

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

The purpose of the veterinary science career development event is to promote college and career readiness by providing opportunities to develop technical knowledge and demonstrate practical skills in the field of veterinary science.

II. OBJECTIVES

- A. Participants will demonstrate professional ethics, decision-making, communication and problem-solving skills.
- B. Participants will demonstrate technical competency with small and large animals in the areas of:
 - 1. Anatomy and physiology
 - 2. Clinical procedures
 - 3. Identification
 - 4. Health and safety
 - 5. Medical terminology

Note: species will be focused on those that are observed in Oklahoma Veterinary Practices. These can include (but not limited to) dogs, cats, cattle, sheep, swine, horses, goats, rabbits, etc.

III. EVENT RULES

- A. A school may enter only one team, consisting of four members, in this event. The score for a team will be calculated from all four members' accrued points.
- B. Individuals or partial teams are not allowed to compete.
- C. Each contestant will participate in only one of the practicum activities.
- D. Only those students who are competing will be allowed to participate in this event.
- E. Any assistance given to a participant from any source during the event, other than an event official, will be sufficient cause to eliminate the team from the event.
- F. Various computer applications may be utilized throughout the event.
- G. Cell phones/personal devices will not be permitted in the contest. They will be collected and placed in the individual team folders belonging to the participants' school. Should a student need to contact their teacher/parent, they can temporarily obtain their phone at the check-in desk to make contact.

IV. EVENT FORMAT

A. Team Make-Up

Teams will consist of four members with all four members' scores counting toward the total team score.

B. Equipment

1. Students will provide pencils, **non-programmable calculators**, and a note and paper free clip board.
2. Contest officials will provide official scan sheet, notes paper, and specific tools and equipment needed to complete practicums.

C. Event Schedule

Individuals will complete each section of the event within the allotted time:

1. Written Exam-40 Minutes
2. Math Application-20 Minutes
3. Identification-20 Minutes
4. Practicum-7 Minutes
5. Team Activity-10 Minutes

D. Individual Activities

1. Written Exam (150 Points)

1. The objective, multiple-choice exam is designed to determine team members' broad understanding of the veterinary science field. Some questions will be scenario based. The written exam will consist of 50 multiple-choice questions. Each question will be worth three points. Topics for the exam may include:

- i. Behavior
- ii. Disease (causes and sources, signs and symptoms)
- iii. Medical terminology
- iv. Medical Records
- v. Anatomy/physiology
- vi. Regulations (federal OSHA, MSDS)
- vii. Patient management
- viii. Facility Management
- ix. Genetics

2.Math Application (100 Points)

The number of math application questions will vary based on the type of activity that is assigned. Questions may include conversions (including metric system), dose calculations, dilutions, cost calculations, and invoices.

Unit conversion sheets will be provided to each student.

3.Identification (120 points)

Participants will identify equipment, parasites, and breeds/species. Identification can include PowerPoint, photos, specimens, and actual equipment. Identification lists are located at the end of the contest guidelines. Students will have a combination of 40 items in the following categories:

1. Equipment –Participants will identify pieces of equipment (actual equipment and/or photos).

2. Parasites –Participants will identify parasites (actual and/or photos). Some parasite identifications may require use of a microscope. Microscopes will be provided.
3. Breeds –Participants will identify breeds of small and large animals (photos).

E. Team Activities

1. Practicums (50 Points)

Each team member will complete **one** practicum worth 50 points. Two students will be assigned for each of the practicum areas defined below, totaling four practicums (200 points). The students will not be made aware of the four practicum options until they enter the exam. They will have 30 seconds to decide which student will perform each practicum. They will be given a maximum of seven minutes to complete the practicum. Participants are expected to talk through the steps to a judge as they are being scored. Judges may speak and ask questions to the participant at the end of the activity. The scorecards can be found at the end of the contest guidelines. Live animals may or may not be used to perform the practicums listed below with an asterisk (*).

a. Following is the list of Handling and Restraining Practicums that students may be asked to perform:

- i. Restraint of the Small Dog for Jugular Venipuncture*
- ii. Restraint of the Cat for Jugular Venipuncture*
- iii. Restraint of the Dog for Cephalic Venipuncture*
- iv. Restraint of the Cat in Lateral Recumbency for Femoral Venipuncture*
- v. Restraint of the Cat for Cehalic IV Catheter Placement
- vi. Applying Elizabethan Collar*
- vii. Removing Dog From Floor Level Cage to Restrain for Lateral Saphenous Venipuncture
- viii. Placing a Tail Tie*
- ix. Restraint of a Rabbit
- x. Applying a Nylon Dog Muzzle*
- xi. Applying a Gauze Dog Muzzle*
- xii. Applying a Cat Muzzle*
- xiii. Haltering a Horse*
- xiv. Haltering Ruminants*
- xv. Snare Restraint of the Pig*

2. Clinical Procedures Practicum

Following is the list of Clinical Procedures Practicums that students may be asked to perform. Please be familiar with safe handling of sharp objects, including needles, scalpels, etc.

- i. Bandage Removal
- ii. Opening a Surgery Pack
- iii. Administering an Intramuscular Injection
- iv. Administering Oral Tablet/Capsule

- v. Prescription Filling
- vi. Administering a Subcutaneous Injection
- vii. Administering Aural Medication
- viii. Administering Ophthalmic Medication
- ix. Prepare a Surgical Pack for Sterilization
- x. Surgical Site Preparation
- xi. Fecal Flotation with Fecalyzer
- xii. Removal of Sutures
- xiii. Filling a Syringe for Injection

2. Team Activity (400 points)

1. Teams will conduct research using local veterinarians and veterinary resources based on the annual topic. In a **seven to eight minute** presentation, teams will demonstrate the different roles of the veterinary team, as well as explain steps and procedures for the veterinary process to the judges.
The 2024 team activity topic is: XX
2. Judges will be allotted two minutes of question/answer time after each presentation.
3. The potential roles to be addressed in the team activity are listed below. Teams need to determine what roles are most important to demonstrate based on the annual topic.

Veterinary team roles may include, but are not limited to:

- i. Veterinary technician
 - ii. Veterinarian
 - iii. Veterinary assistant
 - iv. Receptionist
 - v. Farm manager
 - vi. Owner/client
 - vii. Kennel/stable assistant
4. The presentation can be creative in nature and teams may include props but must be able to set up in two minutes and tear down in one minute. Some common props will be provided and teams are encouraged to set up and tear down as quickly as possible. PowerPoint presentations cannot be utilized in the team activity. See team activity rubric at the end of contest guidelines.

V. SCORING

	Individual Points	Team Points
Written Exam	150	600
Math Application	100	400
Identification	120	480
Practicum	50	200
Team Activity		400
Total	420	2,080

VI. TIEBREAKERS

Tiebreakers will be settled in the following order:

1. Combined individual practicum total score
2. Combined individual written exam total score

VII. REFERENCES

Small Animal Care and Management. Warren. ISBN: 978-4180-4105-2
Animal Science – 3rd Edition, CIMC – www.okcimc.com, (AG3006)

Websites for Identification:

American Kennel Club – <http://www.akc.org/index.cfm>

Cat Fanciers' Association – <http://www.cfa.org/client/breeds.aspx>

American Rabbit Breeders Association – <http://www.arba.net/>

OSHA – <http://www.safetyvet.com/osha/oshamain.htm>

VIII. SUPPLEMENTAL MATERIALS AND FORMS

Scoring Rubrics

Official Oklahoma Veterinary Science ID List

Veterinary Science Scantron

2024 Oklahoma FFA Veterinary Science ID List

Equipment and Materials

001	Ambubag	036	Forceps – Babcock tissue	067	Scissors – Metzenbaum dissecting
002	Anesthetic machines	037	Forceps- Brown-Adson thumb	068	Silver nitrate sticks
003	Autoclave			069	Small animal oxygen cage
004	Autoclave tape indicator	038	Forceps – Crile	070	Snook ovariohysterectomy hook
005	Backhaus towel clamps	039	Forceps – Kelly	071	Speculum – large animal oral
006	Balling gun	040	Forceps – Halstead mosquito	072	Speculum – small animal oral
007	Bandaging material – Elasticon	041	Forceps – Rat tooth thumb	073	Speculum - vaginal
008	Bandaging material – roll gauze	042	Gravity feeder – J tube	074	Squeeze chute
009	Bandaging material – vet wrap	043	Head gate	075	Staple remover
010	Bands (castration or docking)	044	Hog snare	076	Stethoscope
011	Cat bag	045	Hoof knife	077	Surgical drapes
012	Catch pole (dog snare)	046	Hoof rasp	078	Suture needle – cutting
013	Catheter – butterfly	047	IV administration set	079	Suture needle – taper
014	Catheter – IV	048	Laparoscope	080	Syringe – automatic, multi-dose
015	Catheter – Tomcat urinary	049	Laryngoscopes	081	Tattooing instruments – sm. & lg.
016	Centrifuge	050	Muzzle – basket	082	Tonometer
017	Chemical indicator strips	051	Muzzle – nylon	083	Tourniquet
018	Cold sterile tray	052	Needle holder – Mayo-Hegar	084	Trocar and cannula
019	Dehorner – Barnes	053	Needle holder – Olsen-Hegar	085	Twitch – chain
020	Dehorner – electric	054	Obstetrical chain and handle	086	Twitch – humane
021	Dental floats	055	Ophthalmoscope		
022	Dental scaler	056	Otoscope		
023	Drench gun – small ruminant	057	Pig tooth nippers		
024	Ear notcher	058	Radiology personal protective equip		
025	Elastrator	059	Rectal prolapse ring – swine		
026	Elizabethan collar	060	Rumen magnet		
027	Emasculators	061	Scalpel blade		
028	Endoscope	062	Scalpel handle		
029	Endotracheal tubes	063	Scissors – suture wire cutting		
030	Fecal loop	064	Scissors – Lister bandage		
031	Fecalyzers	065	Scissors – Littauer suture removal		
032	Feeding tube for small animals	066	Scissors – Mayo dissecting		
033	Fetal extractor – calf				
034	Forceps – Alligator				
035	Forceps – Allis tissue				

Parasite/Microscopic Identification List

- 089 Blowfly (Family Calliphoridae)
- 090 Calcium oxalate crystals
- 091 Cat warble (Genus Cuterebra)
- 092 Cocci (bacteria)
- 093 Coccidia (Genus Isospora or Eimeria)
- 094 Demodectic mite (Genus Demodex)
- 095 Ear mite (Family Psoroptidae; Genus Otodectes)
- 096 Eosinophils
- 097 Epithelial cells (urine)
- 098 Flea Larva (Genus Ctenocephalides)
- 099 Flea tapeworm egg* (Genus Dipylidium)
- 100 Flea tapeworm segment* (Genus Dipylidium)
- 101 Flea tapeworm* (Genus Dipylidium)
- 102 Fleas* (Genus Ctenocephalides)
- 103 Giardia* (Genus Giardia)
- 104 Heartworm adult* (Genus Dirofilaria)
- 105 Heartworm microfilaria* (Genus Dirofilaria)
- 106 Hookworm adult* (Family Ancylostomatidae; Genus Ancylostoma, Uncinaria, Bunostomum or Globocephalus)
- 107 Hookworm egg* (Family Ancylostomatidae; Genus Ancylostoma, Uncinaria, Bunostomum or Globocephalus)
- 108 Horse Bot* (Genus Gasterophilus)
- 109 Horse Strongyles* (Family Strongylidae; Genus Strongylus)
- 110 Lice – Biting (Order Mallophaga; Genus Bovicola or Trichodectes)
- 111 Lice – sucking (Order Anoplura; Genus Linognathus or Hematopinus)
- 112 Liver fluke (Class Trematoda; Genus Fasciola; Fascioloides or Dicrocoelium)
- 113 Mosquito adult (Family Culicidae; Genus Anopheles, Culex, or Aedes)
- 114 Mosquito larva (Family Culicidae; Genus Anopheles, Culex, or Aedes)
- 115 Neutrophils
- 116 Platelets
- 117 Red blood cell (erythrocyte)
- 118 Rod (bacteria)
- 119 Roundworm adult* (Family Acarididae or Toxocaridae; Genus Toxocara, Toxascaris, Ascaris, Parascaris, or Neoascaris)
- 120 Roundworm egg* (Family Ascarididae or Toxocaridae; Genus Toxocara, Toxascaris, Ascaris, Parascaris, or Neoascaris)
- 121 Sarcoptic mite (Family Sarcoptidae; Genus Sarcoptes or Notoedres)
- 122 Struvite crystals (triple magnesium phosphate)
- 123 Taenia tapeworm egg* (Family Taeniidae; Genus Taenia)
- 124 Taenia tapeworm segment* (Family Taeniidae, Genus Taenia)
- 125 Taenia tapeworm (Family Taeniidae; Genus Taenia)
- 126 Tick – American Dog (Family Dermacentor; Genus variabilis)

- 127 Tick – Black legged deer (Family Ixodes; Genus scapularis)
- 128 Tick – Brown dog (Family Rhipicephalus; Genus sanguineus)
- 129 Tick – Lone star (Family Amblyomma; Genus americanum)
- 130 Whipworm egg* (Genus Trichuris)
- 131 Whipworm* (Genus Trichuris)
- 132 Yeast (cytology)

*Asterisk indicates which parasite life cycles could have written examination questions.

Breed/Species Identification List

DOGS – HERDING GROUP

- 133 Australian Cattle Dog
- 134 Australian Shepherd
- 135 Border Collie
- 136 Collie
- 137 German Shepherd Dog
- 138 Old English Sheepdog
- 139 Pembroke Welsh Corgi
- 140 Shetland Sheepdog

DOGS – HOUND GROUP

- 141 Afghan Hound
- 142 Basenji
- 143 Basset Hound
- 144 Beagle
- 145 Black & Tan Coonhound
- 146 Bloodhound
- 147 Dachshund
- 148 Greyhound
- 149 Rhodesian Ridgeback

DOGS – NON-SPORTING GROUP

- 150 Bichon Frise
- 151 Boston Terrier
- 152 Bulldog
- 153 Chinese Shar-Pei
- 162 Chow Chow
- 163 Dalmation
- 164 Poodle

DOGS – SPORTING GROUP

- 165 Brittany Spaniel
- 166 Cocker Spaniel
- 167 English Setter
- 168 German Shorthair Pointer
- 169 Golden Retriever
- 170 Irish Setter
- 171 Labrador Retriever
- 172 Weimaraner

DOGS – TERRIER GROUP

- 173 Bull Terrier
- 174 Cairn Terrier
- 175 Parson Russell Terrier
- 176 Scottish Terrier

DOGS – TOY GROUP

- 177 Cavalier King Charles Spaniel
- 178 Chihuahua
- 179 Miniature Pinscher
- 180 Papillon
- 181 Pekingese
- 182 Pomeranian
- 183 Poodle
- 184 Pug
- 185 Shih Tzu
- 186 Yorkshire Terrier

DOGS – WORKING GROUP

- 187 Bernese Mountain Dog
- 188 Boxer
- 189 Doberman Pinscher
- 190 Great Dane
- 191 Great Pyrenees
- 192 Mastiff
- 193 Newfoundland
- 194 Portugese Water Dog
- 195 Rottweiler
- 196 Saint Bernard
- 197 Siberian Husky
- 198 Standard Schnauzer

CATS

- 199 Abyssinian
- 200 American Shorthair
- 201 Burmese
- 202 Maine Coon
- 203 Manx
- 204 Persian
- 205 Ragdoll
- 206 Russian Blue
- 207 Siamese
- 208 Sphynx

BIRDS

- 209 African Grey Parrot
- 210 Canary
- 211 Cockatiel
- 212 Cockatoos
- 213 Love Birds
- 214 Macaw
- 215 Parakeet
- 216 Sun Conure
- 217 Zebra Finch

REPTILES

- 218 Bearded Dragon
- 219 Chameleon
- 220 Gecko
- 221 Iguana

POULTRY

- 222 Chicken - Cornish
- 223 Chicken – Leghorns
- 224 Chicken – Plymouth Rock
- 225 Chicken – Rhode Island Red
- 226 Duck
- 227 Geese
- 228 Quail
- 229 Turkey

SMALL MAMMALS

- 230 Chinchilla
- 231 Ferret
- 232 Gerbils
- 233 Guinea Pig
- 234 Hamster
- 235 Hedgehog
- 236 Sugar Glider

RABBITS

- 237 Angora
- 238 Californian
- 239 Dutch
- 240 English Spot
- 241 Holland Lop
- 242 Mini-Rex
- 243 Netherland Dwarf
- 244 New Zealand

DAIRY CATTLE

- 245 Ayrshire
- 246 Brown Swiss
- 247 Guernsey
- 248 Holstein
- 249 Jersey

BEEF CATTLE

- 250 Angus
- 251 Brahman
- 252 Charolais
- 253 Hereford
- 254 Shorthorn
- 255 Simmental

HORSE

- 256 Appaloosa
- 257 Arabian
- 258 Belgian
- 259 Clydesdale
- 260 Morgan
- 261 Paint
- 262 Percheron
- 263 Quarter Horse
- 264 Saddlebred
- 265 Tennessee Walking
- 266 Thoroughbred

GOAT

- 267 Alpine
- 268 Nubian
- 269 Angora
- 270 Boer
- 271 LaMancha
- 272 Saanen
- 273 Toggenburg

SHEEP

- 274 Columbia
- 275 Dorper
- 276 Dorset
- 277 Hampshire
- 278 Merino
- 279 Rambouillet
- 280 Southdown
- 281 Suffolk

SWINE

- 282 American Landrace
- 283 Berkshire
- 284 Chester White
- 285 Duroc
- 286 Hampshire
- 287 Yorkshire