

Veterinary Science CDE

Purpose

The purpose of the Veterinary Science CDE is to provide a competitive event for agricultural education students, provide opportunities for participants to develop technical knowledge, and demonstrate practical skills in the field of veterinary science.

State Event Superintendent

The superintendent for this event is Mrs. Shelby Robertson, State FFA Coordinator, Department of Agricultural and Human Sciences, NCSU, Box 7654, Raleigh, NC 27695-7654. Phone: 919.513.0216 Fax: 919.513.3201

Eligibility and General Guidelines

This event is open to all FFA chapters and FFA members in good standing. FFA Members may not participate in a Career Development Event that leads to a state level event after July 1, following the high school/early college graduation. Members winning a previous state event in this area or that have participated in a previous national event in this area are ineligible.

Each chapter may send one team to compete at the state event. Teams shall consist of three or four members. Four scores will count towards the team total (A three-member team will earn a zero for the 4th score). No alternates are allowed in state events. Any alternate found participating in a state event will result in team disqualification.

FFA members in good standing may also participate as individuals in this event. A chapter may have up to two members participating as individuals as long as the chapter does not have a team participating in the event. Their scores will only count toward individual recognition and will not be tallied as a team score.

The use or possession of cellular phones or any other mobile electronic communication device is prohibited during any state-level career development event. Any violation of this rule by any team member will result in total team disqualification.

FFA members participating in career development events that require the use of calculators may only use non-programmable/graphing calculators that do not have the ability to communicate with other calculators. Calculators will be screened prior to the start of a CDE for acceptability. Students caught using data stored on a calculator or communicating with other calculators will result in a total team disqualification for the event.

Any member found cheating in any state-level career development event will result in total team disqualification for that event.

The North Carolina FFA Association, in keeping with the FFA mission and purposes, does not permit the use of tobacco products, e-cigarettes, vapes, or Juuls at any FFA facility or at any FFA activity.



In compliance with the Americans with Disabilities Act, North Carolina FFA will honor requests for reasonable accommodations made by individuals with disabilities. Please direct accommodation requests through the CDE/LDE Accommodation Request Form. If the accommodation can be made for all and/or doesn't provide an unfair advantage, then every effort will be made to provide the accommodation. Requests can be accommodated more effectively if notice is provided at least 10 days before the event.

Middle School Participation

Middle school students and teams may participate in Career Development Events or Leadership Development Events. The top middle grades team will be recognized at the state FFA convention. Middle school participants should designate during registration.

Dress Code

Participants are required to follow the North Carolina FFA Career Development Event Dress Code. Participants in this event are required to wear long pants and an appropriate shirt with a collar or an appropriate FFA or school t-shirt. Students may also wear scrubs.

The North Carolina FFA Association strives to promote a positive image at all Official FFA Events. The dress code policy was established to address the issue of appropriate attire at all Official FFA Events. Members should adhere to this policy for all events. A ten percent reduction will be applied to all individual scores from a chapter if a participant from that chapter violates the dress code during that career event.

Procedures for Administering the Event

Part I: Multiple Choice Exam - 100 Points

The written exam will be twenty-five (25) multiple-choice items designed to determine each team member's understanding of the Veterinary Science industry. All questions will come from the *Veterinary Assisting: Fundamentals and Applications* textbook written by Beth Vanhorn and Robert Clark published by CENGAGE Learning. **Students will have 30 minutes to complete the written exam.** Exam questions will come from the following topics and chapters by year:

2021 - Veterinary Medical Terminology and Abbreviations (1), Breed Identification and Production Management (9), Rabbit Identification and Production Management (12), The Structure of Living Things (26), The Renal System (32), Animal Nutrition (37), and Veterinary Assisting Procedures (47).

2022 - Veterinary Medical Terminology and Abbreviations (1), Pocket Pet Health and Production Management (11), Ornamental Fish Identification and Production Management (14), Equine Breed Identification and Production Management (19), The Digestive System (28), The Reproductive System (33), Animal Nutrition (37), and Veterinary Assisting Procedures (47).

2023 - Veterinary Medical Terminology and Abbreviations (1), Reptile and Amphibian Breed Identification and Production Management, Beef and Dairy Cattle Breed Identification and Production Management (18), Zoo and Exotic Animal Production Management (16), The Respiratory System (30), The Endocrine System (31), Animal Nutrition (37), and Veterinary Assisting Procedures (47).



2024 - Veterinary Medical Terminology and Abbreviations (1), Poultry Breed Identification and Production Management (24), Sheep Breed Identification and Production Management (22), Goat Breed Identification and Production Management (23), The Immune System (34), Microbiology and Parasitology as Disease Processes (38), Animal Nutrition (37), and Veterinary Assisting Procedures (47).

2025 - Veterinary Medical Terminology and Abbreviations (1), Dog Breed Identification and Production Management (8), Avian Breed Identification and Production Management (10), Circulatory System (29), Musculoskeletal System (27), Animal Nutrition (37), and Veterinary Assisting Procedures (47)

Part II: Math Applications Exam – 100 Points

Students will complete clinical math problems similar to those included in the National FFA CDE. **Students will have 30 minutes to complete this exam.**

Part III: Practicums - 80 Points

Clinical procedures (50 points): Students will complete <u>one</u> of the following (Page numbers refer to the National FFA Veterinary Science CDE Guide 2017-2021): Administering Ophthalmic Medication page 22, Filling a Syringe for Injection Page 26, Surgical Site Preparation Page 30, Prescription Filling page 31

Handling and restraint procedures (30 points): Students will complete **one** of the following (Page numbers refer to the National FFA Veterinary Science CDE Guide 2017-2021): Applying a Cat Muzzle page 35, Restraint of Cat Jugular Venipuncture page 37, Applying a Gauze Dog Muzzle page 39, Restrain of a Dog for Cephalic Venipuncture page 43

Part IV: Identification - 100 Points

Each participant will identify the following (See additional pages):

- A. Equipment from amended list from National 10 pieces
- B. Parasites from amended list from Nationals 10 parasites
- C. Breeds from amended list from National 5 breeds
 - 2021 Small animal breeds (including cats, rabbits, poultry, birds, small mammals and reptiles)
 - 2022 Dog breeds
 - 2023 Large animal breeds
 - 2024 Small animal breeds (including cats, rabbits, poultry, birds, small mammals and reptiles)
 - 2025 Dog breeds



Scoring

Maximum Score	380
Multiple Choice Exam	100
Math Applications Exam	100
Clinical Procedures	50
Handling and Restraint Procedures	30
Identification	100

Procedure for Determining the State Event Winner When Scores are Tied

In the event a tie score exists, apply the following methods in sequential order until the tie is broken:

- 1. Compare the total team scores for the multiple choice exam and the higher scoring team is the winner.
- 2. Compare the total team scores for the identification component and the higher scoring team is the winner.
- 3. Compare the total team scores for the math exam and the higher scoring team is the winner.
- 4. Compare the total team scores for the clinical practicum and the higher scoring team is the winner.
- 5. If teams continue to be tied, a new event will be held to determine the winning team.

Procedure for Determining the High Scoring Individual When Scores are Tied

In the event that a tie score exists, apply the following methods in sequential order until the tie is broken.

- 1. Compare the individual scores for the identification component and the higher contestant is the winner.
- 2. Compare the individual scores for the math exam and the higher scoring contestant is the winner.
- 3. Compare the individual scores for the clinical practicum and the higher scoring contestant is the winner.
- 4. If individual continue to be tied present cowinners.

State Awards

The awards for the state event will be presented annually at the state FFA convention to include a team 1st, 2nd and 3rd place plaque and a travel monetary award. The high scoring individual will receive a plaque. The highest-placing middle school team will be recognized only if they are not already among the overall top three teams. If a middle school team places in the top three overall, they will not receive additional middle school–specific recognition.



National Career Development Event Participation

State winning teams advancing to national career development event participation will be automatically registered for the national event. It is the responsibility of the Chapter FFA Advisor to complete all necessary national certification forms and return them to the State FFA Coordinator by the assigned due date.

State winning CDE teams that choose not to participate at the national level should contact the state office by Sept. 1 prior to National Convention. Teams that fail to inform the state office prior to Sept. 1 will be ineligible to participate in that same CDE for the next year (chapters may appeal to the State FFA Board of Directors). Teams that do not compete at the National Convention will be required to pay back the travel award.

Primary References

Veterinary Assisting: Fundamentals and Applications. Vanhorn, Clark. ISBN: 978-1-4354-5387-6

National FFA Career Development Events: Veterinary Science CDE guide



North Carolina FFA Veterinary Science Career Development Event Equipment List

Name:	Chapter:	Contestant No:
Ambubag		Hoof knife
Anesthetic machines		Hoof rasp
Autoclave		IV administration set
Autoclave tape indicator		Laparoscope
Backhaus towel clamps		Laryngoscopes
Balling gun		Muzzle – basket
Bandaging material – Elasticon		Muzzle – nylon
Bandaging material – roll gauze		Needle holder - Mayo-Hegar
Bandaging material – vet wrap		Needle holder - Olsen Hegar
Bands (castration or docking)		Obstetrical chain and handle
Cat bag		Ophthalmoscope
Catch pole (dog snare)		Otoscope
Catheter – butterfly		Pig tooth nippers
Catheter – IV		Radiology personal protective equipment
Catheter – tomcat urinary		Rectal prolapse ring - swine
Centrifuge		Rumen magnet
Chemical indicator strips		Scalpel blade
Cold sterile tray		Scalpel handle
Dehorner – Barnes		Scissors – Suture wire cutting
Dehorner - electric		Scissors – Bandage
Dental floats		Scissors – Lister bandage
Dental scaler		Scissors – Littauer suture removal
Drench gun - small ruminant		Scissors – Mayo dissecting
Ear notcher		Scissors – Metzenbaum dissecting
Elastrator		Silver nitrate sticks
Elizabethian collar		Small animal oxygen cage
Emasculators		Snook ovariohysterectomy hook
Endoscope		Speculum – large animal oral
Endotracheal tubes		Speculum – small animal oral
Fecal loop		Speculum – vaginal
Fecalyzers		Squeeze chute
Feeding tube for small animals		Staple remover
Fetal extractor-calf		Stethoscope
Forceps – Alligator		Surgical drapes
Forceps – Allis tissue		Suture needle – cutting
Forceps – Babcock tissue		Suture needle - taper
Forceps – Brown-Adson thumb		Syringe – automatic, multi-dose
Forceps – Crile		Tattooing instruments – small and large
Forceps – Kelly		Tonometer
Forceps – Halstead mosquito hemostation	c	Tourniquet
Forceps – Rat tooth thumb		Trocar and cannula
Gravity feeder/ J tube		Twitch chain
Head gate		Twitch handle
Hog snare		



North Carolina FFA Veterinary Science Career Development Event Parasites/Microscopic ID

Name:	Chapter:	Contestant No:
Blowfly (Family Calliphoridae)		Taenia Tapeworm Segment (Family Taeniidae;
Cat Warble (Genus Cuterebra)	_	Genus Taenia)
Cocci (bacteria)		Tick- American Dog (Family Dermacentor; Genus
Coccidia (Genus Isospora or Eimeria)	_	Variabilis)
Demodectic Mite (Genus Demodex)		Tick- Black Legged Deer (Family Ixodes; Genus
Ear Mite (Family Ascaridae; Genus Otodec	etes) –	Scapularis)
Eosinophils	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	Whipworm (Genus Trichuris)
Fleas (Genus Ctenocephalides)	_	Whipworm Egg (Genus Trichuris)
Flea Larva (Genus Ctenocephalides)	_	Yeast
Flea Tapeworm Egg (Genus Dipylidium)	_	1000
Flea Tapeworm Segment (Genus Dipylidius	m)	
Giardia (Genus Giardia)	,	
Heartworm Adult (Genus Dirofilaria)		
Heartworm Microfilaria (Genus Dirofilaria))	
Hookworm Adult (Family Ancylostomatida		
Ancylostoma, Uncinaria, Bunostomum	*	
Globocephalus)	01	
Hookworm Egg (Family Ancylostomatidae	: Genus	
Ancylostoma, Uncinaria, Bunostomum		
Globocephalus)	01	
Horse Bots (Genus Gasterophilus)		
Horse Strongyles (Family Strongylidae; Ge	enus	
Strongylus)	1145	
Lice - Biting (Order Mallophaga; Genus Bo	ovicola or	
Trichodectes)	, 1001a 01	
Lice - Sucking (Order Anoplura; Genus		
Linognathus or Hematopinus)		
Liver Fluke (Class Trematoda; Genus Fasci	iola	
Fascioloides or Dicrocoelium)	1014,	
Mosquito Adult (Family Culicidae; Genus		
Anopheles, Culex or Aedes)		
Mosquito Larva (Family Culicidae; Genus		
Anopheles, Culex or Aedes)		
Red Blood Cell		
Roundworm Adult (Family Ascarididae or		
Toxocaridae; Genus Toxocara, Toxasca:	ris	
Ascaris, Parascaris or Neoascaris)	110,	
Roundworm Egg (Family Ascarididae or		
Toxocaridae; Genus Toxocara, Toxasca	ris	
Ascaris, Parascaris or Neoascaris)	113,	
Sarcoptic Mite (Family Ascaridae; Genus S	Sarcontes	
or Notoedres)	arcopies	
Taenia Tapeworm (Family Taeniidae; Gent	ıs Taenia	
Taenia Tapeworm Egg (Family Taeniidae;		
Taenia)	Collub	
i aciiia)		



North Carolina FFA Veterinary Science Career Development Event

Identification Small Animal Breeds

Name:	Chapter:	Contestant No:
Place the number of the spe	ecies beside the correct name (fou	r points each).
CATS	BIRDS	REPTILES
Abyssinian	Cockatiel	Chameleon
American Shorthair	Cockatoos	Gecko
Burmese	Love Birds	Iguana
Maine Coon	Parakeet	Lizard
Manx	African Gray Parrot	Bearded Dragon
Persian	Canary	
Ragdoll	 Macaw	POULTRY
Russian Blue	Sun Conure	Chicken-Cornish
Siamese	Zebra Finch	Chicken-Leghorn
Sphynx		Chicken-Plymouth Rock
	SMALL MAMMALS	Chicken-Rhode Island Red
RABBITS		Duck
Angora	Chinchilla	Goose
Californian	Ferret	Quail
Dutch	Gerbil	Turkey
English Spot	Guinea Pig	
Netherland Dwarf	Hamster	
Mini-Rex	Hedgehog	
	Sugar Glider	



North Carolina FFA Veterinary Science Career Development Event

Identification Large Animal Breeds

Name:	Chapter:	Contestant No:
Place the number of the species	beside the correct name (four points each	,
DAIRY BREEDS		Saanen
Ayshire		Toggenburg
Brown Swiss	HORSE BREEDS	SHEEP BREEDS
Guernsey	Appaloosa	
Holstein	Arabian	Columbia
Jersey	Belgian	Dorper
	Clydesdale	Dorset
BEEF CATTLE BREEDS	Morgan	Hampshire
Angus	Paint	Merino
Brahman	Percheron	Rambouillet
Charolais	Quarter Horse	Southdown
Hereford	Saddlebred	Suffolk
Shorthorn	Tennessee Walking Horse	
Simmental	Thoroughbred	
SWINE BREEDS	GOAT BREEDS	
American Landrace	Alpine	
Berkshire	Nubian	
Chester White	Angora	
Duroc	Boer	
Hampshire	LaMancha	
Yorkshire	Oberhasli	
	Pygmy	



Terrier

North Carolina FFA Veterinary Science Career Development Event

Identification Dog Breeds

Name:	Chapter:	Contestant No:
Place the number of the species b	peside the correct name (four points eac	h)
SPORTING GROUP		
	HERDING GROUP	
Brittany		TOY GROUP
Cocker Spaniel	Australian Cattle Dog	Cavalier King Charles
English Setter	Australian Shepherd	Spaniel
German Shorthaired	Border Collie	Chihuahua
Pointer	Collie	Miniature Pinscher
Golden Retriever	German Shepherd Dog	Papillon
Irish Setter	Old English Sheepdog	Pekingese
Labrador Retriever	Pembroke Welsh Corgi	Pomeranian
Weimaraner	Shetland Sheepdog	Poodle
NON-SPORTING GROUP	WORKING GROUP	Pug
non si onim o dicer	wording Groot	Shih Tzu
Bichon Frise	Bernese Mountain Dog	Yorkshire Terrier
Boston Terrier	Boxer	
Bulldog	Doberman Pinscher	HOUND GROUP
Chinese Shar-Pei	Great Dane	
Chow Chow	Great Pyrenees	Afghan Hound
Dalmatian	Mastiff	Basenji
Poodle	Newfoundland	Basset Hound
	Portuguese Water Dog	Beagle
TERRIER GROUP	Rottweiler	Black and Tan Coonhound
Pull Tarrior		
	Standard Schnauzer	•
		Knodesian Kidgeback
Bull Terrier Cairn Terrier Parson Russell Terrier Scottish Terrier West Highland White	Saint BernardSiberian HuskyStandard Schnauzer	BloodhoundBachshundGreyhoundRhodesian Ridgeback



Clinical Procedures Practicum Administering Ophthalmic Medication

Name:	Chapter:	_Contestant	No:
Participant must talk through p	oracticum steps with judge.		
CRITERIA		Points Possible	Points Earned
The student wipes any discharge cotton ball.	ge from the patient's eye using a gauze sponge or	8	
The student opens the end of the	he ophthalmic medicine.	6	
apart to open the eye.	ger and thumb to pull the upper and lower lids lower lid down and the index finger pulls the upper	12	
lid upward. The student's other finger may	rest on the head of the animal.		
While resting the hand holding student applies the drops or oil	g the medication on the head of the patient, the ntment gently into the eye without touching the eye, g the proper amount of ointment without	12	
The student releases the eyelid	s.		
The student allows the spinal	to blink to move the medication throughout the eve	6	
The student anows the animal	to blink to move the medication throughout the eye.	6	

TOTAL POINTS



Clinical Procedures Practicum Filling a Syringe for Injection

Name: _____Chapter: ____Contestant No: ____

Participant must talk through practicum steps with judge.		
CRITERIA	POINTS POSSIBLE	POINTS EARNED
The student determines the amount to be place in the syringe	6	
The student selects the proper-sized syringe	8	
The student inserts the syringe into the top of the bottle	6	
The student places the bottle upside down in one hand and holds securely.	6	
The students withdraws the proper volume	6	
The student removes the syringe from the bottle	6	
The student gently taps or snaps the edge of the syringe to remove any air bubbles, or slightly expel the air by pushing the end of the plunger.	6	
The student places syringe in the sharps container.	6	

TOTAL POINTS



was moved away from the incision site.

or until the final rinse sponge was clean.

clipped area.

with the antiseptic.

The student discarded the sponge once it reached the edge of the

The student wiped the clipped area with a rinse solution using a clean surgical sponge following the same pattern as when scrubbing

The student repeated the scrub and rinse a minimum of three times

Clinical Procedures Practicum Surgical Site Preparation

Name: Chapter: Contestant No:

Participants must talk through practicum steps with judges.		
CRITERIA	POINTS POSSIBLE	POINTS EARNED
The student applied antiseptic scrub to the clipped area	8	
The student prepped the clipped area with a clean surgical sponge beginning at the incision site moving in a circular motion and worked toward the edges.	8	
The student did not bring the sponge back to the incision site once it		

TOTAL POINTS

8

8

8

10



Clinical Procedures Practicum Prescription Filling

Name: _____Chapter: ____Contestant No: ____

CRITERIA	POINTS POSSIBLE	POINTS EARNED
The student reads and verbally interprets prescription.	10	
The student selects the correct drug and concentration	20	
The student places the pill counting tray on the pharmacy counter with		
the channel to the left and the open plate in front of him/her.	1	
The student pours the medication tablets or capsules onto the tray plate.	1	
The student opens the channel cover.	1	
The student uses a spatula or tongue depressor to push groups of tablets or capsules into the channel.	1	
When the student has counted the desired amount of medication, he/she closes the channel cover. The student tilts the tray to return the unused medicine into the stock bottle	4	
The student lifts the tray to place the channel spout into the medicine vial and transfer medication.	4	
The student places the lid on the vial and sets it on the counter.	1	
The student appropriately fills out label with prescription information.	7	
TOTAL POINTS	50	



Handling and Restraining Practicum Applying a Cat Muzzle

Name: _____Chapter: ____Contestant No: ____

Participants must talk through practicum steps with judge.		
CRITERIA	POINTS POSSIBLE	POINTS EARNED
The student opens the cage door and calls the cat by name	2	
The student scruffs the cat with one hand and lifts it up.	2	
The student cradles the cat's abdomen with their other hand and removes the cat from the cage.	2	
With the cat still scruffed, the student places the cat under one arm close to their body and closes the cage door with their free hand.	2	
The student places cat on table.	2	
The student selects a muzzle of appropriate size for the cat.	5	
The student places the cat in setting or sternal position on exam table.	2	
The student positions the muzzle properly in his/her hands	3	
The student approaches the cat from behind with the muzzle in both hands while another person restrains cat.	3	
The student brings the muzzle up to the cat's face in one swift motion.	4	
The student secures the muzzle.	3	
TOTAL POINTS	30	



Handling and Restraining Practicum Restraint of the Cat for Jugular Venipuncture

Name: _____Chapter: ____Contestant No: ____

Participants must talk through practicums steps with judges.		
CRITERIA	POINTS POSSIBLE	POINTS EARNED
The student places the cat in sternal recumbency with its chest close to		
the edge of the table.	6	
The student controls and lifts the head up by placing thumb and forefingers over top of head, fingers firm on zygomatic arches (below eyes).	7	
The student's other hand grasps the front legs and extends them down		
off the edge of the table.	7	
The student uses arm and elbow to restrain the cat's body close to the student's body.	6	
The student spoke to the patient in a calm and affectionate manner		
during the procedure	4	

TOTAL POINTS



Handling and Restraining Practicum Applying a Gauze Dog Muzzle

Name: _____Chapter: ____Contestant No: ____

Participant must talk through practicum steps with judge.		
CRITERIA	POINTS POSSIBLE	POINTS EARNED
The student selects proper type of material and length.	4	
The student places the dog in sitting or sternal position on exam table or floor.	2	
The student makes a loop in the gauze and approaches the dog from behind.	6	
The student places the loop on the dog's face with the tie on top.	6	
The student quickly tightens the loop, and then crosses the ends under the dog's face.	6	
The student brings the ends back behind the dog's head under the ears and ties in a quick-release bow.	6	
•		

TOTAL POINTS



Handling and Restraining Practicum Restraint of the Dog for Cephalic Venipuncture

Name:	Chapter:	Contestant No:	
Participants must talk through practicum	n steps with judge.		
CRITERIA		POINTS POSSIBLE	POINTS EARNED
The student places a noose leash on the	dog.	2	
The student restrains the dog in sternal	recumbency.	5	
The student stands on the dog's right si arm around the dog's neck.	de; wrapping his/her right	5	
The student holds the dog's left forelim his/her hand; extends the limb forward performing the procedure.		6	
With the elbow of the dog in his/her pal his/her thumb up so it is on top of the li elbow.		6	
The student occludes the vessel with the thumb, rotates the thumb laterally.	6		
	TOTAL POINTS	30	