

VETERINARY SCIENCE

4 Member Team

IMPORTANT NOTE

Please thoroughly read the General CDE Rules Section at the beginning of this handbook for complete rules and procedures that are relevant to State FFA Career Development Events.

I. PURPOSE

- A. The purpose of the Veterinary Science Career Development Event (CDE) is to promote college and career readiness by offering participants opportunities to cultivate technical knowledge and exhibit practical skills essential to the veterinary science profession.

II. OBJECTIVES

- A. Participants will exhibit professional ethics, effective decision-making, clear communication, and problem-solving skills relevant to veterinary science practices.
- B. Participants will demonstrate technical proficiency in both small and large animal care, focusing on:
 1. **Medical Terminology**
 2. **Anatomy and Physiology**
 3. **Species Identification**
 4. **Clinical Procedures**
 5. **Health and Safety Protocols**

III. EVENT RULES

- A. Team Composition
 1. Each school may enter one team, consisting of up to four members, in this event.
 2. To qualify for nationals, a team must have four members present and competing on the day of the contest. Teams with only three members may compete but will not qualify for nationals.
 3. The total team score will be calculated based on all members' accrued points.
 4. Teams with two or fewer members will not be scored for individual or team placement and are ineligible to qualify for nationals.
- B. Contestant Participation
 1. All contestants must participate in both practicum activities (refer to practicum rules for detailed information).
- C. Dress Code
 1. Contestants must wear clothing appropriate for handling and interacting with animals, emphasizing both professionalism and safety.
 2. Required attire includes long pants and closed-toe shoes
 - a. Examples:
 - i. Jeans or khakis paired with a scrub top and boots.
 - ii. Scrub tops and pants paired with tennis shoes.
- D. Personal Conduct
 1. Talking or discussion during the contest is not permitted.
 2. Cheating of any kind is strictly prohibited.

- a. Participants caught cheating, talking, or using unauthorized technology will have a red “X” marked on their scantron. While they may continue for experience, their scantron will not be graded, and their score will be recorded as 0.
- E. Personal Devices
1. Cell phones and personal devices are prohibited during the contest.
 2. Devices will be collected and stored in the team folder assigned to the participants' school.
 3. If a student needs to contact a teacher or parent, they may temporarily retrieve their device from the check-in desk to make contact.
- F. Equipment
1. Provided by contestants
 - a. #2 pencils
 - b. Non-programable calculator
 - c. Clipboard
 2. Provided by contest superintendent
 - a. Official scanform
 - b. Blank scratch paper
 - c. ID reference sheet
 - d. Unit conversion sheets
- Note:** Any items brought by students, including calculators and clipboards, must be free of stickers, writing, conversion sheets, or any alterations. Students found to have altered their equipment will not be allowed to use it during the contest.

IV. EVENT SCHEDULE

- A. The event will include multiple sections, with students rotating through four main stations and a designated rest station. Time limits for each section are strictly enforced to ensure a fair competition. Each station will have additional time allocated for instructions and material distribution. During the rest station, participants may use the bathroom but are prohibited from talking. Violations of this rule may result in dismissal from the contest.
- B. Time limits for each section are as follows:
1. Written Exam – 40 minutes
 2. Math Application – 20 minutes
 3. Identification – 20 minutes
 4. Practicum – 6 minutes per practicum (two practicums per contestant)
- Contestants will complete all activities individually within their allotted time. The competition is designed to test their knowledge and skills across various aspects of veterinary science.

V. EVENT COMPONENTS

- A. Written Exam (150 points)
1. The written exam is designed to assess participants' comprehensive knowledge of the veterinary science field. It consists of 50 objective, multiple-choice questions, including scenario-based questions. Each question is worth three points. Participants will have 40 minutes to complete the written exam.

2. Topics for the exam may include:
 - a. Animal Science Principles
 - i. Reproduction
 - ii. Genetics
 - iii. Welfare
 - iv. Behavior
 - v. Anatomy
 - vi. Physiology
 - vii. Nutrition
 - b. Veterinary Science Principles
 - i. Disease Etiology
 - ii. Epidemiology
 - iii. Pathogenesis
 - iv. Medical Terminology
 - v. Clinical Application
 - c. Clinic Management
 - i. Medical Records
 - ii. Regulations (e.g., Federal OSHA, MSDS)
 - iii. Patient Management
 - iv. Facility Management
- B. Math Application (100 Points)
 1. Participants will solve various math problems related to veterinary science. Participants will have 20 minutes complete the exam and are permitted to use a non-programmable calculator. The number of questions will vary depending on the activity assigned and may include:
 - a. Unit conversions (including the metric system)
 - b. Dose calculations
 - c. Dilutions
 - d. Cost calculations
 - e. InvoicesNote: Unit conversion sheets will be provided to each participant during the math application exam.
- C. Identification (135 points)
 1. Participants will identify equipment, parasites, anatomy, and breeds/species. Identification may include photos, live specimens, and actual equipment. ID sheets will be provided to participants at the start of this session.
 2. The identification activity will last a total of 20 minutes. During this time, students will rotate through individual stations, spending approximately 30 seconds at each. After all participants have completed the initial rotation, there will be a brief review period where students can revisit certain stations they did not complete or mark.
 3. The review period will be limited, and students will NOT have the opportunity to revisit every station.
 4. To prepare effectively, students should practice completing identification within a 30-second timeframe.
 5. The identification activity will include a total of 45 items (each worth 3 points) in

the following categories:

- a. Equipment: Identify various tools and equipment using actual items or photos.
- b. Parasites: Identify parasites using photos or actual specimens, which may involve microscope usage (microscopes will be provided).
- c. Anatomy: Identify organs, bones, and anatomical structures across animal species.
- d. Breeds: Identify breeds of small and large animals using photos.

D. Practicums (50 points each)

1. Each participant will complete two practicums, one focusing on ‘Handling and Restraint’ and the other on ‘Clinical Procedures’, worth 50 points each. The specific practicum will be announced upon arrival at the practicum activity.
2. Scoring for practicums
 - a. Each team member will complete two practicums: one focused on handling and restraint and the other on clinical procedures. Each practicum is worth a maximum of 50 points, for a total of 100 points per participant. The practicums are designed to evaluate both the participant's ability to perform the required skill and their ability to clearly articulate each step listed on the practicum rubric sheet.
 - b. Key scoring components
 - i. Clarity of explanation
 - Participants must clearly verbalize each step of the practicum rubric while performing the skill.
 - Judges will evaluate how accurately and clearly the steps are described, ensuring the participant demonstrates a thorough understanding of the procedure.
 - ii. Proficiency in Skill Execution:
 - Participants are assessed on their ability to correctly and safely perform the skill, adhering to the rubric requirements.
 - Proper handling techniques, safety measures, and attention to detail are critical to achieving a high score.
3. Practicum process
 - a. Participants will have six minutes to complete each practicum.
 - b. Judges will observe and score participants in real-time, using the national FFA practicum rubric.
 - c. Practicum assignments are not revealed until participants enter the exam room.
4. Scoring breakdown
 - a. Articulation of Steps: Participants must vocalize each step as they complete it, contributing significantly to their score. Missing or unclear verbalization of steps will result in point deductions.
 - b. Skill Proficiency: Participants must demonstrate competency and adherence to the rubric's standards. Errors in execution, safety breaches, or incomplete tasks will lead to point reductions.

Participants should thoroughly review the practicum rubrics and practice both performing and explaining the required skills to ensure they are prepared for both components of the scoring criteria. The practicum rubrics can be found on the National FFA Veterinary Science CDE website under “CDE Handbook” then

“2023 Practicum Rubrics & Format” folder and in the appendix of this manual.

5. Handling and restraint practicums
Participants may be asked to perform any two of the following:
 - a. Applying a Cat Muzzle
 - b. Applying a Lead Chain on a Horse Under the Chin
 - c. Applying Elizabethan Collar
 - d. Applying Nylon Dog Muzzle
 - e. Haltering a Horse
 - f. Haltering Ruminants
 - g. Lifting the Hind Foot of a Horse
 - h. Placing a Tail Tie
 - i. Removing a Cat from a Cage and Wrap in a Fear-Reduced Manner
 - j. Removing Dog from Floor Level Cage to Restrain for Lateral Saphenous Venipuncture
 - k. Restraint of a Piglet
 - l. Restraint of a Rabbit
 - m. Restraint of the Cat for Cephalic IV Catheter Placement
 - n. Restraint of the Cat for Jugular Venipuncture
 - o. Restraint of the Cat in Lateral Recumbency for Femoral Venipuncture
 - p. Restraint of Dog for Cephalic Venipuncture
 - q. Restraint of the Small Dog for Jugular Venipuncture
 - r. Snare Restraint of the Pig
6. Clinical procedures practicums
Participants may be asked to perform any two of the following:
 - a. Administering Oral Tablet/Capsule
 - b. Administering Aural Medication
 - c. Administering an Intramuscular Injection
 - d. Administering Ophthalmic Medication
 - e. Administering a Subcutaneous Injection
 - f. Applying an Electronic Ear Tag to Livestock
 - g. Applying a Standing Wrap on a Horse
 - h. Bandage Removal
 - i. Cystocentesis in Companion Animals
 - j. Fecal Flotation with Fecalyzer
 - k. Filling a Syringe for Injection
 - l. Fine Needle Biopsy- Aspirate
 - m. Opening a Surgery Pack
 - n. Prepare a Surgical Pack for Sterilization
 - o. Prescription Filling
 - p. Removal of Sutures
 - q. Surgical Site Preparation
 - r. Swabbing a Lesion
 - s. Using a Microscope- Dry
 - t. Using a Microscope- Oil Immersion

VI. SCORING

	Individual Points	Team Points
Written Exam	150	600
Math Application	100	400
Identification	135	540
Practicum	<u>100</u>	<u>400</u>
Total	485	1,940

VII. TIEBREAKERS

Tiebreakers will be settled in the following order:

- A. The participant or team with the highest combined practicum score will be ranked higher.
- B. If a tie remains, the participant or team with the higher written exam score will be ranked higher.
- C. If a tie persists after applying these criteria, contest officials may use further methods as necessary to determine rankings.

VIII. REFERENCES

- Veterinary Science: Preparatory Training for the Veterinary Assistant by Floron C. Faries, Jr., DVM, MS.
- Written Exam
 - https://www.ffa.org/resource_tag/cde-handbook-q-qnd-a-q-a-previous-tests-practicum-veterinary-science-cde-handbook/
 - Veterinary Science CDE Quizlets
- Math Application
 - Veterinary Science CDE Math Application Quizlets
 - Previous Exams- National FFA Veterinary Science CDE website
- Species Identification
 - <https://www.akc.org/dog-breeds/>
 - <https://cfa.org/breeds/>
 - <https://breeds.okstate.edu/>
- Team Practicum
 - <https://vetmed.tamu.edu/ffa-veterinary-science/veterinary-ffa-practicum/>

IX. SUPPLEMENTAL MATERIALS AND FORMS

- Scoring rubrics
- ID List Veterinary Science
- Scanform: Universal H