



Agricultural Education

Lesson Title: Poultry Product Inspection and Grading

Standard: 4.2 Inspection and grading: Outline the United States Department of Agriculture (USDA) inspection procedures and system for classes, standards, and grades of poultry products. Perform the evaluation and grading of carcasses and parts of chickens and turkeys, pre-cooked, further processed, and poultry meat products, providing written and oral justification for evaluation and grading scores. Evaluate and grade eggs for interior and exterior quality and provide written and oral justification for evaluation conclusions.

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* The standard is for the Advanced Food Science class

edTPA Lesson Plan # Day 1/1

Grade: 12

Lesson Title: Poultry Product Inspection and Grading

Length of Lesson: 30 Minutes

Standard: [4.2 Inspection and grading: Outline the United States Department of Agriculture (USDA) inspection procedures and system for classes, standards, and grades of poultry products. Perform the evaluation and grading of carcasses and parts of chickens and turkeys, pre-cooked, further processed, and poultry meat products, providing written and oral justification for evaluation and grading scores. Evaluate and grade eggs for interior and exterior quality and provide written and oral justification for evaluation conclusions.]

Objectives:

- I can critique the quality of egg products using the USDA shell egg standards, grades, and classes. (Evaluate)
- I can grade carcasses, chicken and turkey parts, pre-cooked products, and various poultry meat items, providing clear justifications in both written and spoken form.

Assessment:

Formative Assessment - Poultry Product Grading

- In small groups (of 2 or 3), students will be provided with samples of poultry products, including chicken and turkey carcasses, pre-cooked and further processed items, and eggs. This will be a combination of actual eggs and images of chicken and turkey carcasses because the actual items may not be attainable.
- Each group will evaluate and grade the samples based on the criteria discussed during the lesson.

Summative Assessment - Students will write a comprehensive USDA Inspection and Grading Report for the given poultry products and eggs. They will have been provided with a template for how the report may look. The report should include:

- A description of the product.
- The grade assigned to the product.
- Detailed justifications for the grading considering factors like size, shape, color, texture, interior and exterior quality.
- A concluding summary and any recommendations or improvements.

Activating Strategy: Students will be asked what they know about poultry inspection. Then they will be set in a scenario where they are USDA inspectors responsible for grading poultry products. I will provide them with a checklist of criteria to consider, and ask them to discuss, in pairs or small groups, how they would go about inspecting and grading a given product.

Instruction: [1. Begin by discussing the importance of quality control and grading in the poultry industry, emphasizing the role of the USDA.

2. Use what was discussed in the activating strategy.
3. Demonstrate the evaluation and grading process for chicken and turkey carcasses and parts. Explain the criteria for grading, including factors like size, shape, color, and texture.
4. Provide students with samples (or images of samples) of pre-cooked and further processed poultry meat products. In small groups, have them evaluate and grade the products, using the criteria discussed.
5. Switch the focus to eggs. Show examples of eggs with different interior and exterior quality characteristics. Repeat the process.
6. In pairs, have students evaluate and grade eggs based on their quality characteristics.
7. Encourage students to write down their evaluation and grading scores for both poultry products and eggs, along with justifications for their scores.]

Closure: [1. As a class, have students share their evaluation and grading scores and justifications for the poultry products and eggs.

Summarize the key points about the USDA inspection procedures and the criteria for grading poultry products and eggs.]

Modifications/Grouping:

[We will plan to put students in 4 pairs. In the situation that eggs or other poultry products are limited we may have larger groups.]

Academic Language: [Terms related to poultry inspection and grading, e.g., classes, standards, grades, quality, criteria, evaluation, justification.]

Materials/Resources/Technology:

- PowerPoint presentation or whiteboard
- Images or video clips of poultry processing
- Samples of poultry products
- Samples of eggs
- Projector/computer

Poultry Inspection and Grading



Standard and Objectives :

4.2 Inspection and grading: Outline the United States Department of Agriculture (USDA) inspection procedures and system for classes, standards, and grades of poultry products. Perform the evaluation and grading of carcasses and parts of chickens and turkeys, pre-cooked, further processed, and poultry meat products, providing written and oral justification for evaluation and grading scores. Evaluate and grade eggs for interior and exterior quality and provide written and oral justification for evaluation conclusions.

Objectives :

- I can critique the quality of eggs products using the USDA shell egg standards, grades, and classes.
(Evaluate)
- I can grade carcasses, chicken and turkey parts, pre-cooked products, and various poultry meat items, providing clear justifications in both written and spoken form.
(Evaluate)



Why is Poultry Inspection even a BIG deal?

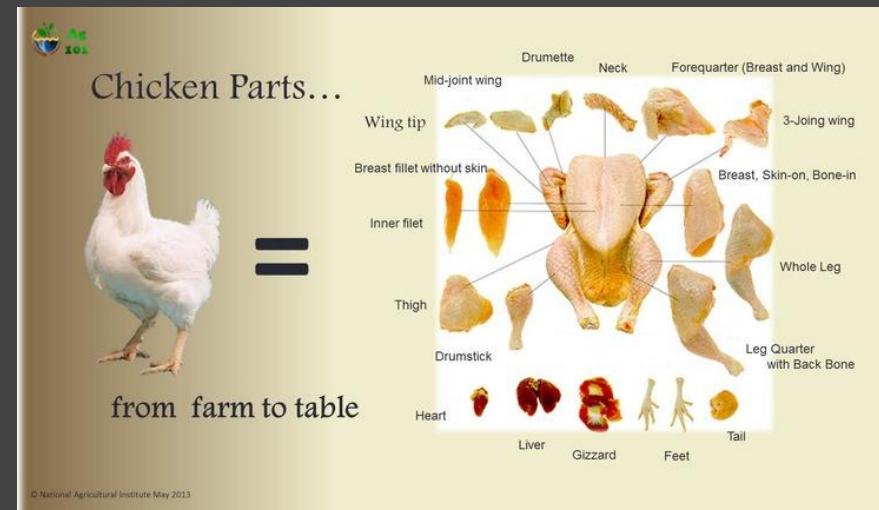
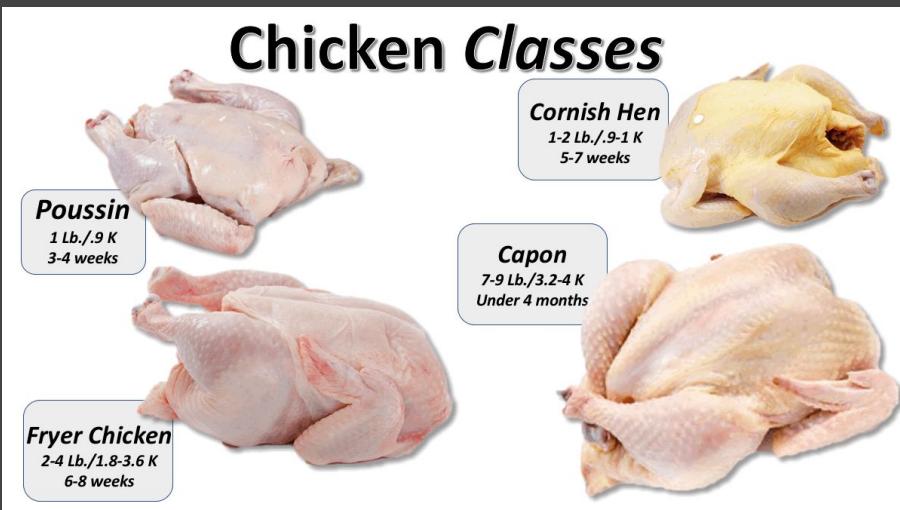
- The U.S. poultry industry is the world's largest producer and second largest exporter of poultry meat, and is a major egg producer.
- What could go wrong in poultry meat product inspection?
- How about with egg inspection?

USDA's Integral Role in Poultry Inspection

- Inspections & Certifications: Conducts inspections of poultry facilities to verify adherence to standards, granting certifications for compliance.
- Quality Grading: Establishes grading systems to classify poultry based on quality factors, helping consumers in informed purchasing decisions.
- Research & Development: Conducts research to improve industry practices, enhancing safety protocols and production methods.
- Consumer Protection: Safeguards public health by monitoring and addressing issues related to food safety and poultry quality.

What USDA standards and programs have been put in place that have affected the poultry industry?

Brief overview of what you've been eating



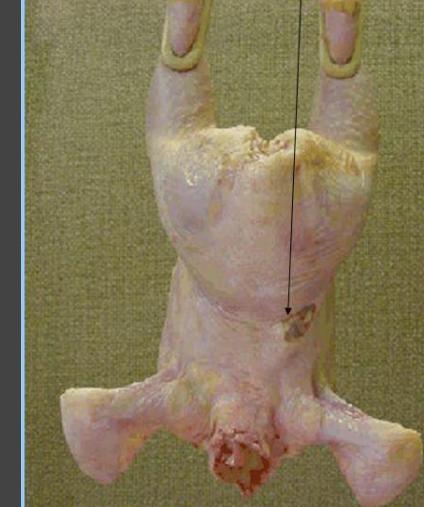
Poultry meat inspection checklist :

- Color: Check for uniformity in color, avoiding any abnormal discoloration.
- Texture: Assess the surface texture for consistency and absence of irregularities.
- Skin Integrity: Ensure the skin is intact without tears or damages.
Size and Shape:
 - Size Consistency: Evaluate if the product meets the standard size criteria.
 - Shape: Ensure the product conforms to the expected shape without deformities.
- Fat Distribution: Check for the presence of fat throughout the meat without excessive accumulation in certain areas.
- Bone Integrity: Ensure bones are intact without fractures or splintering.
- Boneless Meat: If applicable, check for the presence of bone fragments in boneless cuts.
- Overall Appearance: Evaluate the overall appearance considering all aspects together.
- Quality Grade: Assign the appropriate USDA grade based on the observations and standards for the specific product.

Lets try it out now

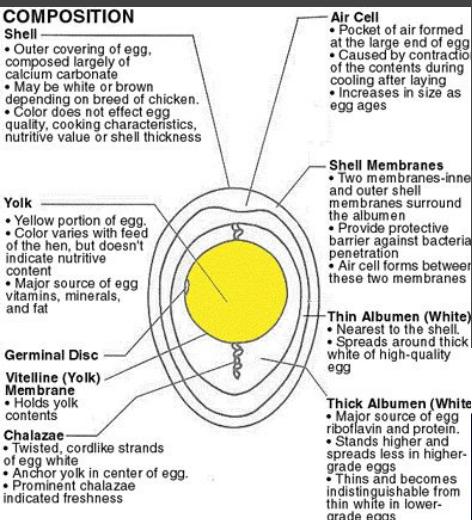
In groups of 2 or 3, you will use the the checklist to grade these cuts of meat.





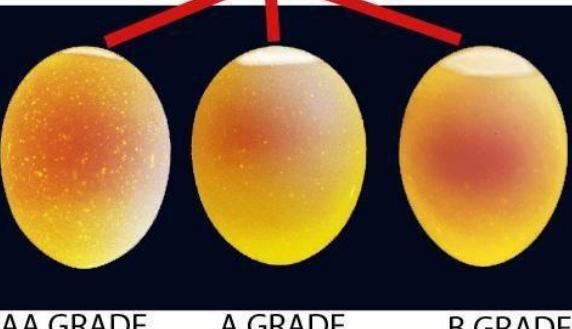
Now with eggs!

On the backside of your meat checklist, there is another checklist for eggs.



Notice the outline
of the yolks

AIR CELL



EGG GRADES

GRADE AA

Firm, round, eggs that stand high. These are the freshest and highest quality eggs available and are great for poaching and frying.



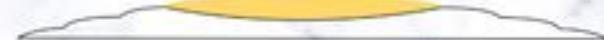
GRADE A

Less firm but fairly high eggs. These eggs are used for general purpose cooking in most recipes.

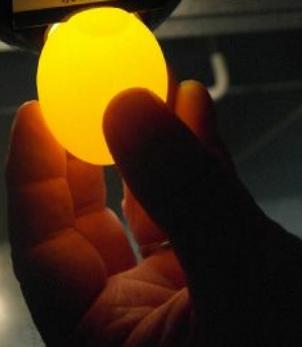


GRADE B

Flattened, more watery eggs with bigger air cells. These eggs are generally either further processed or used for baking.



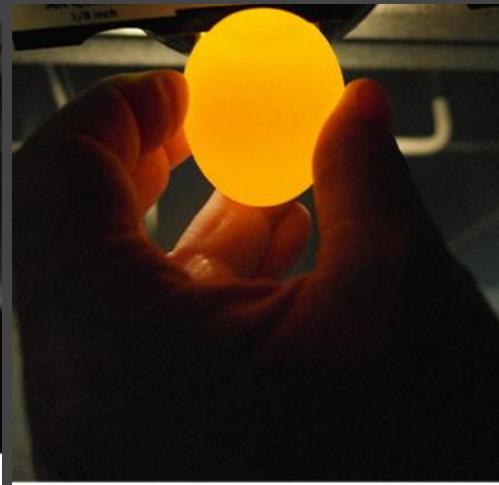
In your groups, use your checklist to determine the grade of each egg and why.



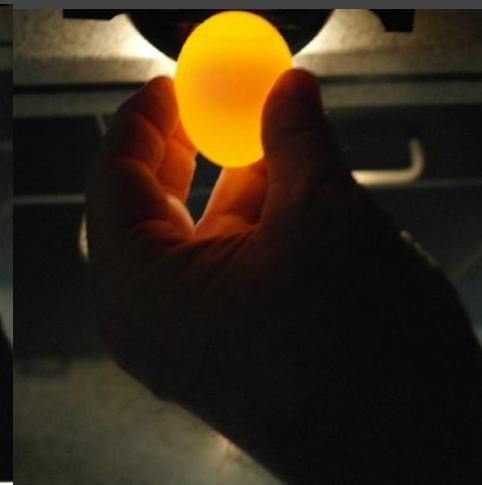
1



2



3



4

Name _____ Date _____

USDA Poultry Inspection and Grading Quiz

-Multiple Choice - 10 Points Each-

1. What is the main purpose of USDA inspection procedures for poultry products?
 - a. Enhancing flavor
 - b. Ensuring food safety and quality
 - c. Reducing production costs
 - d. Increasing product variety

2. Which factors are considered in the grading of poultry products?
 - a. Taste and aroma
 - b. Size, shape, color, and texture
 - c. Packaging design
 - d. Brand popularity

3. Which of the following is NOT typically considered in the USDA grading of eggs?
 - a. Shell color
 - b. Interior quality
 - c. Size
 - d. Packaging material

4. In poultry product grading, what does the term "texture" refer to?
 - a. Flavor intensity
 - b. Size and shape
 - c. Consistency and tenderness
 - d. Packaging quality

-Short Answer - 15 Points Each-

5. Explain the significance of USDA inspection procedures in the poultry industry.

6. Choose one poultry product discussed in class and describe the criteria used in its evaluation and grading.

7. Imagine you are a USDA inspector. What challenges might you encounter during the grading process, and how would you address them?

8. List two criteria considered in the grading of eggs.