

Agriscience

Nebraska Career Development Event
Handbook and Rules for 2025-2029

1. PURPOSE

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.

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

2. OBJECTIVES

- a. Team Activity Objectives
 - I. Natural Resources
 - i. Demonstrate adherence to protective equipment requirements when using various AFNR tools and equipment.
 - ii. Identify and label the external organs of a perch.
 - iii. Describe the functions of the external organs of a perch.
 - iv. Utilize dissection tools to safely dissect a perch.
 - v. Identify and label the internal organs of the perch.
 - vi. Describe the functions of internal organs of a perch.
 - II. Animal Science
 - i. Demonstrate adherence to protective equipment requirements when using various AFNR tools and equipment.
 - ii. Utilize dissection tools to safely dissect a fetal pig.
 - iii. Identify and label the external anatomical features of a fetal pig.
 - iv. Identify and label the internal anatomical features of a fetal pig.
 - v. Describe the functions of the internal organs of a fetal pig.
 - vi. Distinguish the anatomical regions of a fetal pig.
- b. Individual Foundational SAE Portfolio Objectives
 - I. Research an agricultural career and describe the following aspects in a written report:
 - i. Students will be able to explore careers in the AFNR area.
 - ii. Students will be able to complete an educational plan.
 - iii. Students will be able to identify career readiness skills they possess and identify skills to improve upon.
 - iv. Students will be able to complete an educational finance projection of post secondary education and training.
 - v. Students will identify workplace safety precautions.
 - vi. Students will understand the importance of agricultural education and the role it plays in agriculture literacy.
 - II. Use proper grammar, sentence structure and semantics in writing a report.
- c. Individual Written Examination Objectives
 - I. Natural Resources:
 - i. Identify biological requirements of living organisms in different living environments.
 - ii. Determine the relationship between water and soil in our environments.
 - iii. Determine relationships between forests and the resources they produce.
 - iv. Determine relationships between wildlife and their surrounding environment.
 - v. Understand the basic flow of energy through an ecosystem.
 - II. Animal Science:

- i. Determine the nutritional requirements of animals and how to satisfy them.
 - ii. Identify specific management practices that may be needed to maintain an animal's health.
 - iii. Understand the basics of genetics and breeding.
 - iv. Identify specific management practices and care for small companion animals.
 - v. Understand basic approved practices in the care and management of dairy and livestock animals.
 - vi. Identify elements and trends in the food science industry.
- III. Agriscience Units:
- i. Identify the basic living requirements for life.
 - ii. Identify the most influential turning points in the history of agriculture.
 - iii. Examine the elements of biotechnology.
 - iv. Describe some of the applications of biotechnology in agriculture.
 - v. Determine the major pest groups and some elements of effective pest management techniques for the different types.
 - vi. Determine the nature of chemicals used to control pests and how to use those chemicals safely.
 - vii. Determine the major strategies and procedures used for marketing agricultural commodities to maximize profits.
 - viii. Identify the importance of agriculture for the economy.
 - ix. Describe the economic principles used in agribusiness management decision making.
 - x. Determine the different considerations necessary in planning and operating an entrepreneurship business.
 - xi. Identify major parts of a plant and state the functions.
 - xii. Identify the many purposes for different plants.
 - xiii. Describe a plant's relationship with soil, air, water and essential nutrients.
 - xiv. Determine the appropriate management practices for plant growing factors.
 - xv. Determine the methods used by plants to reproduce sexually and asexually.

3. ELIGIBILITY

- a. Any first-year agricultural education student may participate as long as they are in the 9th or 10th grade at the time of the event
- b. Students may only participate in the Agriscience CDE for one year.
- c. This is an open enrollment event at the state level.
- d. Each school may register one (1) team. A team is defined as having four (4) first year agricultural education students.
- e. Teams consisting of less than four individuals will be allowed to complete the team activity but will not be eligible to receive all team points or be eligible for team awards.

4. REQUIRED ATTIRE

- a. 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.
- b. Lab coats are recommended but optional.

5. REQUIRED SUPPLIES AND EQUIPMENT

- a. 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.
 - I. Each student must bring to the competition:
 - i. Splash-proof safety goggles shall be provided by the student and must be properly worn during designated times when instructed during the team practicum.
 - II. 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:
 - i. Non-Latex Gloves
 - ii. Dissection Kits
 - iii. Cleaning Supplies
- b. Two #2 pencils per student are required for the individual exam and the team practicum.

6. EVENT SCHEDULE

- a. Due to the number of participants in this event, there are multiple sections identified on the CDE schedule based on a school's FFA District. See the CDE schedule on the Nebraska CDE website for specific times.
- b. Teams must be present for the following:
 1. Individual Exam - All participating students will take the exam at the same time. Students will be given 50 minutes to complete the exam.
 2. 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 Nebraska CDE website.

7. ANNUAL THEME

- a. This event does not have an annual theme. Each year students will conduct dissections in each area listed below.
 1. Natural Resources (Perch Dissection) - Units: 7, 8, 9, 10, 11, 12, 18, 19, & 20
 2. Animal Science (Fetal Pig Dissection) - Units: 26, 27, & 28

8. EVENT FORMAT

- a. Team Activity
 - a. The team activity practicum will include a perch dissection and a fetal pig dissection. The students should have received instruction related to the laboratory activities found on the Agriscience CDE website as well as consulting the Agriscience Lab manual.
 - b. Teams will be provided a worksheet to complete the team activity and these will be collected at the conclusion of the team activity.
 - c. All participants will be expected to work collaboratively, cooperatively and equally to complete the team activity.
- b. Individual Foundational SAE Portfolio
 - a. The [Foundational SAE Portfolio](#) will be completed and submitted prior the state event.
 - b. 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.
 - c. Teachers must upload the Foundational SAE Portfolios using the link provided and by the date posted on the CDE website so that they can be processed and evaluated prior to the on-campus activities.
- c. Individual written Examination
 - a. Fifty (50) questions in a multiple-choice format.
 - i. Fifteen (15) questions will cover core material, which will originate from the Natural Resources and Animal Science units.
 - ii. 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).
 - b. Material covered on the examination will be taken from the Delmar/Cengage Agriscience: Fundamentals and Applications (6th Edition).
 - c. All four students will complete the examination on campus, based on the schedule posted on the CDE website.
 - d. Fifty-minutes will be allowed for individuals to complete the examination and team members will work individually.

9. SCORING

Event	Individual Points
Written Examination	200
Foundational SAE Portfolio	100
TOTAL	300

Event	Team Points
Total of 4 Individual Scores (4 x 300)	1200
Team Activity	300
TOTAL	1500

10. TIEBREAKER

- a. Individual
 - I. 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.
- b. Team
 - I. In situations involving team ties, we will use the combined individual scores from each team involved in the tie.

11. RESOURCE MATERIALS

- a. Team Activity
 - a. Agriscience Fundamentals and Applications corresponding Lab Manual (ISBN: 9781133686897)
 - b. Professional Development Webinar videos are linked on the CDE webpage.
- b. Foundational SAE Portfolio:
 - a. Foundational SAE Template <https://go.unl.edu/foundationalsaepportfolio>
 - b. Example Foundational SAE Portfolio https://go.unl.edu/foundationalsaepportfolio_ex
 - c. <https://www.agexplorer.com>
 - d. <https://www.careeronestop.org/GetMyFuture/default.aspx?frd=true>
 - e. <https://www.mynextmove.org>

- c. Written Exam
 - a. Agriscience Fundamentals and Applications, 6th Edition by L. DeVere Burton (ISBN-10: 1133686885)
 - b. Test bank www.cengage.com
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12. PAST EXAMS

- a. Test questions are generated from the Agriscience Fundamentals and Applications, 6th Edition test bank, thus no past exams are included.
 - b. [Example Foundational SAE Portfolio](#)
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13. POST-CDE DEBRIEFING OPPORTUNITY

- a. There is no post-CDE debriefing offered.
- b. 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 CDE website.

Appendix

Appendix 1: Foundational SAE Portfolio Rubric

NAME: _____ SCHOOL: _____

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