from the group?
10. What are four susceptible parasites that can have a serious impact on the raising of chickens?

Chicken Report Rubric

Item	3	2	1	Total
Breed Identified: -Latin and Common name -Origination	All information is included and detailed.	Information is included but is missing some detail	Missing important information or data	
Physical Characteristics -Color -Size -Weight	Discusses physical characteristics in depth for both rooster and hen	Information is covered but some is missing	Missing most of the important information	
Breeding and Hatching -Differences between rooster and hen -Requirements for egg hatching	Breeding and hatching is thoroughly discussed	Missing some pertinent information	Not covered extensively or missing information	
Feeding -Feed rations discussed -Feeds identified for different stages of development	All aspects of feeding are covered	Missing some pertinent information	Not covered extensively or missing information	
Report Mechanics -Sentence structure -Spelling -Grammar -Punctuation	Punctuation and capitalization are correct .	There is one error in punctuation and/or capitalization.	There are two or three errors in punctuation and/or capitalization.	
Picture	Pictures of rooster, hen and chick are shown.	Missing one of the three	Missing 2 of the three	