ND FFA Association

SMALL ANIMAL CARE

CDE Handbook

Purpose

This career development event is designed to assess student knowledge, application, analytical, and evaluation abilities in the area of small animal care, veterinary skills, and pet store management.

Objectives

Participants will demonstrate professional ethics, decision-making, business competency, communication and problem-solving skills.
Participants will demonstrate technical competency with small and large animals in the areas of:

- •   Anatomy and physiology.
- •   Clinical procedures.
- •   Identification.
- •   Health and safety.
- •   Medical terminology.
- •   Veterinary math applications.

Rules

a. Each team may be comprised of three to five members.

b. Each team member will take part in the first three portions of the event individually.

c. The top three scores among the team members will constitute the team score.

d. Team members will work together for the team problem-solving portion of the event and submit one copy of their answer sheet. This score will be added to the team score to determine team rankings.

e. The following timelines will be enforced:

1. Written Test	40 minutes
2. Math Practicum	20 minutes
3. Identification	50 minutes
4. Anatomy Practicum	20 minutes
5. Team Activity	20 minutes

f.   Members are to wear Official FFA Dress for this event.

Awards

a. Individual

1.   Individual scores will be tabulated and broken into gold, silver, and bronze award areas.
2.   Individual ties will not be broken
3.   The high individual receives the "baby bison" trophy and a $250 stipend.

b. Team

1.   Team scores will be the sums of the scores of the top three (3) team members. They will be broken into gold, silver, and bronze.
2.   The high team will receive the traveling trophy, travel stipends from ND FFA Foundation and be eligible to represent North Dakota in the National Career Development Event.
3.   Team Tie Breakers: 1st - Breed ID, 2nd – Written Test.

Format

a. Written Test

1.   The written test will be comprised of 50 multiple-choice questions. Each question will be worth four points.
2.   Universal C Scantron will be used.
3.   The six topic areas that will be covered on the written test:
    - Anatomy and Physiology   20%
    - Nutrition   20%
    - Diseases and Parasites   20%
    - Breeding and Genetics   10%
    - Breeds and Grooming   10%
    - Housing and Management   10%
    - Veterinary Terminology   10%

b. Math Practicum

1. There will be 5 math-based questions worth 10 points each.
2. Participants will have 20 minutes to complete the entire math application practicum.
3. Questions may include conversions, dose calculations, dilutions, cost calculations and invoices.
4. Examples of these questions can be found in the National FFA Veterinary Science Math Practicums which can be accessed on FFA.org.

c. Identification

1. The identification portion of this event will be comprised of 60 questions.
2. Each question will be worth four points.
3. Power point slides will be utilized for this portion of the contest, in the interest of saving labor and materials in its preparation, and in contributing to smooth operation of the event.
4. Contestants will identify animals, parasites, and veterinary equipment. They will be broken down with the following numbers per area:

   Dogs—15, Cats—10, Birds—5, Fish—10, Parasites—5, Rabbits—5, Equipment – 10

d. Anatomy Practicums

1. This portion of the contest will follow a theme, which will rotate from year to year.

Rotation	Year	Anatomical Diagram
1	2026	Reproductive Systems Diagrams
		Respiration and Vascular Systems Diagram
		**All on Mammals Only

2	2027	Skeletal Diagrams
		Digestive/Excretory System Diagrams
		Reproductive Systems Diagrams
		**On Avian and Reptile animals only
3.	2028	Skeletal Diagrams
		Digestive/Excretory Systems Diagrams
		Nervous System Diagrams
		**All on Mammals Only

e. Team Problem

1. This portion of the event will consist of mathematical problems that will help build contestant awareness of pet related products.
2. Problems may also deal with management, pet nutrition, and health issues.
3. The following is the rotation for team problems:

Rotation	Year	Topics
1	2026	Sales Problems
		Kennel Management Problems
2	2027	Nutritional Problems
		Health Issues
3	2028	Pet Food Problems
		Fish Aquarium Related Problems

Resources

The following is a list of possible resources that will assist you in finding information that pertains to the Small Animal Care Career Development Event:

a. Small Animal Care and Management-A Delmar Text, by Dean M. Warren
b. National FFA Veterinary Science CDE Written Exams and Math Practicum Exams.
c. American Kennel Club http://www.akc.org/index.cfm
d. Cat Fanciers' Association https://cfa.org/breeds
e. American Rabbit Breeders Association http://www.arba.net/

Scoring

Practicum	Individual Points	Team Points
Written Test	200	600
Math Practicum	50	150
Identification	240	720
Anatomy	50	150
Team Problem		50
Maximum Points	540	1670

AFNR Career Cluster Content Standards

Measurements Assessed	Event Activities Addressing Measurements	Related Academic Standards
ABS.01.03 Performance Indicator: Devise and apply management skills to organize and run an AFNR business in an efficient, legal and ethical manner.		
ABS.01.03.02.b Assess how local, state, federal, international and industry regulations positively and negatively affect the management of AFNR businesses.	Team activity Written exam	CCSS.ELA-LITERACY.SL.9-10.6 CCSS.ELA-LITERACY.SL.11-12.6 CCSS.ELA-LITERACY.L.9-10.6 CCSS.ELA-LITERACY.L.11-12.6 CCSS.ELA-LITERACY.RST.9-10.4 CCSS.ELA-LITERACY.RST.11-12.4
ABS.01.03.03.a Identify and observe ethical standards in planning and operating AFNR businesses.	Team activity Written exam	CCSS.ELA-LITERACY.SL.9-10.6 CCSS.ELA-LITERACY.SL.11-12.6 CCSS.ELA-LITERACY.L.9-10.6 CCSS.ELA-LITERACY.L.11-12.6 CCSS.ELA-LITERACY.RST.9-10.4 CCSS.ELA-LITERACY.RST.11-12.4
AS.01.01. Performance Indicator: Evaluate the historical development and implications of animal origin, domestication and distribution on production practices and the environment.		
AS.01.01.01.a. Research and summarize the origin, significance, distribution and domestication of different animal species.	Written exam	HS-LS4-3
AS.01.01.02.a. Research and summarize major components of animal systems (e.g., livestock, companion animals, etc.)	Identification	HS-LS4-3
AS.01.02. Performance Indicator: Assess and select animal production methods for use in animal systems based upon their effectiveness and impacts.		
AS.01.02.01.a. Identify and categorize terms and methods related to animal production.	Identification	AFNR Career Cluster, Statement 1 AFNR Career Cluster – Animal Systems Pathway, Statement 3 STEM Career Cluster, Statement 1 Buying Goods and Services, Benchmarks: Grade 12, Statement 1 Buying Goods and Services, Benchmarks: Grade 12, Statement 3
AS.01.02.02.b. Calculate costs of marketing versus predicted increases in sales.	Identification	AFNR Career Cluster, Statement 1 AFNR Career Cluster – Animal Systems Pathway, Statement 3 STEM Career Cluster, Statement 1 Buying Goods and Services, Benchmarks: Grade 12, Statement 1

Measurements Assessed	Event Activities Addressing Measurements	Related Academic Standards
		Buying Goods and Services, Benchmarks: Grade 12, Statement 3
AS.01.02.03.b. Analyze and evaluate the accuracy and effectiveness of records used in an animal system business.	Current event Practicums Written exam	AFNR Career Cluster, Statement 1 AFNR Career Cluster – Animal Systems Pathway, Statement 3 STEM Career Cluster, Statement 1 Buying Goods and Services, Benchmarks: Grade 12, Statement 1 Buying Goods and Services, Benchmarks: Grade 12, Statement 3
AS.01.03. Performance Indicator: Analyze and apply laws and sustainable practices to animal agriculture from a global perspective.		
AS.01.03.01.c. Evaluate the impact of laws pertaining to animal agriculture and assess the compliance of production practices with established regulations.	Current event Written exam	AFNR Career Cluster, Statement 2 AFNR Career Cluster – Animal Systems Pathway, Statement 1 STEM Career Cluster, Statement 1, 4 CCSS.ELA-Literacy.W.9-10.9b CCSS.ELA-Literacy.W.11-12.9b CCSS.ELA-Literacy.RI.9-10.1 CCSS.ELA-Literacy.RI.11-12.1 HS-ETS1-1
AS.01.03.02.b. Analyze the local and global impact of sustainable animal agriculture practices on human and environmental systems.	Current event Team activity Written exam	AFNR Career Cluster, Statement 2 AFNR Career Cluster – Animal Systems Pathway, Statement 1 STEM Career Cluster, Statement 1, 4 CCSS.ELA-Literacy.W.9-10.9b CCSS.ELA-Literacy.W.11-12.9b CCSS.ELA-Literacy.RI.9-10.1 CCSS.ELA-Literacy.RI.11-12.1 HS-ETS1-1
AS.02.01. Performance Indicator: Demonstrate management techniques that ensure animal welfare.		
AS.02.01.01.b. Design programs that assure the welfare of animals and prevent abuse or mistreatment.	Current event Team activity Written exam	HS-ETS1-2
AS.02.01.02.b. Analyze and document animal welfare procedures used to ensure safety and maintain low stress when moving and restraining animals.	Current event Practicums Written exam	HS-ETS1-2
AS.02.01.03.b. Analyze and document animal husbandry practices and their impact on animal welfare.	Current event Written exam	HS-ETS1-2
AS.02.02. Performance Indicator: Analyze procedures to ensure that animal products are safe for consumption.		

Measurements Assessed	Event Activities Addressing Measurements	Related Academic Standards
AS.02.02.01.b. Utilize tools, technology and equipment to perform animal husbandry and welfare tasks.	Identification	HS-ETS1-2
AS.02.02.02.b. Analyze consumer concerns with animal production practices relative to human health.	Current event Written exam	HS-ETS1-2
AS.02.02.03.b. Analyze and summarize the impact of animal trace-back capabilities on producers and consumers.	Current event Written exam	HS-ETS1-2
AS.03.01. Performance Indicator: Analyze the nutritional needs of animals.		
AS.03.01.01.c. Assess nutritional needs for an individual animal based on its growth stage and production system.	Current event Team activity Written exam	
AS.03.01.02.b. Correlate a species' nutritional needs to feedstuffs that could meet those needs.	Current event Team activity Written exam	
AS.03.02. Performance Indicator: Analyze feed rations and assess if they meet the nutritional needs of animals.		
AS.03.02.01.c. Select appropriate feedstuffs for animals based on a variety of factors (e.g., economics, digestive system and nutritional needs, etc.).	Current event Team activity Written exam	
AS.03.02.02.c. Select and utilize animal feeds based on nutritional requirements, using rations for maximum nutrition and optimal economic production.	Current event Written exam	
AS.03.02.03.b. Compare and contrast methods that utilize feed additives and growth promotants with production practices that do not (e.g., organic versus conventional production methods).	Current event Team activity Written exam	
AS.03.03. Performance Indicator: Utilize industry tools to make animal nutrition decisions.		
AS.03.03.01.a. Identify and categorize tools and equipment used to meet animal nutrition needs and ensure an abundant and safe food supply.	Identification	

Measurements Assessed	Event Activities Addressing Measurements	Related Academic Standards
AS.03.03.02.b. Analyze and apply information from a feed label and feeding directions to feed animals.	Current event Team activity Written exam	
AS.03.03.03.b. Analyze technologies used to provide animal nutrition and summarize their potential benefits and consequences.	Current event Team activity Written exam	
AS.04.01. Performance Indicator: Evaluate animals for breeding readiness and soundness.		
AS.04.01.01.b. Analyze the functions of major organs in the male and female reproductive systems.	Current event Team activity Written exam	
AS.04.01.02.b. Assess factors that lead to reproductive maturity.	Current event Team activity Written exam	
AS.04.02.03.b. Evaluate reproductive problems that occur in animals	Current event Team activity Written exam	
AS.04.02. Performance Indicator: Apply scientific principles to select and care for breeding animals.		
AS.04.02.01.a. Summarize genetic inheritance in animals.	Current event Team activity Written exam	CCSS.MATH.CONTENT.HSS.MD.A.3 HS-LS3-2 HS-LS3-3
AS.04.02.02.a. Identify and summarize inheritance and terms related to inheritance in animal breeding (e.g., dominate, co-dominate, recessive, homozygous, heterozygous, etc.).	Current event Team activity Written exam	CCSS.MATH.CONTENT.HSS.MD.A.3 HS-LS3-2 HS-LS3-3
AS.04.02.03.a. Identify and summarize genetic defects that affect animal performance	Current event Team activity Written exam	CCSS.MATH.CONTENT.HSS.MD.A.3 HS-LS3-2 HS-LS3-3
AS.04.02.04.b. Analyze the care needs for breeding stock in each stage of growth.	Current event Team activity Written exam	CCSS.MATH.CONTENT.HSS.MD.A.3 HS-LS3-2 HS-LS3-3
AS.04.03 Performance Indicator: Apply scientific principles to breed animals.		
AS.04.03.01.a. Identify and categorize natural and artificial breeding methods (e.g., natural breeding, artificial insemination, estrous synchronization, flushing, cloning, etc.).	Current event Team activity Written exam	
AS.04.03.02.b. Demonstrate artificial insemination techniques.	Current event Team activity	

Measurements Assessed	Event Activities Addressing Measurements	Related Academic Standards
	Written exam	
AS.04.03.03.b. Analyze the processes of major reproductive management practices, including estrous synchronization, superovulation, flushing and embryo transfer.	Current event Team activity Written exam	
AS.05.01. Performance Indicator: Design animal housing, equipment and handling facilities for the major systems of animal production.		
AS.05.01.01.a. Differentiate between the types of facilities needed to house and produce animal species safely and efficiently.	Current event Team activity Written exam	CCSS.MATH.CONTENT.HSS.MD.A.3 HS-LS3-2 HS-LS3-3
AS.05.01.02.c. Select, use and evaluate equipment, technology and handling procedures to enhance sustainability and production efficiency.	Current event Identification Team activity Written exam	CCSS.MATH.CONTENT.HSS.MD.A.3 HS-LS3-2 HS-LS3-3
AS.05.02. Performance Indicator: Comply with government regulations and safety standards for facilities used in animal production.		
AS.05.02.01.a. Identify and summarize the general standards that must be met in facilities for animal production (e.g., environmental, zoning, construction, etc.).	Current event Team activity Written exam	CCSS.ELA-Literacy.W.9-10.9b CCSS.ELA-Literacy.W.11-12.9b
AS.05.02.02.a. Distinguish between the types of laws and regulations pertaining to animal systems.	Current event Team activity Written exam	CCSS.ELA-Literacy.W.9-10.9b CCSS.ELA-Literacy.W.11-12.9b
AS.06.01. Performance Indicator: Classify animals according to taxonomic classification systems and use (e.g. agricultural, companion, etc.).		
AS.06.01.01.b. Explain how animals are classified using a taxonomic classification system.	Current event Written exam	
AS.06.01.02.b. Appraise and evaluate the economic value of animals for various applications in the agriculture industry.	Current event Written exam	
AS.06.01.03.b. Analyze the visual characteristics of an animal or animal product and select correct classification terminology when referring to companion and production animals.	Current event Written exam	
AS.06.02. Performance Indicator: Apply principles of comparative anatomy and physiology to uses within various animal systems.		

Measurements Assessed	Event Activities Addressing Measurements	Related Academic Standards
AS.06.02.01.b. Analyze the functions of each animal cell structure.	Written exam	HS-LS1-2
AS.06.02.02.b. Analyze the processes of meiosis and mitosis in animal growth, development, health and reproduction.	Written exam	HS-LS1-2
AS.06.02.03.b. Compare and contrast animal cells, tissues, organs, body systems types and functions among animal species.	Written exam	HS-LS1-2
AS.06.03. Performance Indicator: Select animals for specific purposes and maximum performance based on anatomy and physiology.		
AS.06.03.01.a. Identify and summarize how an animal's health can be affected by anatomical and physiological disorders.	Written exam	STEM Career Cluster, Statement 5
AS.06.03.02.a. Evaluate an animal against its optimal anatomical and physiological characteristics.	Current event Identification Written exam	STEM Career Cluster, Statement 5
AS.07.01. Performance Indicator: Design programs to prevent animal diseases, parasites and other disorders and ensure animal welfare.		
AS.07.01.01.c. Select and use tools and technology to meet specific animal health management goals.	Current event Identification Practicums Written exam	CCSS.MATH.CONTENT.HSN.Q.A.1 CCSS.MATH.CONTENT.HSN.Q.A.2 CCSS.MATH.CONTENT.HSN.Q.A.3
AS.07.01.02.c. Determine when an animal health concern needs to be referred to an animal health professional.	Current event Identification Written exam	CCSS.MATH.CONTENT.HSN.Q.A.1 CCSS.MATH.CONTENT.HSN.Q.A.2 CCSS.MATH.CONTENT.HSN.Q.A.3
AS.07.01.03.b. Identify and describe common illnesses and disorders of animals based on symptoms and problems caused by wounds, diseases, parasites and physiological disorders.	Current event Identification Written exam	CCSS.MATH.CONTENT.HSN.Q.A.1 CCSS.MATH.CONTENT.HSN.Q.A.2 CCSS.MATH.CONTENT.HSN.Q.A.3
AS.07.01.04.b. Research and analyze data to evaluate preventive measures for controlling and limiting the spread of diseases, parasites and disorders among animals.	Current event Identification Written exam	CCSS.MATH.CONTENT.HSN.Q.A.1 CCSS.MATH.CONTENT.HSN.Q.A.2 CCSS.MATH.CONTENT.HSN.Q.A.3
AS.07.01.05.b. Assess the safety and effectiveness of facilities and equipment used for surgical and nonsurgical veterinary treatments and procedures.	Current event Identification Written exam	CCSS.MATH.CONTENT.HSN.Q.A.1 CCSS.MATH.CONTENT.HSN.Q.A.2 CCSS.MATH.CONTENT.HSN.Q.A.3
AS.07.02. Performance Indicator: Analyze biosecurity measures utilized to protect the welfare of animals.		

Measurements Assessed	Event Activities Addressing Measurements	Related Academic Standards
AS.07.02.01.a. Summarize the importance of biosecurity to the animal industry.	Current event Identification Written exam	
AS.07.02.02.b. Analyze the health risk of different zoonotic diseases to humans and identify prevention methods.	Current event Identification Written exam	
AS.08.01. Performance Indicator: Design and implement methods to reduce the effects of animal production on the environment.		
AS.08.01.01.a. Identify and summarize the effects of animal agriculture on the environment (e.g., waste disposal, carbon footprint, air quality, environmental efficiencies, etc.).	Current event Identification Written exam	AFNR Career Cluster – Environmental Service Systems Pathway, Statement 1 HS-LS2-6 HS-LS2-7
AS.08.02. Performance Indicator: Evaluate the effects of environmental conditions on animals and create plans to ensure favorable environments for animals.		
AS.08.02.01.a. Research and summarize environmental conditions that impact animals (e.g., weather, sources of water, food resources, etc.).	Current event Identification Written exam	HS.LS4-6
AS.08.02.01.a. Identify and summarize methods for ensuring optimal environmental conditions for animals.	Current event Identification Written exam	HS.LS4-6
CS.01.03. Performance Indicator: Identify public policies and their impact on AFNR systems.		
CS.01.03.01.a. Summarize public policies affecting AFNR standards.	Team activity Written exam	
CS.01.03.02.a. Identify influential historical and current public policies that impact AFNR systems.	Team activity Written exam	
CS.02.02. Performance Indicator: Examine the components of the AFNR systems and their impact on the local, state, national and global society and economy		
CS.02.02.01.b. Assess components within AFNR systems and analyze relationships between systems.	Math applications exam Team activity Written exam	
CS.05.01. Performance Indicator: Evaluate the steps and requirements to pursue a career opportunity in each of the AFNR career pathways (e.g., goals, degrees, certifications, resumes, cover letter, portfolios, interviews, etc.).		
CS.05.01.01.a. Identify and summarize the steps to pursue a career in an AFNR pathway (e.g., self-assessment, set goals, etc.).	Current event Practicums Team activity	

Measurements Assessed	Event Activities Addressing Measurements	Related Academic Standards
CS.05.01.02.b. Analyze personal skillset and create a plan for obtaining the required education, training, and experiences to obtain a career in an AFNR pathway.	Current event Practicums Team activity	
CS.05.01.03.c. Evaluate, update and improve a set of personal tools to reflect current skills, experiences, education, goals, etc. and complete the processes needed to pursue and obtain a career in an AFNR pathway.	Current event Identification Math applications exam Practicums Written exam	
CS.05.02. Performance Indicator: Examine careers in each of the AFNR Pathways.		
CS.05.02.01.b. Assess personal skills and align them with potential career opportunities in AFNR pathways.	Practicums	
CRP.01.01. Performance Indicator: Model personal responsibility in the workplace and community.		
CRP.01.01.01.a. Define personal responsibility and distinguish how it applies in workplace and community (e.g., make educated choices, listen and follow directions, ask for help when needed, meet expected standards, etc.).	Current event Team activity	
CRP.01.01.02.a. Distinguish personal levels of responsibility, which can be applied in the workplace and community.	Current event Team activity	
CRP.01.02 Performance Indicator: Evaluate and consider the near-term and long-term impacts of personal and professional decisions on employers and community before taking action.		
CRP.01.02.01.b. Assess the pros and cons of personal decisions based on their anticipated impact on self and others.	Current event Team activity	
CRP.01.03. Performance Indicator: Identify and act upon opportunities for professional and civic service at work and in the community.		
CRP.01.03.01.b. Assess available professional service opportunities at work places and in community (e.g., trainings, organizing events, etc.).	Current event Team activity Written exam	
CRP.01.03.02.b. Assess available civic service opportunities at workplaces and in the community (e.g., community events, attend meetings, etc.).	Current event Team activity Written exam	

Measurements Assessed	Event Activities Addressing Measurements	Related Academic Standards
CRP.04.01. Performance Indicator: Speak using strategies that ensure clarity, logic, purpose and professionalism in formal and informal settings.		
CRP.04.01.01.b. Analyze use of verbal and non-verbal communication strategies in workplace situations.	Current event Practicums Team activity	
CRP.04.01.02.b. Apply strategies for speaking with clarity, logic, purpose and professionalism in a variety of situations in formal and informal settings.	Current event Team activity	
CRP.04.02. Performance Indicator: Produce clear, reasoned and coherent written communication in formal and informal settings.		
CRP.04.02.01.a. Research and summarize the purpose of different forms of written communication in formal and informal settings (e.g., letters, emails, reports, social media, etc.).	Current event	
CRP.04.02.02.b. Apply techniques for ensuring clarity, logic and coherence to edit written communications (e.g., emails, reports, presentations, technical documents, etc.).	Current event Math applications exam	
CRP.05.01. Performance Indicator: Assess, identify and synthesize the information and resources needed to make decisions that positively impact the workplace and community.		
CRP.05.01.01.b. Analyze how the process of decision making is used in workplace and community situations.	Team activity	
CRP.08.01. Performance Indicator: Apply reason and logic to evaluate workplace and community situations from multiple perspectives.		
CRP.08.01.01.b. Apply steps for critical thinking to a variety of workplace and community situations.	Current event Team activity	
CRP.10.01. Performance Indicator: Identify career opportunities within a career cluster that match personal interests, talents, goals and preferences.		
CRP.10.01.02.b. Analyze skills needed for potential careers and compare and contrast skills needed with personal interests, talents, goals and preferences.	Practicums	

Measurements Assessed	Event Activities Addressing Measurements	Related Academic Standards
CRP.10.02. Performance Indicator: Examine career advancement requirements (e.g., education, certification, training, etc.) and create goals for continuous growth in a chosen career.		
CRP.10.02.01.b. Analyze the steps to meet career advancement requirements for potential careers.	Practicums	
CRP.12.01. Performance Indicator: Contribute to team-oriented projects and build consensus to accomplish results using cultural global competence in the workplace and community.		
CRP.12.01.01.b. Formulate action plans to complete team-oriented projects in the workplace and community, including plans for personal contributions.	Team activity	
CRP.12.02. Performance Indicator: Create and implement strategies to engage team members to work toward team and organizational goals in a variety of workplace and community situations (e.g., meetings, presentations, etc.).		
CRP.12.02.01.b. Assess team dynamics and match strategies to increase team member engagement.	Team activity	