

**Tennessee FFA Animal Evaluation Career Development Events - An Analysis of  
Employability Skill Development**

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**State:** Tennessee

**Category:** Social Science

**Division:** 5 Individual member in grades 11 and 12



### Abstract

The purpose of this study was to determine which employability skills are emphasized in animal evaluation Career Development Events (CDEs) in Tennessee FFA. The procedures included determining which employability skills are emphasized in each animal evaluation CDE: Dairy Evaluation, Livestock Evaluation, Horse Evaluation, and Poultry Evaluation. The skills were categorized into the appropriate code and theme, as described by the United States Department of Education Career and Technical Education. A content analysis was performed on the Employability Skills Framework and the number of CDEs analyzed. This was done by analyzing each of the different CDE rulebooks and determining if the appropriate skill was present from the Employability Skills Framework. It was hypothesized that if FFA students participated in animal evaluation CDEs then the theme of "Workplace Skills" would be most prevalent. This hypothesis was not supported. The results showed that the employability theme of "Applied Knowledge" was used the most at 28 skills, then "Workplace Skills" at 24 skills, and lastly "Effective Relationships" at 8 skills. The researcher analyzed each CDE to determine which theme was most prevalent. The Dairy Evaluation CDE emphasizes the theme of "Applied Knowledge" the most at 6 skills. The Livestock Evaluation CDE utilized the theme of "Applied Knowledge" the most at 9 skills. The Horse Evaluation CDE uses the theme of "Applied Knowledge" and "Workplace Skills" equally at 6 skills each. Finally, the Poultry Evaluation CDE utilized the "Applied Knowledge" theme the most at 7 skills. In conclusion, the theme of "Applied Knowledge" was emphasized most frequently. This shows that FFA animal evaluation CDEs at the state level focus on testing skills of academic disciplines and critical thinking skills most frequently, and have less focus on teamwork, collaboration, or flexibility. This research can be utilized to offer changes that can be made to CDEs to align with skills that employers desire.



## Introduction

This research was conducted to answer the question of “What skills are emphasized by Tennessee FFA CDEs?” The purpose of a CDE is “Career Development Events and Leadership Development Events focus on student success. FFA members study and practice to gain a complete and comprehensive knowledge of what it takes to succeed in a related career” (National FFA Organization, 2018). Therefore, CDEs are meant to give students who compete in them a place to develop the skills required to be employed in the broad industry of agriculture.

The United States Department of Education, Office of Career, Technical, and Adult Education (OCTAE) provides a framework of employability skills that employers are seeking from their employees. This framework coincides with lesson plans taught in Career and Technical Education (CTE) classes across the nation and is formatted into a checklist seen in Appendix A. If CDEs are to be used as a lesson to provide FFA members with the skills they need to be employed, it can be inferred that the Employability Skills Framework Checklist can be utilized as a grading tool to determine which skills are emphasized by the CDEs. Previous research has been conducted to show the influence of how Agriscience students perceive their own success in learning skills taught to them in class. It was found that “The means for each 21st century skill construct fell within a high level of perceived self-efficacy...” (Thiel & Marx, 2019). This helps provide reasoning for this experiment as it is implied that students in Agriscience classes will compete in FFA contests. If these students feel confident that they are learning the appropriate skills needed to be employed in the 21<sup>st</sup> century, then research should be conducted on the skills that they are learning.

OCTAE is partnered with the Perkins Collaborative Resource Network (PCRN), the creators of the Employability Skills Framework and have identified 43 skills that employers



require from their employees. All skills are listed in Appendix A, but can be broken down into three themes, “Applied Knowledge,” “Effective Relationships,” and “Workplace Skills.”

Applied knowledge being the focus on academic skills, such as mathematics, critical thinking skills, and decision-making skills. This theme can be further categorized into two codes of:

“Applied Academic Skills” and “Critical Thinking Skills.” The next theme of “Effective

Relationships” provides a focus on team-building skills, collaboration, and flexibility. This can be categorized into two codes: “Interpersonal Skills” and “Personal Qualities.” Finally, the last

theme of “Workplace Skills” is comprised of resource management skills, communication skills, and technological skills. This theme can be broken into five codes labeled: “Resource

Management,” “Information Use,” “Communication Skills,” “Systems Thinking,” and

“Technology Use.” All 43 skills are utilized to enhance CTE lessons to ensure students are exposed to these skills and can develop them throughout their CTE careers.

The impact this can have on agriculture is the ability to provide more FFA members with better employability skills by enhancing CDEs. If FFA members are the future workforce of agriculture, then the development of these skills allows for a more skilled workforce. This leads to more productivity, less training, and ultimately more money for the agricultural industry.

Additionally, if CDEs can be changed in the future to better emphasize these employability skills then it would allow for more FFA members to be able to utilize the chance to develop their skills. In Tennessee FFA, two teams from each of the grand regions – East, Middle, and West – will compete in the State FFA contest. Each team can be comprised of only 4 members, which equates to a total of 24 FFA members. Each region has its own set of rules and regulations regarding each of these CDEs which is often less strenuous than the State contest. Of these six teams, only one may represent Tennessee FFA in the National FFA contest. The National contest



consists of a more rigorous competition, which in turn implies more skills being used. Since only Tennessee 24 FFA members have the chance to develop their skills out of the 28,000 FFA members in the State Association (Tennessee FFA Association, 2021). If CDEs could be amended to better test and develop skills from the Regional level and up, it would allow for more students to be able to better develop more of their skills. Since FFA CDEs have their handbook, rules, and regulations updated every five years, it would allow for the proper amount of time and planning to revolutionize these events for the betterment of FFA members.

### **Literature Review**

When the Smiths-Hughes Act of 1917 was made into a law, it created the guidelines and implementation of Career and Technical Education (CTE) into public education in the United States (Moore, 2020). Included in this Act was the requirement that students in vocational education participate in a Supervised Agricultural Experience (SAE) (Moore, 2020). Initially these SAEs are used to provide students with work-based learning experiences outside of the classroom, to provide them with relevant skills. FFA provides many opportunities for students to develop skills outside of their SAEs. For example, FFA CDE's give students a unique insight into agricultural careers and give first hand experience in the CDE's related industry. "Career Development Events and Leadership Development Events focus on student success. FFA members study and practice to gain a complete and comprehensive knowledge of what it takes to succeed in a related career" (National FFA Organization, 2018). These CDEs are designed to teach students the required skills to excel in their desired career field.



OCTAE collaborates with many organizations to ensure that students are prepared for future careers. “The Division of Academic and Technical Education is responsible for helping all students acquire challenging academic and technical skills and be prepared for high-skill, high-wage, or high-demand occupations in the 21st century global economy” (U.S. Department of Education, 2020). They release yearly resources, such as grants and lesson plans, to allow students the opportunity to learn skills that employers want. One of the programs they implement is the PCRN, which is utilized “to support research; development and demonstration; dissemination; and evaluation and assessment activities aimed at improving the quality and effectiveness of career and technical education programs” (Perkins Collaborative Resource Network, n.d.a). The PCRN provides a framework for skills that employers desire. This framework consists of three themes: “Applied Knowledge,” “Workplace Skills,” and “Effective Relationships,” additionally there are nine total codes that each theme can be categorized as (Perkins Collaborative Resource Network, n.d.b). For the theme of “Applied Knowledge” there are two codes: “Applied Academic Skills” and “Critical Thinking Skills” (Perkins Collaborative Resource Network, n.d.b). These codes have a focus on testing academic skills - such as mathematics, science, and language arts - as well as critical thinking. According to the PCRN Network, “Successful careers are built on solid personal and interpersonal skills. Defining, measuring, and building these skills— even naming them— can be challenging” (Perkins Collaborative Resource Network, n.d.b). This coincides with the ideals of the National FFA Organization as both organizations provide opportunities for students to build skills to increase their chances of employability.

In 1970, 25% of the United States lived in rural areas (US Census Bureau, 2018). Over the span of 50 years the rural population has decreased to only 19.3% (America Counts Staff,



2017). As the population continues to become more urban, it's important for students to learn vocational and agricultural skills in the classroom or through CTE programs such as FFA. Students are exposed to a variety of learning opportunities ranging from SAEs, FFA CDEs, and vocational education experiences in the classroom. Studies have shown that, “Students who engaged in agriscience research SAEs expressed higher levels of perceived self-efficacy of 21st century skills in the following 21st century skill constructs: (a) critical thinking and problem solving, (b) communication and collaboration, (c) information literacy, (d) flexibility and adaptability, (e) initiative and self-direction, (f) productivity and accountability, and (g) leadership and responsibility” (Thiel & Marx, 2019). This shows how opportunities in FFA SAEs provide students with opportunities to gain more relevant skills that employers want, therefore increasing their employability. The authors say, “It is recommended that involvement in agriscience research SAEs be expanded in school-based agricultural education programs as a potential approach to support student development of 21st century skills” (Theil & Marx, 2019). This is a call for students to join FFA and the CTE opportunities it provides. Whether it be through their, SAE, the classroom, or the different CDEs students participate in, students will be able to acquire skills that employers are looking for.

### **Materials and Methods**

#### **Materials:**

- Computer
- Microsoft Excel software program
- Tennessee FFA Association – Dairy Evaluation and Cattle Management Handbook (2017-2021)



- Tennessee FFA Association – Livestock Evaluation Handbook (2017-2021)
- Tennessee FFA Association – Horse Evaluation Handbook (2017-2021)
- Tennessee FFA Association – Poultry Evaluation Handbook (2017-2021)
- Zoom software program

**Methods: Setup:**

First the researcher copied the Employability Skills Framework (Appendix A) into four separate Microsoft Excel spreadsheets for each of the animal evaluation CDEs, Dairy Cattle Evaluation and Management, Livestock Evaluation, Horse Evaluation, and Poultry Evaluation. Then the researcher labeled each separate spreadsheet accordingly with the appropriate animal evaluation CDE it coincided with. The researcher then amended the “Included in Lesson” section of the framework checklist to read “Included in CDE,” as well as amended the “Notes” section to read “Evidence” (Appendix A). The researcher also struck out the initial section of the framework checklist with the titles of “Instructor,” “Lesson Topic,” and “Activities that Reinforce Employability Skills” (Appendix A).

**Methods: Dairy Cattle Evaluation and Management Data Collection:**

The researcher opened the Microsoft Excel spreadsheet labeled “Dairy Cattle Evaluation and Management.” The researcher then read the section of the handbook regarding the event format and activities performed in the CDE (Appendix B). The researcher then read each skill of the Employability Skills Framework Checklist and determined if the skill was being emphasized and used in the CDE. If the skill was being emphasized: it would receive a value of 1, if it was not





emphasized it would receive a value of 0. Additionally, if the skill was being emphasized the researcher would provide evidence by referencing which activity included that skill.

**Methods: Livestock Evaluation Data Collection:**

The researcher opened the Microsoft Excel spreadsheet labeled “Livestock Evaluation.” The researcher then read the section of the handbook regarding the event format and activities performed in the CDE (Appendix C). The researcher then read each skill of the Employability Skills Framework Checklist and determined if the skill was being emphasized and used in the CDE. If the skill was being emphasized: it would receive a value of 1, if it was not emphasized it would receive a value of 0. Additionally, if the skill was being emphasized the researcher would provide evidence by referencing which activity included that skill.

**Methods: Horse Evaluation Data Collection:**

The researcher opened the Microsoft Excel spreadsheet labeled “Horse Evaluation.” The researcher then read the section of the handbook regarding the event format and activities performed in the CDE (Appendix D). The researcher then read each skill of the Employability Skills Framework Checklist and determined if the skill was being emphasized and used in the CDE. If the skill was being emphasized: it would receive a value of 1, if it was not emphasized it would receive a value of 0. Additionally, if the skill was being emphasized the researcher would provide evidence by referencing which activity included that skill.

**Methods: Poultry Evaluation Data Collection:**

The researcher opened the Microsoft Excel spreadsheet labeled “Poultry Evaluation.” The researcher then read the section of the handbook regarding the event format and activities performed in the CDE (Appendix E). The researcher then read each skill of the Employability



Skills Framework Checklist and determined if the skill was being emphasized and used in the CDE. If the skill was being emphasized: it would receive a value of 1, if it was not emphasized it would receive a value of 0. Additionally, if the skill was being emphasized the researcher would provide evidence by referencing which activity included that skill.

### **Methods: Frequency Analysis:**

The researcher copied the amended section of the Employability Skills Framework Checklist of “Included in CDE” from each of the separate animal evaluation Microsoft Excel spreadsheets into a new spreadsheet titled “Frequency.” After all four data sets were collected, the researcher used the “Sum” tool to calculate the frequency of each skill across of four CDEs by highlighting the row of the first skill with the ‘Sum” tool, pressing calculate, then allowing the auto-calculate tool to calculate the sums of the other skills.

### **Research Questions:**

1. Which category of employability skills does the Dairy Cattle Evaluation and Management CDE most frequently address?
2. Which category of employability skills does the Livestock Evaluation CDE most frequently address?
3. Which category of employability skills does the Horse Evaluation CDE most frequently address?
4. Which category of employability skills does the Poultry Evaluation CDE most frequently address?
5. Which category of employability skills do animal evaluation CDEs most frequently address?



**Hypothesis Research Question 1:** If FFA students participated in the Dairy Cattle Evaluation and Management CDE, then the theme of Workplace Skills would be most prevalent.

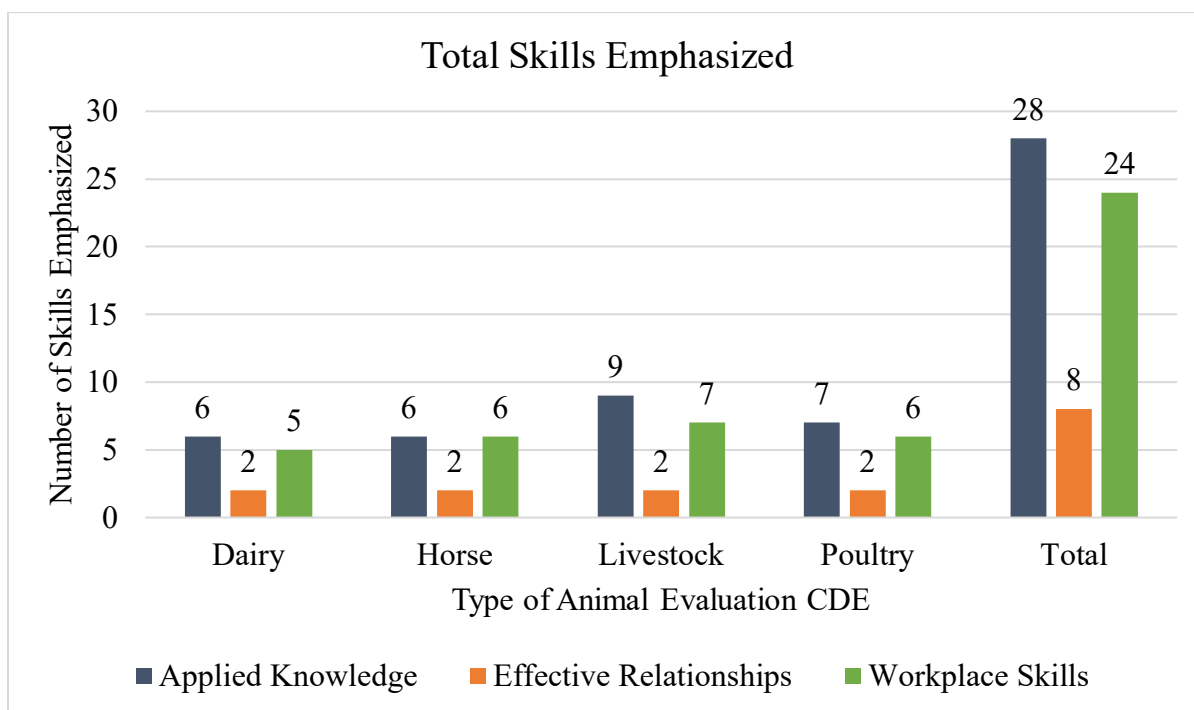
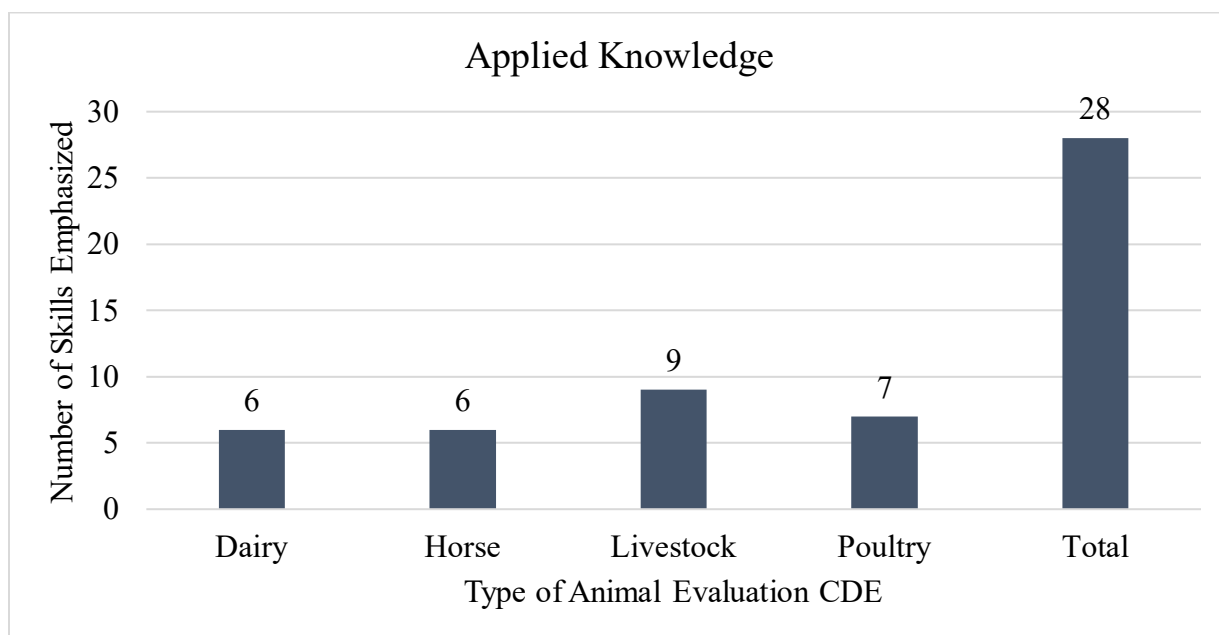
**Hypothesis Research Question 2:** If FFA students participated in the Livestock Evaluation CDE, then the theme of Workplace Skills would be most prevalent.

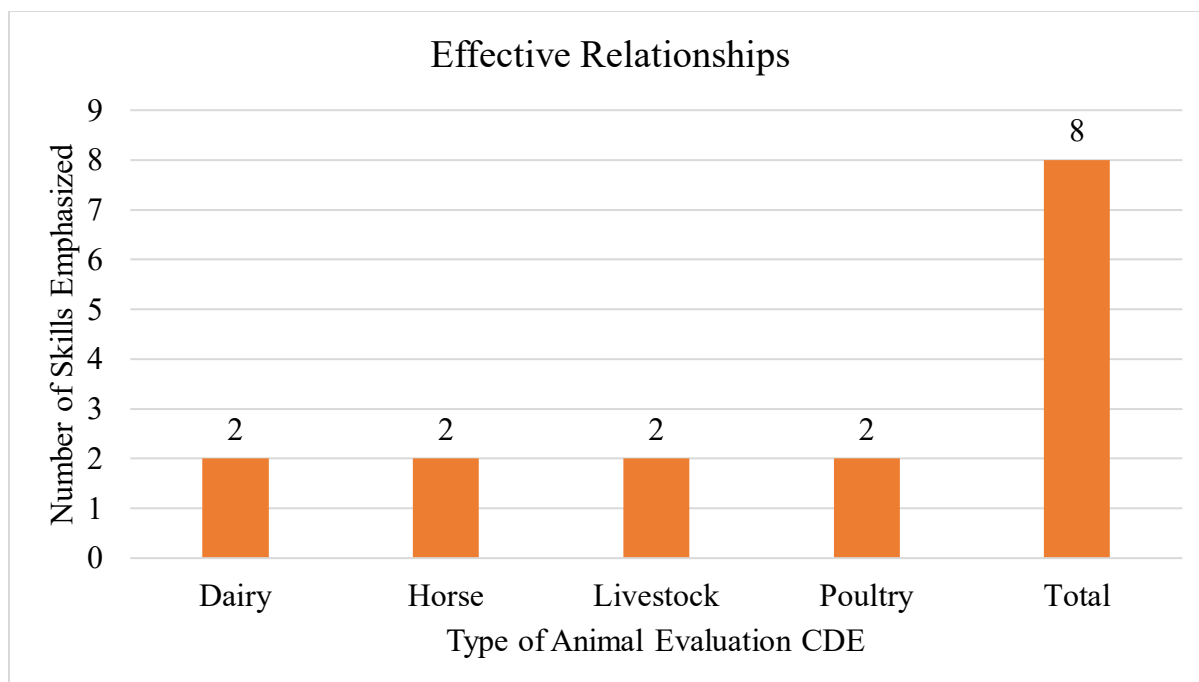
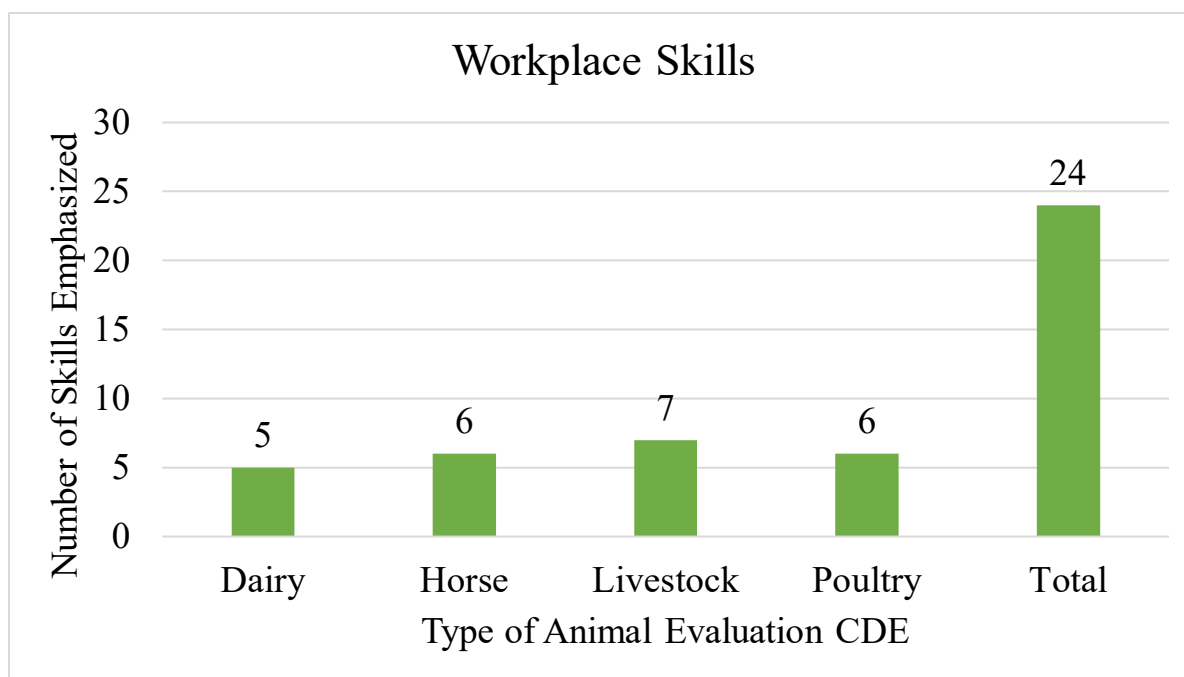
**Hypothesis Research Question 3:** If FFA students participated in the Horse Evaluation CDE, then the theme of Workplace Skills would be most prevalent.

**Hypothesis Research Question 4:** If FFA students participated in the Poultry Evaluation CDE, then the theme of Workplace Skills would be most prevalent.

**Hypothesis Research Question 5:** If FFA students participated in animal evaluation CDEs then the theme of Workplace Skills would be most prevalent.



**Results****Figure 1****Figure 2**

**Figure 3****Figure 4**

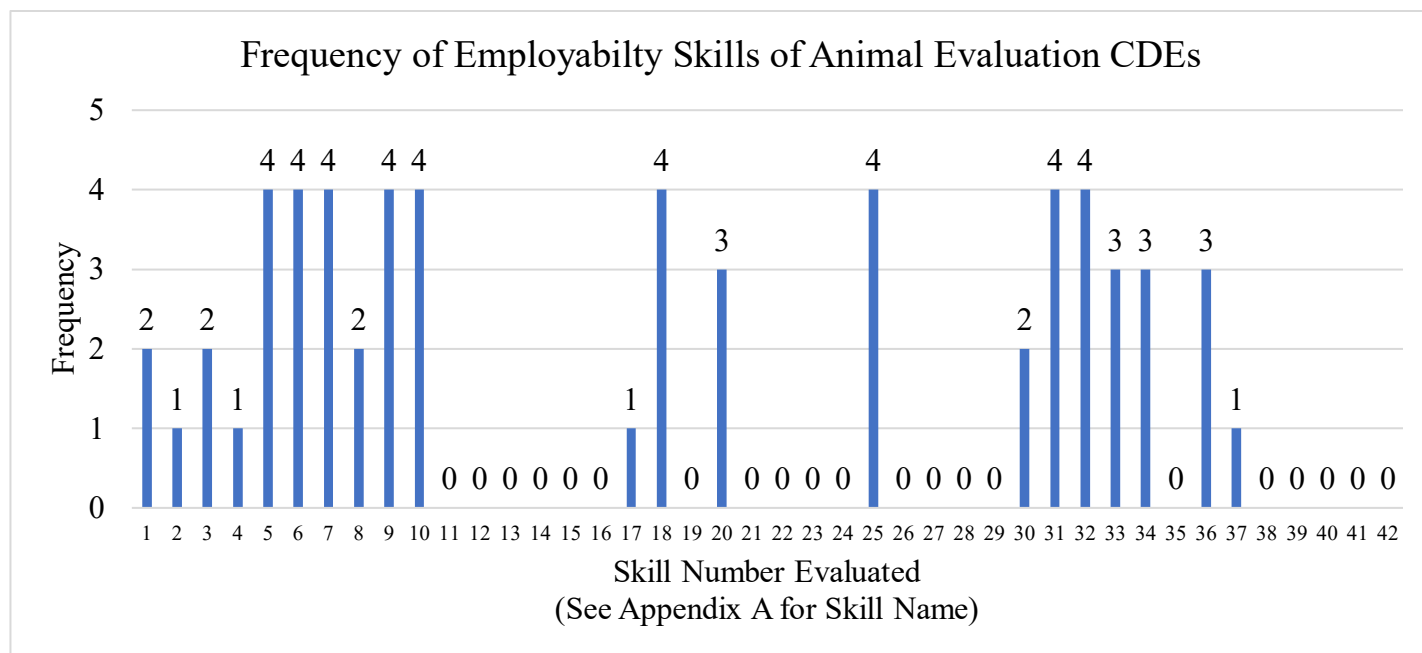


Figure 5



### Discussion and Conclusions

The hypotheses of all five research questions stated that the theme of ‘Workplace Skills’ would be the most emphasized across all four animal evaluation CDEs and overall. The results of the content analysis did not support the hypotheses. As shown in Figure 1, it was found that the theme of “Applied Knowledge” was emphasized the most at 28 skills, then the theme of “Workplace Skills” at 24 skills, and the theme of “Effective Relationships” being utilized the least at 8 skills. In the Dairy Cattle Evaluation and Management CDE, it was found that themes were used in the frequency of “Applied Knowledge” at 6 skills, then “Workplace Skills” at 5 skills, then ‘Effective Relationships’ at 2 skills. In the Horse Evaluation CDE, it was found that themes were used in the frequency of “Applied Knowledge” and “Workplace Skills” equally at 6 skills, then ‘Effective Relationships’ at 2 skills. In the Livestock Evaluation CDE, it was found that themes were used in the frequency of “Applied Knowledge” at 9 skills, then “Workplace Skills” at 7 skills, then ‘Effective Relationships’ at 2 skills. In the Poultry Evaluation CDE, it was found that themes were used in the frequency of “Applied Knowledge” at 7 skills, then “Workplace Skills” at 6 skills, then ‘Effective Relationships’ at 2 skills. This shows that the theme of “Applied Knowledge” was utilized the most across all CDEs and that the Livestock Evaluation CDE emphasized the greatest number of skills.

The focus on the “Applied Knowledge” theme as shown in Figure 2, shows how the animal evaluation CDEs emphasize the most skills in terms of academic skills and critical thinking. The focus on academic skills allows students to develop learning strategies, increase retention rates, and increase metacognitive abilities (CalPolyPomona, 2021). This can prove useful for students as they are able to establish the most efficient ways to complete tasks in the workplace and be able to solve problems on their own. The emphasis on “The ability to think



critically calls for a higher order thinking than simply the ability to recall information” (University of Louisville, 2002). Allowing students to focus on problem solving and the retention of past solutions to fix problems they are currently facing.

The lack of focus shown in the theme of “Effective Relationships” as shown in Figure 3 shows how animal evaluation CDEs to not emphasize the skills of teamwork, collaboration, and adaptability. The focus on teamwork allows for students to “Collaboration within a group can help solve difficult problems. Brainstorming is a good opportunity for the team to exchange ideas and come up with creative ways of doing things. By working together, teams can find the solutions that work best” (YTI, 2015). If the focus on teamwork and collaboration is increased, then students will be able to develop their skills more and be more likely to succeed.

If this research were to be changed, the experiment would be done on a larger scale to incorporate more CDEs. This would be beneficial as it would allow for the analysis of all skills that all Tennessee FFA CDEs emphasize, meaning more growth and development for its members. Additionally, an analysis of the CDEs at a Regional and National level would be beneficial as to measure the ratio of students affected compared to the number of skills being emphasized and developed. Also, if another researcher would conduct the content analysis of the CDEs an Inter-rater Reliability Test could be conducted to better determine areas of bias in the research. One area of bias in the research could be found in the content analysis, as it was performed by the researcher and their own interpretation of each of the 43 employability skills and their definitions.

This research could offer innovative ways for students to be able to better develop their employability skills and for CDEs to evolve to allow for this better development. CDEs are required to be amended and changed every five years which would allow for the emphasis of the





appropriate skills that are needed to succeed in the agricultural field. As FFA members are the future of agriculture, the more developed they are and the more skills they can utilize allows for a more skilled workforce in the future. Ultimately by providing our students with the best tools available to become better agriculturalists, it creates the potential for smarter, more-skilled workers. Which in turn can equate to increased revenue in the agricultural industry.

### **Acknowledgments**

While conducting the experiment, assistance was provided by Dr. Chaney Mosley, Agriculture Professor at Middle Tennessee State University (MTSU), who collaborated with the researcher through Zoom with this experiment. Dr. Mosley's insight was used to assist in the content and data analysis of the experiment. Assistance was also provided by Stewarts Creek FFA advisor Gina Stewart, who provided oversight while conducting the experiment. Collaboration was also provided by Abbey Taylor, agricultural education student at MTSU, and Makenzie Moorehead, agricultural education student at the University of Tennessee at Martin, who assisted in ensuring the scientific accuracy of the experiment and its validity. This project would not have been possible without the collaboration and help from all the above individuals.



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## Appendix A

### Employability Skills Framework – Lesson Planning Checklist

Instructor: \_\_\_\_\_

Lesson Topic: \_\_\_\_\_

Activities that reinforce Employability Skills: \_\_\_\_\_

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Employability Skills Lesson Components		Included in Lesson?		Notes
		Yes	No	
APPLIED KNOWLEDGE				
Applied Academic Skills Applied academic skills are evident daily in homework assignments, classwork, and Q&A exchanges during lessons.	Reading skills Students apply/demonstrate reading skills by interpreting written instructions/project directions and constructing responses, using print and online materials as resources, completing worksheets, and seeking clarification about what they have read.			
	Writing skills Students rely on writing skills to construct lab reports, posters, and presentation materials, take notes, and compose responses to essay questions.			
	Math strategies/procedures Students use computational skills appropriately and make logical choices when analyzing and differentiating among available procedures. Outside of math class, this includes creating/interpreting			



	tables and graphs and organizing/displaying data.			
	Scientific principles/procedures Students follow procedures, experiment, infer, hypothesize (even as simple as "what if we do it this way"), and construct processes to complete a task (can occur outside of math/science classes).			
<b>Critical Thinking Skills</b> Critical thinking skills are evident in homework, group work, project-based tasks, and presentations.	<b>Thinks creatively</b> Students create innovative and novel ideas/solutions and display divergent thinking. This can be seen in oral presentations and creative writing assignments, open-ended tasks, and project design.			
	<b>Thinks critically</b> Students display analytical and strategic thinking. This can be seen in debating an issue, converging on an understanding, assessing a problem, and questioning (playing devil's advocate).			
	<b>Makes sound decisions</b> Students differentiate between multiple approaches and assess options (could be linked to thinking critically).			
	<b>Solves problems</b> Students assess problems involving the use of available resources (personnel and materials) and review multiple strategies for resolving problems (could be linked to thinking creatively).			
	<b>Reasons</b> Students negotiate pros/cons of ideas, approaches, and solutions and analyze options using "if-then" rationale.			
	<b>Plans/organizes</b> Students plan steps, procedures, and/or approaches for addressing tasks. This occurs naturally in most assignments, ranging from solving one problem to completing a long-term project.			
<b>EFFECTIVE RELATIONSHIPS</b>				
<b>Interpersonal Skills</b> Interpersonal skills are almost always displayed when students work in pairs or teams to	<b>Understands teamwork and works with others</b> Students participate in cooperative groups or with a partner, contribute fairly to the task, and show respect to others.			



complete short-term or long-term tasks.	<b>Responds to customer needs</b> Students help fellow students understand tasks, find resources, and fulfill assigned roles (think of fellow students as customers).			
	<b>Exercises leadership</b> Students participate as team leaders or effective team members in project assignments and organize work to meet project goals and team roles.			
	<b>Negotiates to resolve conflict</b> Students keep team members on track, suggest alternatives, and discuss options (can be as much about agreement as conflict).			
	<b>Respects individual differences</b> Students listen to and consider all team members' ideas, respond supportively to ideas given in class or in teams, and work well with all teammates.			
<b>Personal Qualities</b> Personal qualities are routinely displayed in students' everyday actions in the classroom — how they participate in lessons, communicate, contribute to the learning environment, treat their fellow students, and govern themselves.	<b>Demonstrates responsibility and self-discipline</b> Students actively participate in class, asking questions, volunteering answers, completing/submitting assignments, and working well in groups.			
	<b>Adapts and shows flexibility</b> Students adapt easily to different modes of instruction and different types of assignments.			
	<b>Works independently</b> Students commit to time-on-task during class and begin work without fanfare.			
	<b>Demonstrates a willingness to learn</b> Students are cooperative and noticeably engaged.			
	<b>Demonstrates integrity</b> Students treat work assignments with respect in that work is either original or credited correctly.			
	<b>Demonstrates professionalism</b> Students treat others and work assignments with respect. All ideas are considered and work is either original or credited correctly.			
	<b>Takes initiative</b> Students commit to time-on-task during class and begin work without			



	fanfare. This is also evident during teamwork.			
	<b>Displays a positive attitude and sense of self-worth</b> Students contribute positively to the class.			
	<b>Takes responsibility for professional growth</b> Students are active listeners, seeking clarification and understanding when needed.			
WORKPLACE SKILLS				
<b>Resource Management</b> Resource management is often a component of project-based learning and collaborative group work but can also apply to how an individual student manages class time.	<b>Manages time</b> Students demonstrate time management when organizing and planning project activities with a team or when organizing and managing themselves and individual class assignments and homework. Time management is inherent in almost all assignments.			
	<b>Manages money</b> Students manage money in group projects requiring allocation of limited finances and resources (i.e. designing/marketing a toy, flipping a house, or planning a trip).			
	<b>Manages resources</b> Students manage resources in projects requiring allocation of limited finances, resources (materials), and personnel.			
	<b>Manages personnel</b> Students gain experience managing personnel (i.e. each other) in group projects requiring allocation of limited finances, resources (materials), and role assignments. They also manage their own behavior and participation.			
<b>Information Use</b> Information use can include retrieving information from any medium (e.g., print, TV, Internet, or in person) and can be as simple as looking up one piece of information to writing a term paper	<b>Locates</b> Students use analytical strategies to determine the best medium for finding necessary information.			
	<b>Organizes</b> Students use any graphic organizer—outline, concept map, organization chart, tables, etc. to sort information/data.			
	<b>Uses</b> Students use classification and analytic skills to determine the			



or preparing an oral presentation.	necessary information (i.e., stay on target) to complete task.			
	<b>Analyzes</b> Students assess information to determine which is relevant (does not have to be a mathematical analysis).			
	<b>Communicates</b> Students summarize information to compose written or oral presentations, posters, reports, slides, etc. This can also be as simple as a student explaining a problem in front of the class.			
<b>Communication Skills</b> Routinely displayed in students' everyday actions in the classroom — how they participate in lessons, contribute to the learning environment, treat their fellow students, and govern themselves.	<b>Communicates verbally</b> Students provide oral responses. Evidence ranges from impromptu short answers during a lesson to completing a formal oral presentation.			
	<b>Listens actively</b> Students are noticeably engaged through notetaking, questioning, and responding.			
	<b>Comprehends written material</b> Students use/demonstrate reading skills by following written instructions/project directions, reviewing print and digital resources, completing worksheets, and asking questions about what they have read.			
	<b>Conveys information in writing</b> Students rely on writing skills to organize lab reports, posters, presentation materials and to take notes and reply to essay questions.			
	<b>Observes carefully</b> Students interpret verbal and nonverbal communication efforts of others.			
<b>Systems Thinking</b> A team working in sync to accomplish an assignment can be thought of as a system.	<b>Understands and uses systems</b> Students understand their roles and assignments when collaborating as a team (system) and contribute to the organizational structure and function of the team.			
	<b>Monitors systems</b> Students devise methods to assess team (system) progress.			
	<b>Improves systems</b> Students negotiate mid-course			





	corrections, adaptations to team (system) tasks if necessary.			
<b>Technology Use</b> In the classroom and workplace, technology skills typically refer to the use of digital electronics.	<b>Understands and uses technology</b> Students often rely on various digital technologies for calculating, collecting and displaying data, conducting research, creating presentations, and writing reports.			



## Appendix B

TENNESSEE FFA ASSOCIATION DAIRY CATTLE EVALUATION AND MANAGEMENT HANDBOOK 2017–2021 3

### Event Format

Each participant must have:

- Two sharpened No. 2 pencils, a dairy evaluation scantron from [judgingcard.com](http://judgingcard.com), and a clear clipboard with no notes attached.

### INDIVIDUAL ACTIVITIES

#### GENERAL KNOWLEDGE EXAM (150 POINTS)

- The exam will consist of a 50 question exam involving dairy management practices and DHI Records. The exam questions will come from the previous five years National FFA Dairy General Knowledge Exam located on [ffa.org](http://ffa.org).
- Participants will have 40 minutes to complete the exam.

#### EVALUATION AND SELECTION (300 POINTS)

- Six classes of four dairy animals will each be placed on type. Classes will be selected from the recognized breeds of dairy cattle. The class selection committee, however, shall give priority to selecting quality cattle in the breeds available and not be obligated to having all breeds represented in the evaluation classes. Classes will consist of heifers, young cows or mature cows.
- Class or classes may contain production (DHI) data as part of the evaluation process.
- Participants will be permitted to view the animals from all angles but will not be permitted to handle them.
- The dairy cattle handlers will wear numbers which identify the animals.
- Each class is worth 50 points maximum for a correct placing.
- Participants will have 12 minutes to place each class. For classes on which oral reasons will be given, participants will be given 15 minutes.

#### ORAL REASONS (150 POINTS)

- Oral reasons will be required on three classes. These three classes will be designated by the event superintendent prior to the actual evaluation of the class.
- Oral reasons will be given in another location immediately following the evaluation classes.
- Participants may not use notes during delivery of reasons. Points will be deducted for the use of notes.
- Each class is worth 50 points maximum for each set of reasons.
- Participants will have 12 minutes to prepare each set of oral reasons. No more than two minutes may be used to deliver the reasons before the judges.



## Appendix C

TENNESSEE FFA ASSOCIATION LIVESTOCK EVALUATION HANDBOOK 2017–2021 3

- Any participant in possession of an electronic device in the event area is subject to disqualification.

### Event Format

#### EQUIPMENT

Materials students must provide:

- Participants must bring two No. 2 pencils, a clear, transparent clipboard, and a livestock evaluation scantron (purchased through [judgingcard.com](http://judgingcard.com))

Equipment provided:

- All paper will be provided. Participants are not to bring any paper.
- All other necessary materials will be provided by event committee.

#### INDIVIDUAL ACTIVITIES

##### WRITTEN EXAM (25 QUESTIONS – TWO POINTS EACH, 50 POINTS TOTAL)

Written test: The objective, multiple choice exam is designed to determine team members understanding of the livestock industry. The exam will consist of 25 multiple choice questions (two points each) made of the previous five years National FFA Livestock Evaluation Written Exams. Old tests can be found on [ffa.org](http://ffa.org). A test bank will be developed and updated annually on the Downloads page of [tnffa.org](http://tnffa.org). Thirty minutes will be given for the exam.

##### LIVESTOCK EVALUATION/PLACING CLASSES (50 POINTS/CLASS, 400 POINTS TOTAL)

Eight classes of four animals each will be placed. Classes may be breeding or market animals from beef, swine, sheep, or meat goat species. At least one class will include the use of production/performance data.

##### ORAL REASONS (50 POINTS/CLASS, 200 POINTS TOTAL)

Up to four sets of oral reasons will be designated by the event superintendent at the beginning of the event. One set of reasons will be given on the production data class. Reasons will be given after all classes have been placed. Participants will be provided paper to take notes on each reason class for preparation. Use of notes during the reason presentation is strongly discouraged.



**KEEP CULL (50 POINTS EACH WITH 400 POINTS TOTAL)**

Keep/cull classes: There will be up to four selection classes that may be beef, swine, sheep or meat goats; each made up of eight breeding animals. Participants will be required to select the four best animals from the eight, using visual appraisal and performance data. Performance data will be provided. Production/performance data (including EPDs) may be used in the keep/cull classes of beef, swine, sheep or meat goats. Performance criteria, when used, shall be based on current industry standards.



## Appendix D

### Event Format

Materials each participant needs to provide:

- Two sharpened No. 2 pencils for placing classes
- A clear, transparent clipboard
- Official scantron (purchased through [judgingcard.com](http://judgingcard.com))
- No pre-printed materials will be allowed during the event

### INDIVIDUAL ACTIVITIES

#### IDENTIFICATION CLASS (50 POINTS)

Participants will identify breeds and/or colors and markings of horses, tack and equipment as well as leg deviations (i.e., toed out, toed in, sickle hocked etc.,) items. Each problem will be worth two points each, 25 items total. This activity will come from the previous five years of National FFA Identification Classes posted on [ffa.org](http://ffa.org).

#### SELECTION CLASSES (300 POINTS)

Six classes will be evaluated, consisting of halter and performance classes. There will be three classes of reasons. Classes will be approximately 12–15 minutes in length. All classes will be 50 points.

Halter classes will be evaluated. Halter classes may be represented by the following breeds and types: Tennessee Walking Horse, Quarter Horse, Conformation Hunter, Appaloosa, Arabian, Paint, American Saddlebred and Morgan. All halter classes will be evaluated as sound.

Performance classes will be evaluated. Performance classes may include: Western Horsemanship, Hunt Seat Equitation, Western Pleasure, Ranch Pleasure, Western Riding, Reining, English Pleasure (Saddle Seat), Hunter Under Saddle (Hunt Seat), Trail and Hunter Hack. Performance classes will be evaluated as presented (unsoundness to be penalized accordingly). Patterns and scoresheets will be provided to the teams prior to the start of the



event for all classes requiring patterns.

**ORAL REASONS (150 POINTS)**

There will be up to two performance oral reasons classes selected from Western Pleasure, Ranch Pleasure, Western Riding, Western Horsemanship, Hunt Seat Equitation Reining, English Pleasure (Saddle Seat) and Hunter Under Saddle (Hunt Seat). (50 points each)

There will be up to two Halter oral reasons classes selected from the halter classes listed above (50 points each)

**Note:** Major points will be deducted if participants use notes during oral reasons presentations.



## Appendix E

### LIVE POULTRY

#### MARKET BROILER PLACING (50 POINTS)

Each participant will place a class of four market broilers. Each participant will be permitted to “handle” the birds, as long as the birds are inspected in a professional and humane manner. Participants may not remove the broilers from the holding unit.

#### EGG-TYPE HEN PLACING (50 POINTS)

Each participant will place a class of four egg-type hens. The birds will be Single-Comb White



Leghorns, or commercial strains of Leghorn-type (inbred cross). The birds may have trimmed beaks. Each participant will be permitted to “handle” the birds, as long as the birds are inspected in a professional and humane manner.

#### LIVE POULTRY SCORING

CRITERIA	Points
Market broilers placing	50
Egg-type hens placing	50

#### READY-TO-COOK POULTRY

##### CARCASS GRADING (50 POINTS)

Each participant will grade a class of ten ready-to-cook chicken and/or turkey carcasses and/or parts. Criteria for grading will be derived from USDA standards for chicken carcasses weighing two pounds to six pounds and for turkey carcasses weighing six to sixteen pounds or carcasses weighing greater than sixteen pounds. Four categories may be used, including the USDA quality grades A, B, C and the category NG (nongradable). Participants may not touch any carcass or part; doing so will result in disqualification. If used, the shackle holding a carcass may be rotated to show the entire carcass.

Scoring for parts and carcass grading:

Participant's Grade	OFFICIAL GRADE			
	A	B	C	NG
A	5	3	1	0
B	3	5	3	0
C	1	3	5	0
NG	0	0	0	5

As shown above, carcass grading is scored based on the USDA quality grades A, B, C and the category NG. Each correct grade receives a score of five points. If the item is graded one quality grade below or above the correct grade, two points will be deducted to obtain a score of three points. If the item is graded two quality grades below or above the correct grade, four points are deducted to obtain a score of one point. However, if the “NG” line is “crossed” (i.e., an





incorrect judgment), all five points are deducted to obtain a score of zero points. (Adapted from information provided by Don Sheets, Retired, Kansas Board of Agriculture, Topeka, Kansas.)

#### CARCASS PLACING (50 POINTS)

Each participant will place a class of four ready-to-cook chicken or turkey carcasses. Criteria for placing will be derived from USDA standards relative poultry weight classes. Participants may not touch any carcass; doing so will result in disqualification. If used, the shackle holding a carcass may be rotated to show the entire carcass.

#### READY-TO-COOK POULTRY SCORING

CRITERIA	Points
Carcass grading	50
Carcasses placing	50

### SHELL EGGS

#### INTERIOR GRADING (50 POINTS)

Each participant will grade a class of ten white (or white-tint) shell eggs. Criteria for grading will be derived from USDA standards for interior quality of market eggs. The USDA quality grades will be AA, A, B and Loss. Participants must candle the eggs to determine the appropriate USDA quality grade, but improper handling of eggs will result in disqualification.

Scoring for interior egg quality grading:

	OFFICIAL GRADE			
Participant's Grade	AA	A	B	Loss
AA	5	3	1	0
A	3	5	3	0
B	1	3	5	0
Loss	0	0	0	5



As shown above, interior egg quality grading is scored based on the USDA quality grades AA, A, B and Loss. In the case of Class 76, each correct grade receives a score of five points. If the item is graded one quality grade below or above the correct grade, two points will be deducted to obtain a score of three points. If the item is graded two quality grades below or above the correct grade, four points are deducted to obtain a score of one point. However, if the “Loss” line is “crossed” (i.e., an incorrect judgment), all five points are deducted to obtain a score of zero points.

#### EXTERIOR GRADING (50 POINTS)

Each participant will grade a class of ten shell eggs (white, brown or other). Criteria for grading will be derived from USDA standards for exterior quality of market eggs. The USDA quality grades will be AA/A, B and NG (nongradable). Criteria for grading may include decisions related to the following quality factors: Soundness (unbroken, check, dented check or leaker); stains (slight/moderate stain or prominent stain); adhering dirt or foreign material; egg shape (approximately normal shape, unusual or decidedly misshapen); shell texture (large calcium deposits, body check or pronounced ridges); shell thickness (pronounced thin spots); no defect.

Each participant will determine written factors for the grading of the exterior chicken eggs. The written factors will relate to the criteria used for grading exterior quality of eggs.

Scoring for exterior egg quality grading:

	OFFICIAL GRADE		
Participant's Grade	AA/A	B	NG
AA/A	5	2	0
B	2	5	0
NG	0	0	5
Loss	0	0	0

As shown above exterior egg quality grading is scored based on the USDA quality grades AA/A, B and NG (nongradable). Each correct grade receives a score of five points. If the item is graded one quality grade below or above the correct grade, three point will be deducted to obtain a score of two points. However, if the “Loss” line is “crossed” (i.e., an incorrect judgment), all five points are deducted to obtain a score of zero points.

#### WRITTEN FACTORS CLASS (50 POINTS)

Written factors for exterior egg quality grading and has a value of 50 points per participant.



Exterior egg quality grading is evaluated for twelve different quality factors. Further processed poultry meat products are evaluated for seven different quality factors. Each item may be determined to have “no defect” or to have one or more defects.

For each correct match with the judge, zero points are deducted.

For each “defect” or “no defect” missed or added, two points are deducted.

No score will be less than zero.

#### **SHELL EGGS SCORING**

CLASS	Points
Interior grading	50
Exterior grading	50
Written factor for Class	50

### **FURTHER PROCESSED POULTRY**

#### **BONELESS FURTHER PROCESSED (50 POINTS)**

Each participant will determine written quality factors for a class of ten boneless further processed poultry meat products (e.g., precooked, poultry meat patties, tenders, nuggets or other boneless products). Criteria for evaluation will include coating defects, color defects, consistency of shape/size, broken and/or incomplete products, cluster/marriages and evidence of foreign material. Participants may not touch any product; doing so will result in disqualification.

Boneless Further Processed Poultry Meat Products:

DEFECT	PRODUCT NUMBER									
	1	2	3	4	5	6	7	8	9	10
Coating Void										
Inconsistent Color										
Inconsistent Shape/Size										



Broken/Incomplete										
Cluster/Marriages										
Foreign Material										
No Defect										

**BONE-IN FURTHER PROCESSED (50 POINTS)**

Each participant will determine written quality factors for a class of ten bone-in further processed poultry meat products (e.g., precooked, bone-in wings or other bone-in poultry meat products). Criteria for evaluation will include coating defects if applicable, color defects, consistency of size, broken products, miscut products, and evidence of foreign material. Participants may not touch any product; doing so will result in disqualification.

**CARCASS PARTS IDENTIFICATION (50 POINTS)**

Each participant will identify ten poultry parts. Poultry parts to be identified will be randomly selected and consistent with those used in the chicken processing and merchandising industries. The participant may not touch any part; doing so will result in disqualification.

The identification class consisting of ten poultry carcass parts. The class has a value of 50 points per participant. Each correct answer receives a score of five points.

**FURTHER PROCESSED POULTRY SCORING**

CLASS	Points
Boneless Further Processed	50
Bone-In Further Processed	50
Carcass Parts Identification	50



**Written Exam (100 Points)**

The written examination will be administered at the beginning of the event. Each participant will complete a 30 item written examination on poultry production, management, anatomy and physiology. Five or more items will require mathematical calculations. A test bank for the exam will be provided and updated annually on [tnffa.org](http://tnffa.org)

