

Agriscience

Rule years 2025–2028 · Revision 1 · Published October 9, 2026

0. General Rules & Eligibility

Career Development Events are governed by the NAEA CDE Committee. All events follow [CDE General Rules and Eligibility](#).

Qualification for this event

District qualification	All schools (open enrollment)
Students per team	4
Grades	9–10 (first-year agricultural education students)
National qualifying event?	No
Timeframe	FFA Convention
Host	UNL ALEC Division
Event Superintendent	Dr. Nathan Conner

1. Overview

The purpose of the Nebraska Agriscience Career Development Event is to develop a foundation of knowledge and skills that will prepare first-year students (9th or 10th grade) to continue in agricultural education coursework and enter agricultural careers within the natural resources, animal science, and/or plant science systems career fields.

Agricultural Education courses that align with the Agriscience CDE include: Introduction to Agriculture, Food, and Natural Resources.

Objectives

Team Activity Objectives

- Natural Resources
 - Demonstrate adherence to protective equipment requirements when using various AFNR tools and equipment.
 - Identify and label the external organs of a perch.
 - Describe the functions of the external organs of a perch.
 - Utilize dissection tools to safely dissect a perch.
 - Identify and label the internal organs of the perch.
 - Describe the functions of internal organs of a perch.
- Animal Science
 - Demonstrate adherence to protective equipment requirements when using various AFNR tools and equipment.
 - Utilize dissection tools to safely dissect a fetal pig.
 - Identify and label the external anatomical features of a fetal pig.
 - Identify and label the internal anatomical features of a fetal pig.

- Describe the functions of the internal organs of a fetal pig
- Distinguish the anatomical regions of a fetal pig.

Individual Foundational SAE Portfolio Objectives

- Research an agricultural career and describe the following aspects in a written report:
 - Students will be able to explore careers in the AFNR area.
 - Students will be able to complete an educational plan.
 - Students will be able to identify career readiness skills they possess and identify skills to improve upon.
 - Students will be able to complete an educational finance projection of post-secondary education and training.
 - Students will identify workplace safety precautions.
 - Students will understand the importance of agricultural education and the role it plays in agriculture literacy.
- Use proper grammar, sentence structure, and semantics in writing a report.

Individual Written Examination Objectives

- Natural Resources:
 - Identify biological requirements of living organisms in different living environments.
 - Determine the relationship between water and soil in our environments.
 - Determine relationships between forests and the resources they produce.
 - Determine relationships between wildlife and their surrounding environment.
 - Understand the basic flow of energy through an ecosystem.
- Animal Science:
 - Determine the nutritional requirements of animals and how to satisfy them.
 - Identify specific management practices that may be needed to maintain an animal's health.
 - Understand the basics of genetics and breeding.
 - Identify specific management practices and care for small companion animals.
 - Understand basic approved practices in the care and management of dairy and livestock animals.
 - Identify elements and trends in the food science industry.
- Agriscience Units:
 - Identify the basic living requirements for life.
 - Identify the most influential turning points in the history of agriculture.
 - Examine the elements of biotechnology.
 - Describe some of the applications of biotechnology in agriculture.
 - Determine the major pest groups and some elements of effective pest management techniques for the different types.
 - Determine the nature of chemicals used to control pests and how to use those chemicals safely.
 - Determine the major strategies and procedures used for marketing agricultural commodities to maximize profits.
 - Identify the importance of agriculture for the economy.
 - Describe the economic principles used in agribusiness management decision making.
 - Determine the different considerations necessary in planning and operating an entrepreneurship business.
 - Identify major parts of a plant and state the functions.
 - Identify the many purposes for different plants.

- Describe a plant's relationship with soil, air, water and essential nutrients.
- Determine the appropriate management practices for plant growing factors.
- Determine the methods used by plants to reproduce sexually and asexually.

2. Eligibility & Team

Open to students in Grades 9–10 (first-year agricultural education students). Teams are 4 students. All schools (open enrollment) advance. This event is not national-qualifying.

- Students may only participate in the Agriscience CDE for one year.
- Each school may register one (1) team. A team is defined as having four (4) first-year agricultural education students.
- Teams with fewer than four individuals may complete the team activity but will not be eligible to receive all team points or be eligible for team awards.

3. What to Bring

Attire

- Official FFA Dress or Professional Attire, such as dress pants and a collared shirt. Inappropriate dress, as determined by the event superintendent, may result in up to a 10% point deduction on the individual exam portion of the event.
- Lab coats are recommended but optional.

Supplies

ZERO TOLERANCE POLICY: Students who **do not** have, bring, or wear required Personal Protective Equipment **will not be allowed** to participate in the team practicum portion of the event, and a 75-point (25%) deduction from the team activity score will be assessed. PPE **will not be** provided under any circumstances.

- Each student must bring to the competition:
 - Students must provide splash-proof safety goggles and wear them properly during designated times, as instructed during the team practicum.
 - Students must bring two #2 pencils for the individual exam and the team practicum.
- Each student will be provided the following during the CDE, as required for the practicum, and must wear and/or properly use the following when instructed:
 - Non-Latex Gloves
 - Dissection Kits
 - Cleaning Supplies

4. Event Format

Timing

- A. Because of the number of participants in this event, the CDE schedule includes multiple sections based on a school's Ag Education District. See the [CDE schedule](#) on the Nebraska CDEs website for specific times.

B. Teams must be present for the following:

- I. Individual Exam - All participating students will take the exam at the same time. Students will be given 50 minutes to complete the exam.
- II. Team Practicum Rotation - Teams must attend at the designated time based on their Agricultural Education District. Each rotation will be one-hour in length and will involve a team practicum. Each team will have 45 minutes to complete the practicum with a 15-minute period for rotation for lab clean up, set up, and team instructions.

C. Foundational SAE Portfolios must be submitted by the due date and using the link identified on the [Agriscience page on the Nebraska CDEs website](#).

Format

This event **has no annual theme**. Each year, students will conduct dissections in **both** areas listed below.

- Natural Resources (Perch Dissection) - Units: 7, 8, 9, 10, 11, 12, 18, 19, & 20
- Animal Science (Fetal Pig Dissection) - Units: 26, 27, & 28

Event Components

A. Team Activity

- I. The team activity practicum will include a perch dissection and a fetal pig dissection. Students should consult the Agriscience Lab manual and use the study resources listed in Section 6 of these rules.
- II. Teams will be provided a worksheet to complete the team activity, and these will be collected at the conclusion of the team activity.
- III. All participants will be expected to work collaboratively, cooperatively, and equally to complete the team activity.

B. Individual Foundational SAE Portfolio

- I. The Foundational SAE Portfolio will be completed and submitted prior to the state event.
- II. Students must select a career with a strong connection to agriculture and will receive a point deduction without a detailed description of its connection to agriculture. Follow the Foundational SAE Portfolio Rubric.
- III. Teachers must upload the Foundational SAE Portfolios using the link provided and by the date posted on the [Agriscience page on the Nebraska CDEs website](#) so they can be processed and evaluated before the on-campus activities.

C. Individual written Examination

- I. Fifty (50) questions in a multiple-choice format.
 1. Fifteen (15) questions will cover core material from the Natural Resources and Animal Science units.
 2. Thirty-five (35) questions will come from within the Agriscience (6th edition) textbook. Units: 1, 2, 3, 4, 13, 14, 15, 16, 17, 21, 22, 34, 35, & 36 (Plant and other Agriscience units).
- II. Material covered on the examination will be taken from the Delmar/Cengage Agriscience: Fundamentals and Applications (6th Edition).
- III. All four students will complete the examination on campus, based on the [CDE schedule](#) on the Nebraska CDEs website.
- IV. Students will have 50 minutes to complete the examination, and team members will work individually.

5. Scoring & Tiebreakers

Individual Scoring

Component	Detail	Points
Written Examination	50 questions × 4 points	200
Foundational SAE Portfolio	100 Points, scored by rubric	100
Grand total		300

Individual Tiebreakers

Individual tiebreakers are resolved in this order:

- A. In situations involving ties with individuals, questions from the examination scores will be used as the first criteria (Question x, Question y, Question z). The superintendent will randomly select the questions.

Team Scoring

Component	Detail	Points
Sum of Individual Scores	4 Students × 300 Points	1,200
Team Activity	Two dissections, scored by rubric	300
Grand total		1,500

Team Tiebreakers

Team tiebreakers are resolved in the order listed below.

- A. In situations involving team ties, we will use the combined individual scores from each team involved in the tie.

6. Study Resources

Approved study resources

- [UNL CDE Study Materials Folder \(OneDrive\)](#) — Practice materials and examples for this CDE.

Dissection Team Activity

- **Agriscience Fundamentals and Applications corresponding Lab Manual (ISBN: 9781133686897)**
- [2024 Agriscience Fetal Pig Dissection Guide](#) — Step-by-step fetal pig dissection guide for the Agriscience practicum.
- [Agriscience Perch Anatomy Identification List](#) — Perch anatomy structures for the dissection identification.
- [Fetal Pig Dissection Video](#) — YouTube walkthrough of a fetal pig dissection.
- [Perch Dissection Video](#) — YouTube walkthrough of a perch dissection.

Foundational SAE Portfolio

- [**Foundational SAE Template**](#) — Google Docs template for building the Foundational SAE portfolio (make a copy)
- [**Example Foundational SAE Portfolio**](#) — Google Docs example of a completed Foundational SAE portfolio for reference
- [**FFA AgExplorer**](#) — FFA AgExplorer career-exploration site; research agricultural careers for the Foundational SAE portfolio
- [**CareerOneStop – GetMyFuture**](#) — U.S. Dept. of Labor youth career and education explorer; for Foundational SAE portfolio research
- [**My Next Move**](#) — U.S. Dept. of Labor career explorer with interest assessment; for Foundational SAE portfolio research

Exam

- **Agriscience Fundamentals and Applications, 6th Edition by L. DeVere Burton (ISBN-10: 1133686885)**
- [**Test bank**](#) — Cengage publisher site; source for the written-exam test bank
- **Test questions are generated from the Agriscience Fundamentals and Applications, 6th Edition test bank, thus no past exams are included.**

7. After the Event

There is no post-CDE debriefing offered.

An online Professional Development Webinar video will be shared prior to the event that covers the team practicum portion and will be linked on the [Agriscience page on the Nebraska CDEs website](#).

List of Appendices

- [Appendix A: Foundational SAE Portfolio Rubric](#)

Appendix A: Foundational SAE Portfolio Rubric

NAME: _____ SCHOOL: _____

Component	Criteria	Completion Status	Suggestions:	Points Earned:
Part A: Career Exploration - Completion	Completed 2 career interest surveys.			/4
Part A: Career Exp - Completion	Completed 4 summaries on AFNR careers.			/4
Part A: Career Exp - Reflection	Reflected on the interest surveys.			/8
Part A: Career Exp - Completion	Completed the list of career focus areas and connection to CDE/LDE's.			/4
Part A: Career Exp - Reflection	Reflected on list and activities connected to career focus area.			/8
Part B: Ed Plan - Completion	Planned Ag & academic core classes schedule.			/4
Part B: Ed Plan - Reflection	Reflected on the creation of your educational plan.			/8
Part C: Empl Skills - Completion	Completed 3 current employability skills.			/4
Part C: Empl Skills - Reflection	Reflected on 3 current employability skills and identified an additional 1 skill they needed to improve upon and how they would do so.			/10
Part D: Finances - Completion	Completed the finance table.			/4
Part D: Finances - Reflection	Reflected on plans to finance their education/training.			/8
Part E: Workplace Safety - Completion	Complete the google slide template with description of PPE equipment and source of picture.			/4
Part E: Workplace Safety - Reflection	Reflected to explain how the safety precautions would benefit them in your future career.			/8
Part F: Agricultural Literacy - Reflection	Completed reflection on the classroom lesson/project and how it aligns to future career goals.			/10
Grammar and spelling accuracy.	Document submitted was spelling and grammar error free.			/12
			Total	/100

Subcommittee

Standing subcommittee for this event

Name	School / Organization	Role
Payden Woodruff	Palmer	Chair
Dr. Nathan Conner	UNL — ALEC	Superintendent
Dr. Matt Kreifels	UNL	Exec liaison
Amy Kohtz	EMF	Member
Kurt VanDeWalle	Fillmore Central	Member
Taylor Wilton-Cooper	Omaha Bryan	Member

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