

Course	Agricultural Science I
Unit	Introduction to Animal Products
Lesson	Poultry Products
Estimated Time	90 minutes or 2-50 minute blocks

Student Outcome

Identify and grade poultry products.

Learning Objectives

1. Identify the edible parts of poultry.
2. Explain how ready-to-cook poultry is graded.
3. Identify the quality factors that influence egg grading.

Grade Level Expectations

Resources, Supplies & Equipment, and Supplemental Information

Resources

1. PowerPoint Slides
 - ☐ PPt 1 – Main Parts of an Egg
2. Handouts
 - ☐ HO 1 – Ready-to-Cook Poultry – A Quality
 - ☐ HO 2 – Ready-to-Cook Poultry – B Quality
 - ☐ HO 3 – Ready-to-Cook Poultry – C Quality
 - ☐ HO 4 – Summary of U.S. Standards for Quality of Individual Shell Eggs
3. Activity Sheets
 - ☐ AS 1 – Poultry Grading (Instructor)
 - ☐ AS 1 – Poultry Grading (Student)
4. *Introduction to Animal Products (Student Reference)*. University of Missouri-Columbia: Instructional Materials Laboratory, 1998.
5. *Introduction to Animal Products Curriculum Enhancement*. University of Missouri-Columbia: Instructional Materials Laboratory, 2003.

Supplies & Equipment

- ☐ Chicken carcass, cutting board, and knife
- ☐ Four poultry carcasses
- ☐ Candling light
- ☐ Farm eggs stored for one week at room temperature
- ☐ Fresh farm eggs

Supplemental Information

1. Internet Sites

- ❑ “Inspection & Grading - What are the Differences?” Safe Food Handling Fact Sheets. Food Safety and Inspection Service. United States Department of Agriculture. Accessed on October 19, 2007, from http://www.fsis.usda.gov/Fact_Sheets/Inspection_&_Grading/index.asp.
- ❑ “Poultry-Grading Manual.” Agriculture Handbook Number 31. Agricultural Marketing Service. United States Department of Agriculture. Accessed on October 19, 2007, from <http://www.ams.usda.gov/poultry/resources/PYGradingManual.pdf>.
- ❑ “How to Buy Eggs.” Home and Garden Bulletin Number 264. Agricultural Marketing Service. United States Department of Agriculture. Accessed on October 19, 2007, from <http://www.ams.usda.gov/howtobuy/eggs.htm>.
- ❑ “Basic Egg Facts.” The American Egg Board. Accessed on October 19, 2007, from <http://www.aeb.org/LearnMore/EggFacts.htm>.

2. Print




- ❑ Mountney, G.J. and C.R. Parkhurst. *Poultry Products Technology*. 3rd ed. Binghamton, NY: Food Products Press, 1995.
 - ❑ Pond, K. and W. Pond. *Introduction to Animal Science*. New York: John Wiley & Sons, 2000.
-





Interest Approach


Using an entire chicken (or turkey) carcass, a cutting board, and a knife, cut up the chicken. Explain to students what the various parts are called. If time allows, demonstrate how boneless parts are achieved.

Communicate the Learning Objectives

1. Identify the edible parts of poultry.
2. Explain how ready-to-cook poultry is graded.
3. Identify the quality factors that influence egg grading.

Instructor Directions	Content Outline
Objective 1 <i>Have students list the edible parts of a chicken or turkey carcass. If available, refer to the Poultry Science Manual for National FFA Career Development Events for reference pictures.</i>	Identify the edible parts of poultry. <ol style="list-style-type: none">1. Half2. Breast quarter with or without wing3. Breast with or without ribs4. Boneless, skinless breast5. Breast tenderloin6. Wishbone7. Leg quarter8. Leg9. Drumstick10. Thigh11. Wing12. Drumette13. Back14. Liver, gizzard, heart, neck (Note: Unless otherwise stated, skin remains attached to the parts.)
Objective 2 <i>Ask students how poultry carcasses are graded. Use HO 1, HO 2, and HO 3 for discussion.</i>  HO 1 – Ready-to-Cook Poultry – A Quality  HO 2 – Ready-to-Cook Poultry – B Quality  HO 3 – Ready-to-Cook Poultry – C Quality	Describe how ready-to-cook poultry is graded. USDA Grades <ol style="list-style-type: none">1. A2. B3. C Quality factors <ol style="list-style-type: none">1. Conformation2. Fleshing3. Fat covering4. Defeathering5. Exposed flesh

Instructor Directions	Content Outline
<p><i>Explain the possible defects. Point out that if a carcass or part does not meet <u>all</u> the minimum standards for a grade, it will be graded at the next lowest grade. Prepare four poultry carcasses as presented in AS 1 (Instructor). Then have students evaluate the carcasses using AS 1 (Student).</i></p> <p> AS 1 – Poultry Grading (Instructor)</p> <p> AS 1 – Poultry Grading (Student)</p>	<ol style="list-style-type: none"> 6. Discoloration 7. Disjointed and broken bones 8. Missing parts 9. Freezing defects
<p>Objective 3</p> <p><i>Ask students how eggs are graded. Explain that the air cell, white, and yolk are evaluated using a candling light. If time permits, let students practice egg grading using a candling light and farm eggs (all store eggs should be similar grades). Store a few eggs at room temperature for one week to compare their internal quality with those of freshly laid farm eggs. Use PPt 1 and HO 4.</i></p> <p> PPt 1 – Main Parts of an Egg</p> <p> HO 4 – Summary of U.S. Standards for Quality of Individual Shell Eggs</p>	<p>Describe the quality factors that influence egg grading.</p> <ol style="list-style-type: none"> 1. Shell 2. Air cell 3. White 4. Yolk

<p>Application:</p> <p> AS 1 – Poultry Grading (Student)</p>	<p>Answers to AS 1</p> <p>Answers are at the Instructor's Discretion.</p> <p>Other activities:</p> <ol style="list-style-type: none"> 1. Purchase table eggs from a local store and have students bring in farm fresh eggs, if available. Assign egg grades using HO 4 as a reference. The USDA has slides showing the principles of egg grading and sizing.
<p>Closure/Summary</p>	<p>The majority of poultry purchased by consumers has been precut into various parts. Both poultry parts and carcasses can be federally graded before being sold to consumers. Eggs are graded on the quality of the shell, air cell, white, and yolk.</p>
<p>Evaluation: Quiz</p>	<p>Answers</p> <ol style="list-style-type: none"> 1. d 2. a 3. b 4. a 5. air cell, white, and yolk