



Michigan FFA
Agriculture, Food, & Natural
Resources Education
Career Development Event
Manual

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Michigan FFA

Agriculture, Food, & Natural Resources Education

Career Development Event Manual

AFNR Education Career Development Event Goal

The goal of this Career Development Event is designed to provide high school students (grades 9-12) with an opportunity to develop and present as teaching lesson related to agriculture, food, and natural resources education broadly defined.

AFNRE Educational Career Development Event Objectives and Rules

I. Objectives

1. To provide an opportunity to expose a wide variety of students to the planning, development and implementation of an agriculture, food, or natural resources education lesson plan in a simulated classroom setting.
2. To acquire knowledge and skills in teaching agriculture, food, and natural resources education for present and future use.
3. To become knowledgeable of, and familiar with, a wide variety of curriculum opportunities that instructors of agricultural education must utilize.
4. To understand the principles and fundamentals of instruction of agriculture, food, and natural resources education.
5. To further the opportunities for students to become proficient in the techniques used by agriculture, food, and natural resources educators.
6. To promote the opportunities for agriculture, food, and natural resources education as a career.
7. To promote career choices by providing an opportunity for individuals to become acquainted with professionals in the industry.
8. To foster learner centered instruction, leadership and communication skills.

II. Qualification Procedures

1. Students will upload and submit an electronic lesson plan and video of the student presenting that lesson to the Michigan FFA Office by September 30.
2. Students and teachers **MUST** adhere to appropriate consent policies affecting other students who may be videoed as mock students for lessons.
3. Judges will determine the top six lessons using the rubric for the contest.
4. The top six participants will be notified and invited through their program instructor.
5. The top six invited participants will present their lessons at Fall PDI (October) to three unbiased judges and a mock classroom of students.
6. Students will provide a copy of the certification form at Fall PDI.

III. Finals Event Rules

1. One high school FFA member (9-12 grades) who is presenting and is available to answer judges' questions.
2. Members may present their lessons in Official FFA Dress or business casual.
3. Guidelines of eligibility for the Agriculture Education and Outreach CDE will be consistent with other Michigan FFA Career Development Events. Individuals will be certified by respective state staff from authentic state guide forms.
4. A total of three competent and unbiased judges will be provided. They will be instructed not to take sides on the lesson(s). Professors, K-12 educators, and extension educators are recommended. The contest chair of this CDE will adequately prepare the judges before the event competition.
5. Seating of individuals for the state contest will be done by the FFA contest chairperson in a fair and impartial manner.
6. The Agriculture, Food, and Natural Resources Education CDE contest will include a simulated classroom with students that may ask questions during the course of the lesson presentation.
7. This contest will be limited to 2 participants per chapter. However, chapters over 75 members may enter 3 participants.

8. Fire, live animals, weapons (guns, bows, knives, etc.) and operational engines cannot be used due to building limitations. Electric motors may be used.

IV. Finals Event Format

1. EQUIPMENT PROVIDED – Equipment provided by the contest coordinator will include: tables and a mock classroom set of students. Other equipment is allowed, but the presenting individual must provide it.

2. The event will be divided into four parts as follows:

- A. **Lesson Planning, Student Situation Summary, and Motivation for the lesson summary (100 Points)**

- 1) **Each student must present 3 copies of the lesson plan, 10 copies of the student situation summary, and 3 copies of a brief summary on the motivation for the lesson to the contest chair prior to the start of the contest finals.** See the AFNR lesson planning, student situation summary, and motivation for the lesson summary score sheet for the breakdown of the various scoring components.

- i) The lesson plan must include the following information: A cover page, which will include, the course name, lesson title, and name of instructor. The lesson plan, will include all relevant educational materials needed to deliver the lesson. Examples may include, however are not limited to Powerpoint summaries, note outlines, and student worksheets.

- ii) The student situation summary will be given to the simulating students during the contest. This will be used as a guideline for students to determine the types of learners they will be representing. Note that these students may ask questions during the contest for clarification or a better understanding from a learner perspective.

- iii) The motivation of the lesson summary is a brief paragraph that will give the judges the reasoning behind the contestant choosing this area of instruction. This may also include a brief timeline of where the lesson falls within the unit sequence.

- B. **Preparation and Delivery for the lesson (100 Points)**

- 1) The preparation and delivery of the lesson should rely on learner centered teaching principles. Students have 10-12 minutes (See Time Limits below) to instruct the simulated classroom of students their instructional lesson. The use of teaching aids to convey this message may be appropriate. Examples of teaching aids may include, however are not limited to AV equipment, handouts, technology, laboratory equipment).

C. Student Assessment/Evaluation (50 Points)

- 1) Within the 10-12 minute teaching lesson the contestant may elect to assess students during the lesson. Assessments and/or evaluations may also take place after the lesson (within the 10-12 minutes); however, the assessments/evaluations will be directed at the simulating students in the classroom.

D. Questioning and Reflection of Lesson (50 Points)

- 1) During the 5-minute questioning session judges may ask any questions of clarification from the lesson plan, materials, or lesson delivery of the lesson. Judges will also ask the contestants to reflect on their performance of the teaching of the lesson from a learner-centered approach.

4. Time Limits: Five minutes will be allowed for setup between lessons. The lesson delivery will be 10-12 minutes in length. Students will receive a signal at 9 minutes and 11:30 minutes for the lesson delivery. A maximum of 5 minutes for questions and answers will be allotted. Questions and answers will terminate at the end of 5 minutes. Five minutes will be allowed for take down. The timekeeper should record the length of the presentation and report to the judges. The exact total minutes and seconds must be recorded showing undertime or overtime for which deductions will be made. Deductions of 2 points will be made for each minute (or major fraction, thereof) over 12:30 minutes and 4 points for each minute (or major fraction, thereof) under 10 minutes based on the timekeeper's record. To avoid penalty, a lesson delivery must be over 10 minutes and under 12 minutes and 30 seconds.) Official time does not include the time required for the individuals' introduction.
5. The lesson should be designed to be viewed by the judges and a group of students that will be simulating a classroom.
6. The lessons shall be presented to a minimum of two relevant groups that represent populations that are appropriate to the lesson being presented. An additional point will be awarded for each presentation conducted within an appropriate classroom setting (up to 2 additional). All presentations must be **certified using the appropriate AFNRE certification form.**
7. Official dress for FFA members is as follows:

Female Members: Black skirt or dress slacks, White-collared blouse, Official FFA blue scarf, Black dress shoes with a closed heel and toe, Black nylon hosiery or socks, Official FFA jacket zipped to the top and worn in the manner prescribed by the National FFA Constitution.

(The skirt is to be at least knee length, hemmed evenly across the bottom, with a slit no longer than two inches above the knee, excluding the kick pleat.)

Male Members: Black dress slacks, White-collared shirt, Official FFA tie, Black dress shoes, Black socks, Official FFA jacket zipped to the top and worn in the manner prescribed by the National FFA Constitution.

8. Gold or silver trophy awards will be given to all six finals participants at the judge's discretion. The contest winner will receive a \$2,000 scholarship to MSU as a student majoring in Agriculture, Food, and Natural Resources Education (AFNRE), and a traveling trophy that can be put on display at the home school of the winner. The names of both the winner and respective teacher will also be included on the traveling trophy.

(Revised 5/8/15)

AFNRE CDE Score Sheet

Contestant Name _____ Chapter _____ Year in School _____

SECTION 1 - Lesson Planning, Student Situation, and Motivation for Lesson Scoring (100 Points)

Lesson Components	Situation and Objectives	Content
The lesson plan provides reference to what is to be accomplished based on the previous lesson. _____/10	The situation is clearly written and includes information relevant to the students as learners. _____/10	The content of the lesson plan is appropriate for age and ability of the particular course. _____/10
The lesson provides an interest approach based on age and grade level. _____/10	The lesson and situation are age and ability appropriate. _____/10	The content is engaging and applicable to the real world. _____/10
The lesson provides student-teacher planning. _____/10	The objective(s) is clearly written with appropriate audience, behavior, and conditions. _____/10	The worksheets, printed material, demonstrations, and other learning tools facilitate learning and have clear direction. _____/10
The lesson provides a problem solution. _____/10		
		SECTION 1 SCORE _____/100

SECTION 2 - Preparation and Delivery of Lesson (100 Points)

Lesson Delivery Components	Problem Solution	Application
Previous work has been reviewed effectively. _____/10	Incorporates 10+ principles Of learning. _____/10	Appropriate domain of learning (Bloom's Taxonomy). _____/5
Relevancy of subject matter to learner-centered instruction. _____/5	Lesson is student centered. _____/10	Transferrable to real situation. _____/5
Previews what is to be learned. _____/5	Solves the problem with appropriate content. _____/10	Active and engaging. _____/5
Visual aides that complement The materials and lesson. _____/10	Problem solution provides clarity And variability with an opportunity For students to learn. _____/10	Planned out. _____/5
		Supervised and directed learning _____/5
		Inquire into/knowledge of progression _____/5
		SECTION 2 SCORE _____/100

SECTION 3 - Student Assessment/Evaluation (50 Points)

Assessment of the students is thoughtful and meaningful throughout the delivery of the lesson. _____/10
Assessments or evaluations are based on the situation as stated in the lesson plan and conveyed in the lesson. _____/10
Assessments and evaluations are appropriate for the type of learner-centered instruction that is conveyed through the lesson. _____/10
Students are given clear direction as to how they will be evaluated. _____/10
Assessments and evaluations provide clear instructions to complete and allow students adequate time _____/10
SECTION 3 SCORE _____/50

SECTION 4 - Questioning and Reflection of Lesson (50 Points)

Each judge will ask one question of the contestants. Questions will be based on the content and lesson presented. One judge will ask the contestant to reflect on their lesson and interaction with students.	
Question #1	_____/10
Question #2	_____/10
Question #3	_____/10
Reflection of the lesson	_____/20
SECTION 4 SCORE	_____/50

SECTION 5 - Certification

Did the contestant meet the certification minimum?	_____/(+5)
Additional certifications	____ 1 ____ 1 Points
SECTION 5 SCORE	_____/Up to 7

SECTION 1 SCORE	_____/100
SECTION 2 SCORE	_____/100
SECTION 3 SCORE	_____/50
SECTION 4 SCORE	_____/50
SECTION 5 SCORE	_____(Extra Points)
TOTAL SCORE	_____/300
RANK	_____ AWARD _____

JUDGES COMMENTS:

AFNRE CDE – Principles of Teaching and Learning

PRINCIPLES OF TEACHING AND LEARNING (Newcomb, McCracken, Warmbrod, & Whittington, 2004)

- Organization and Structure of Subject Matter

- Principle 1 – When subject matter to be learned possesses meaning, organization, and structure that is clear to students, learning proceeds more rapidly and is retained longer.
- Principle 2 – Readiness is a prerequisite for learning. Subject matter and learning experiences must begin where the learner is.

- Motivation

- Principle 3 – Students must be motivated to learn. Learning activities should be provided that reflect the wants, needs, interests, and aspirations of students.
- Principle 4 – Students are motivated through their involvement in setting goals and planning learning activities.
- Principle 5 – Success is a strong motivating force.
- Principle 6 – Students are motivated when they attempt tasks that fall in a range of challenge such that success is perceived to be possible but not certain.

- Reward and Reinforcement

- Principle 7 – When students have knowledge of their learning progress, performance will be superior to what it would have been without such knowledge.
- Principle 8 – Behaviors that are reinforced (rewarded) are more likely to be learned.
- Principle 9 – To be most effective, reward (reinforcement) must follow as immediately as possible the desired behavior and be clearly connected with that behavior by the student.

- Techniques of Teaching

- Principle 10 – Directed learning is more effective than undirected learning
- Principle 11 – To maximize learning, students should *inquire* into rather than be *instructed* into subject matter. Problem-oriented approaches to teaching improve learning.
- Principle 12 – Students learn what they practice.
- Principle 13 – Supervised practice that is most effective occurs in a functional educational experience.

- Transfer of Learning

- Principle 14 – Learning is most likely to be used (transferred) if it is learned in a situation as much like that in which it is to be used as possible and immediately preceding the time when it is needed.
- Principle 15 – Transfer of learning is more likely to take place when what is to be transferred is a generalization, a general rule, or a formula.
- Principle 16 – Students can learn to transfer what they have learned; teachers must teach students how to transfer learning to laboratory and real-life situation.

Newcomb, L. H., McCracken, J. D., Warmbrod, J. R., & Whittington, M. S. (2004). *Methods of Teaching Agriculture*, 3rd Edition. Pearson Education, Inc., Upper Saddle River, NJ.

AFNRE CDE – Traits of Effective Learning

TRAITS OF EFFECTIVE TEACHING (Rosenshine and Furst, 1973)

- Clarity

- Explain concepts clearly
- Plan for and demonstrate knowledge of subject matter
- Answer student questions intelligently

- Variability

- Use multiple strategies to communicate their message
- Use a variety of instructional materials
- Employ a variety of types of evaluation

- Enthusiasm

- Use movements, gestures, and voice inflections (smile, greet)
- Show genuine care for students
- Use excitement, involvement, or passion regarding the subject matter

- Students' Opportunity

- Identify their post-instructional outcomes prior to instruction
- Provide ALL students the opportunity to learn AND to SHOW they have learned
- Teach toward students' successful attainment of these outcomes during the instructional time

- Task Oriented

- Project a manner of knowing what they expect concerning learner performance
- Efficiently and effectively use class time
- Know how to accomplish the necessary activities related to the successful attainment of the performance identified

Rosenshine, B., & Furst, K. (1973). Second Handbook on Research of Teaching.

AFNRE CDE Certification Form

LESSON PRESENTATION (CERTIFICATION FORM)

The Agriculture, Food, and Natural Resources Educator must certify the lesson presentations prior to the date of competition. Each participant must present his or her lesson presentation to a relevant group or organization. Examples may include teaching classrooms, 4-H groups, governmental boards, farm related organizations, community organizations, etc. Each participant is required to present to a minimum of two distinct relevant groups, however each participant may present their lesson to an additional 1 to 2 relevant groups for additional points.

Lesson Presentation #1

(Name of Group or Organization and Setting)

(Print Name of Representative)

(Signature of Representative)

(Date of Presentation)

Lesson Presentation #2

(Name of Group or Organization and Setting)

(Print Name of Representative)

(Signature of Representative)

(Date of Presentation)

Lesson Presentation #3

(Name of Group or Organization and Setting)

(Print Name of Representative)

(Signature of Representative)

(Date of Presentation)

AFNRE CDE Lesson Plan Template

Name	
Target Grade Level	
What is the background of the class	
Subject (Course Name)	

Perspective of Lesson Plan	
(Where in the Unit Plan does the lesson take place)	

Title	
Situation	
Learning for Student Objective(s)	

Standards (CTE)	
Material and References	
Interest Approach	

Student Teacher Planning	
What is the problem (what are trying to solve through your teaching)?	
Why is it important to solve it?	
How are you going to solve it?	

Problem Solution		
Time	Summary of Content/Key Questions “The what to teach”	Teaching Technique/Procedure “The how to teach”

Application

Evaluation

AFNRE CDE Lesson Plan Example

AFNRE CDE Lesson Plan Example	
Name	Pat Q. Farmer
Target Grade Level	9 th Grade
Subject (Course Name)	Ecology

AFNRE CDE Lesson Plan Example	
Perspective of Lesson Plan (Where in the Unit Plan does the lesson take place)	This lesson is occurring prior to the opening day of Michigan's Firearm white-tailed deer season (November 13). Currently students are in unit on wildlife management of upland game species. The goal of the lesson is to provide students with an understanding of how to measure white-tailed deer antlers in an effort to better understand management goals for a hunters' property.

Title	Measuring white-tailed deer antlers
Situation	Students in this ecology class have been studying wildlife management of various upland game species of Michigan. Currently there are 22 freshmen in the class who have a range of interests in wildlife and the out-of-doors. There are 12 males and 10 females.
Learning for Student Objective(s)	Given a set of Michigan white-tailed deer antlers, students will be able to measure all the appropriate measurements as described by Commemorative Bucks of Michigan and Boone and Crockett to within 5% of the actual score of the antlers.

Standard				
Standards (CTE)	A		Explain interrelationships between natural resources and humans necessary to conduct management activities in natural environments.	
		2	Apply scientific principles of an ecosystem.	
			a	Describe the organization of life in an ecological system.
			b	Differentiate between habitats and niches.
			c	Illustrate cycles found in given ecosystems.
Material and References	<p>Boone and Crockett website - http://www.boone-crockett.org/bgRecords/ScoringYourTrophy.asp?area=bgRecords</p> <p>Commemorative Bucks of Michigan - http://buckfax.com</p> <p>10 sets of scoring tools (wooden tape measurer, 1 yard of steel cable, 3 alligator clips, metal tape measures for beam circumferences, pencils, scoring sheets)</p>			
Interest Approach	<p>Have a large set of deer antlers on the table in front of the class. Ask students if they know that there is a system for scoring antlers? Ask students if it important that there is a scoring system in place? Why? Ultimately, large white-tailed deer antlers are valuable and can be worth tens of thousands of dollars to the right person.</p>			

Student Teacher Planning	
What is the problem (what are trying to solve through your teaching)?	The importance of having a system in place for scoring antlers.
Why is it important to solve it?	A scoring system can provide students with a sense of what antler mass and length are and why they are important to hunters and providing a metric for determining quality wildlife.
How are you going to solve it?	Provide a system for scoring animals. Assist students in understanding the process of scoring antlers and helping students to score a set of antlers.

Problem Solution		
Time	Summary of Content/Key Questions “The what to teach”	Teaching Technique/Procedure “The how to teach”
10:00	How to score your deer antlers using the Boone and Crockett system.	YouTube Video - https://www.youtube.com/watch?v=CIPEda9rwrl
10:00	Demonstration of the process of how to score a set of deer antlers.	Show students the different components used to score white-tailed deer as defined on the YouTube video. Demonstrate the process using the set of deer antlers used in the interest approach. At the same time, develop a stepwise process on the board that helps students understand the steps to scoring a set of antlers.
20:00	Have students score deer antlers.	Group students into team of 3 or 4. Provide each groups with a set of materials needed to score a set of white-tailed deer antlers as well as a set of deer antlers. Using the protocol defined in the YouTube video and through the demonstration, have each group score the set of deer antlers provided.
5:00	Discuss the process of scoring deer antlers.	Discuss some of the challenges associated with scoring deer antlers. Highlight that each set of antlers is unique and that many of the score may be subjective based on decisions during the scoring process.

3:00	Importance of being able to score deer antlers	Discussion of why this process is important to understand and that a high scoring set of antlers can be valuable. Therefore, a couple of inches can mean several thousand dollars.
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Application
Have students score a set of deer antlers in a group. See above for details.

Evaluation
Have students individually score a set of antlers as part of an assessment (quiz, practicum or as part of a unit test).

AFNRE CDE Lesson Plan Scoring Rubric

	Developing	Acceptable	Exemplary	Score/Comments
<i>Preparation</i>				
<i>Title</i>	0 No Title	1 Title but doesn't denote action	2 Title denoting action	
<i>Situation</i>	1 Has one but general	2 Has detailed situation for class, but lacks situation for lesson	3 Has detailed situation for both the class and the lesson	
<i>Objectives</i>	0-2 Has performance but lacks condition and criteria	3-4 Has complete objective but isn't clear and concise	5-6 Clear, concise, complete performance objective	
<i>Standards</i>	0 No standards	1 AFNRE standard but should have academic	2 All appropriate standards (denoted "not applicable" if necessary)	
<i>Materials/References</i>	0 Has some listed but lacks detail and/or quantities	1 Lists all appropriate materials and/or references but missing some detail/quantities	2 Lists all appropriate materials/references with necessary details/quantities	
<i>Interest Approach</i>	0-2 Has some type of approach but doesn't address the wants, needs and aspirations of students	3-4 Creates a felt need and provides a clear lead into the lesson	5-6 Creates a felt need based on a real life problem	

	Developing	Acceptable	Exemplary	Score/Comments
<i>Student/Teacher Planning</i>	0 No student teacher planning	2-3 Two of the three parts to student/teacher planning	4 All parts completed in student/teacher planning	
<i>Presentation</i>				
<i>Problem Solution</i>	0-10 - Incorporates less than 5 principles of learning - Partially met standards or didn't meet them - Exclusively teacher centered - Somewhat clear	11-20 - Incorporates at least 5 principles of learning - Standards met - Appropriate content and teaching techniques - Lesson provides clarity and some variability	21-30 - Incorporates 10+ principles of learning - Student centered - Standards met - Solves the problem with appropriate content and teaching techniques (includes a timeline) - Problem solution provides clarity and variability with an opportunity for students to learn	
<i>Application</i>	0-4 - Same domain but different level - Not planned out - Not directed learning - Not transferrable to real situation	5-8 - Same domain and level - Planned out - Somewhat transferrable to real situation - Supervised and directed learning - Knowledge of progress	9-12 - Same domain and level - Transferrable to real situation - Active and engaging - Planned out - Supervised and directed learning - Inquire into; knowledge of progress	

	Developing	Acceptable	Exemplary	Score/Comments
<i>Evaluation</i>	0-3 - Same domain but different level	4-6 - Same domain and level - Criteria specified	7-8 - Same domain and level - Related to application - Criteria specified - Evaluates the objective - Adaptive to student learning style	
<i>Total Points</i>				

AFNRE CDE Resources

Mager, R. F. (1997). *Preparing Instructional Objectives*, 3rd Edition. CEP Press, Atlanta, GA.

Newcomb, L. H., McCracken, J. D., Warmbrod, J. R., & Whittington, M. S. (2003). *Methods of Teaching Agriculture*, 3rd Edition. Pearson Education Inc., Upper Saddle River, NJ.

Rosenshine B., & Furst, K. (1973). *Second Handbook on Research of Teaching*.