

***VETERINARY SCIENCE
CAREER DEVELOPMENT EVENT***

RULES AND REGULATIONS

TEAM COMPETITION



ALABAMA FFA ASSOCIATION

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Alabama State Department of Education, Dr. Eric G. Mackey, State Superintendent of Education

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Veterinary Science CDE

VETERINARY SCIENCE CAREER DEVELOPMENT EVENT

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 skills in the field of veterinary science.

OBJECTIVES

Participants will demonstrate professional ethics, decision-making, communication and problem-solving skill.

Participants will demonstrate technical competency with small and large animals in the areas of anatomy and physiology; clinical procedures; identification; health and safety; and medical terminology.

ELIGIBILITY AND REGULATIONS

- For specific eligibility of participants, refer to the Contest and Awards Booklet.
- There will be a district elimination for this event. The top four teams in each district will advance to the state event.
- If a cell phone or smart watch is seen or heard in the possession of a competitor, that individual student will be disqualified from competition and receive a score of zero. Any participant in possession of an electronic device in the event area is subject to disqualification.
- Competitors must enter their **first and last name** as well as their **chapter number and name** on the scorecard or they will receive a score of zero. Judges will not attempt to figure out who the card belongs to.
- Scantrons cards that are incorrectly completed (i.e. chapter numbers are not correctly shaded in, stray marks, etc.) will not be scored thus receiving a score of zero.
- NO jewelry may be worn on the day of the state event, including rings, bracelets, earrings and exposed body piercing. Wrist watches are permitted.

DISCLAIMER

In the event that contests (CDE, LDE, TDE's) cannot be held in person, a virtual option may be conducted. Contest rules and guidelines are subject to change to meet the needs of a virtual experience.

DRESS CODE

Participants must wear closed toed shoes/boots (no sandals, crocs or slides) and long pants (jeans with no holes/ khakis/dress pants) or skirts (for religious reasons) that cover the knees if not in official dress. Leggings, jogging pants, yoga, lycra, are not permitted. Shirts should be long enough to be tucked in (no crop tops or midriff showing) and not

contain vulgar or suggestive material or language. Contest where oral reasons are given should respect the professionalism of the event, and dress aligning with the profession is preferred. Official FFA Dress is an allowable form of dress for all events. **Consequences for not being in dress code will result in disqualification, and the participant will not be allowed to compete.**

ALTERNATE POLICY

For district level events, if a chapter brings alternates there will be no more than two alternates allowed per team. Alternates will use a copy of the scan form (not an original) for those events scored via judgingcard.com. If more than four official scan forms are turned in for a chapter in one event, the highest score(s) for that team will be disqualified and deleted until the chapter only has four team members in the scoring system. Alternates must not be in groups with official team members.

For state level events, alternates are not allowed.

EVENT RULES

1. The team will consist of a maximum of four members. The team's total score will be based on the sum of the points earned by the three highest scoring participants on the team.
2. Students will need to bring number 2 pencils, calculators and clipboards (STATE ONLY).
3. Alabama FFA and the Auburn University College of Veterinary Medicine will provide paper, specific tools and equipment needed to complete practicums in the state event.
4. Because of sanitation reasons, some items needed in the event, such as stethoscopes will need to be provided by the participant or their chapter. Teams will be provided a list of specific items needed for a specific year based on the event activities. (STATE ONLY)
5. **District contests will consist of *the following* phases:**
 - Written Exam – 100 points
 - Identification – 100 points
 - Total Individual Score – 200 points
 - Total Team Score – 600 points

WRITTEN EXAMINATION (100 points) - Each participant will have 30 minutes to complete the 50 multiple choice questions. The objective exam is designed to determine team members' broad understanding of the veterinary science field. Topics for the exam may include behavior, disease (causes and sources, signs and symptoms), medical terminology, medical records, anatomy/physiology, regulations (federal, OSHA, MSDS), patient management, facility management, genetics, nutrition and husbandry.

IDENTIFICATION (100 points total) – Participants will identify equipment, parasites, and breeds/species for a total of 100 points (2 points per item). Thirty (30) minutes will be given for this activity. Identification lists are located at the end of this booklet.
Equipment – Participants will identify pieces of equipment (actual equipment and photos).

Participants will also need to have general knowledge about the use for each item.

Parasites – Participants will identify parasites (specimen and photos) and explain the life cycles of selected parasites.

Breeds – Participants will identify breeds of small and large animals (photos).

6. State finals will consist of *the following* phases:

- Written Exam – 100 points
- Identification – 100 points
- Math Practicum – 100 points
- Clinical Practicum – 50 points
- Handling and Restraint Practicum – 50 points
- Total Individual Score – 400

WRITTEN EXAMINATION (100 points) - Each participant will have 30 minutes to complete the 50 multiple choice questions. The objective exam is designed to determine team members' broad understanding of the veterinary science field. Topics for the exam may include behavior, disease (causes and sources, signs and symptoms), medical terminology, medical records, anatomy/physiology, regulations (federal, OSHA, MSDS), patient management, facility management, genetics, nutrition and husbandry.

IDENTIFICATION (100 points total) – Participants will identify equipment, parasites and breeds/species for a total of 100 points (2 points per item). Thirty (30) minutes to complete the 50 multiple choice questions. Identification lists are located at the end of this booklet.

- Equipment – Participants will identify pieces of equipment (actual equipment and photos). Participants will also need to have general knowledge about the use for each item.
- Parasites – Participants will identify parasites (specimen and photos) and explain the life cycles of selected parasites.
- Breeds – Participants will identify breeds of small and large animals (photos).

MATH APPLICATIONS PRACTICUM (100 points) – There will be 10 math practicum questions. Participants will have thirty (30) minutes to complete the entire math application practicum. Questions may include conversions, dose calculations, dilutions, cost calculations and invoices.

Example: Sophie, a golden retriever, and her owner have just moved from out- of-state and are re-establishing veterinarian relations at your clinic. Sophie's owner has provided you with her health records from her previous veterinarian. Sophie has been prescribed a diet plan by the previous veterinarian and had been coming into the clinic for weekly weight checks. Sophie's owner would like to continue the weekly checks. You weigh Sophie and record her weight as 19 kg. The owner would like you to tell her how much weight Sophie has lost. Sophie's last recorded weight was 43.2 pounds. How many pounds did Sophie lose since the last weighing? Answer: Sophie has lost 1.4 pounds since the last recorded weighing.

CLINICAL PRACTICUM (50 points) – Participants will be given one clinical procedure to complete. Students are expected to talk through the clinical procedure steps to a judge as they are being scored. Judges may ask participants for clarification on steps performed. All clinical procedure scorecards are linked or may be found at [Veterinary Science Handbook.pdf | Powered by Box](#). Some examples include Administering the following: Aural Medication, Ophthalmic Medication, Intramuscular Injection, Subcutaneous Injection, Bandage Removal, filling a Syringe for Injection, Fecal Flotation with Fecalyzer, Opening a Surgery Pack, Prepare a Surgical Pack for Sterilization, Surgical Site Preparation, Prescription Filling, Removal of Sutures, Administer Oral Tablets/Capsule Time 5 minutes per student

HANDLING AND RESTRAINT PRACTICUM (50 points) – Participants will be given one handling/restraint activities to complete (50 points each). Participants are expected to talk through the handling and restraining steps to a judge as they are being scored. Judges may ask participants for clarification on steps performed. All clinical procedure scorecards are linked or may be found at [Veterinary Science Handbook.pdf | Powered by Box](#). Some examples include, Removing a Cat from a Cage and Placing in a Cat Bag, Applying a Cat Muzzle, Restraint of the Cat in Lateral Recumbency for Femoral Venipuncture, Restraint of the Cat for Jugular Venipuncture, Applying Gauze Dog Muzzle, Applying Nylon Dog Muzzle, Removing Dog from Floor Level Cage to Restrain for Lateral Saphenous Venipuncture, Restraint of the Small Dog for Jugular Venipuncture, Restraint of a Rabbit, Haltering Ruminants, Haltering a Horse, Applying Elizabethan Collar, Snare Restraint of the Pig Time 5 minutes per student

TIE BREAKERS

District Event

In the event of a team tie, tiebreakers will be settled in the following order: combined individual identification total score; combined individual written exam total score.

In the event of an individual tie, tiebreakers will be settled in the following order: identification score; written exam score.

State Event

In the event of a team tie, tiebreakers will be settled in the following order: combined individual practicum total score; combined individual written exam total score. In the event of an individual tie, tiebreakers will be settled in the following order: combined practicum score; written exam score.

Equipment and Materials Identification List

100. Anesthetic machines
101. Autoclave
102. Autoclave tape indicator
103. Backhaus towel clamps
104. Balling gun
105. Bandaging material — Elasticon
106. Bandaging material — roll gauze
107. Bandaging material — vet wrap
108. Bands (castration or docking)
109. Catheter — IV
110. Catheter — Tomcat urinary
111. Cautery
112. Centrifuge
113. Chemical indicator strips
114. Dehorner — Barnes
115. Dehorner — electric
116. Dental/Power Float
117. Dental scaler
118. Large Animal Ear Tagger
119. Ear notcher
120. Elastrator
121. Electronic ID Reader
122. Elizabethan collar
123. Emasculators
124. Endotracheal tubes
125. Fecal loop
126. Fecalyzer
127. Fetal extractor — calf
128. Forceps — Allis tissue
129. Forceps — Babcock tissue
130. Forceps — Brown-Adson thumb
131. Forceps — Crile
132. Forceps — Kelly
133. Forceps — Rat tooth thumb
134. Forceps — Rochester Carmalt
135. Hog snare
136. Hoof knife
137. Hoof rasp
138. IV Fluid Bag
139. Muzzle — basket
140. Muzzle — nylon
141. Needle holder — Olsen-Hegar
142. Obstetrical chain and handle
143. Ophthalmoscope
144. Otoscope
145. Pig tooth nippers
146. Rumen magnet
147. Scalpel blade
148. Scalpel handle
149. Scissors — Utility Bandage
150. Scissors — Lister bandage
151. Scissors — Mayo dissecting
152. Scissors — Metzenbaum dissecting
153. Silver nitrate sticks
154. Snook ovariohysterectomy hook
155. Speculum — Equine
156. Speculum — Frick/Bovine
157. Cattle Handling Restraint Device
158. Staple remover
159. Stethoscope
160. Syringe — Leur Lock
161. Syringe — Slip Tip
162. Syringe — automatic, multi-dose
163. Tattooing instruments
164. Thermometer
165. Trocar and cannula
166. Humane Twitch

Parasite/Microscopic Identification List

200. Cat Warble (Genus *Cuterebra*)
201. Coccidia (Genus *Isospora* or *Eimeria*)
202. Demodectic Mite (Genus *Demodex*)
203. Ear Mite (Family *Psoroptidae*; Genus *Otodectes*)
204. Flea Tapeworm Egg (Genus *Dipylidium*)
205. Flea Tapeworm Segment (Genus *Dipylidium*)
206. Giardia (Genus *Giardia*)
207. Heartworm Adult (Genus *Dirofilaria*)
208. Heartworm Microfilaria (Genus *Dirofilaria*)
209. Hookworm Adult (Family *Ancylostomatidae*; Genus *Ancylostoma*, *Uncinaria*, *Bunostomum* or *Globocephalus*)
210. Hookworm Egg (Family *Ancylostomatidae*; Genus *Ancylostoma*, *Uncinaria*, *Bunostomum* or *Globocephalus*)
211. Horse Strongyles (Family *Strongylidae*; Genus *Strongylus*)
212. Liver Fluke (Class Trematoda; Genus *Fasciola*, *Fascioloides* or *Dicrocoelium*)
213. Mosquito Larva (Family *Culicidae*; Genus *Anopheles*, *Culex* or *Aedes*)
214. Neutrophils
215. Platelets
216. Mammalian red blood cell (erythrocyte)
217. Avian red blood cell (erythrocyte)
218. Roundworm Adult (Family *Ascarididae* or *Toxocaridae*; Genus *Toxocara*, *Toxascaris*, *Ascaris*, *Parascaris* or *Neoascaris*)
219. Roundworm Egg (Family *Ascarididae* or *Toxocaridae*; Genus *Toxocara*, *Toxascaris*, *Ascaris*, *Parascaris* or *Neoascaris*)
220. Sarcoptic Mite (Family *Sarcoptidae*; Genus *Sarcoptes* or *Notoedres*)
221. Taenia Tapeworm Egg (Family *Taeniidae*; Genus *Taenia*)
222. Taenia Tapeworm Segment (Family *Taeniidae*; Genus *Taenia*)
223. Tick — American Dog (Family *Dermacentor*; Genus *variabilis*)
224. Tick — Black Legged Deer (Family *Ixodes*; Genus *scapularis*)
225. Tick — Brown Dog (Family *Rhipicephalus*; Genus *sanguineus*)
226. Tick — Lone Star (Family *Amblyomma*; Genus *americanum*)
227. Whipworm Egg (Genus *Trichuris*)
228. Whipworm (Genus *Trichuris*)

Breed/Species Identification List

DOGS

Herding Group

- 300. Australian Cattle Dog
- 301. Australian Shepherd
- 302. Border Collie
- 303. Collie
- 304. German Shepherd Dog
- 305. Old English Sheepdog
- 306. Pembroke Corgi

Hound Group

- 307. Basset Hound
- 308. Beagle
- 309. Bloodhound
- 310. Dachshund
- 311. Greyhound
- 312. Rhodesian Ridgeback

Non-Sporting Group

- 313. Bichon Frise
- 314. Boston Terrier
- 315. Bulldog
- 316. Chow Chow
- 317. Dalmatian
- 318. Poodle

Sporting Group

- 319. Brittany Spaniel
- 320. Cocker Spaniel
- 321. English Setter
- 322. German Shorthaired Pointer
- 323. Golden Retriever
- 324. Irish Setter
- 325. Labrador Retriever
- 326. Weimaraner

Terrier Group

- 327. Bull Terrier
- 328. Cairn Terrier
- 329. Parson Russell Terrier
- 330. Scottish Terrier
- 331. West Highland White Terrier

Toy Group

- 332. Cavalier King Charles Spaniel
- 333. Chihuahua
- 334. Miniature Pinscher
- 335. Papillon
- 336. Pekingese
- 337. Pomeranian
- 338. Toy Poodle
- 339. Pug
- 340. Shih Tzu
- 341. Yorkshire Terrier

Working Group

- 342. Bernese Mountain Dog
- 343. Boxer
- 344. Doberman Pinscher
- 345. Great Dane
- 346. Great Pyrenees
- 347. Mastiff
- 348. Newfoundland
- 349. Rottweiler
- 350. Saint Bernard
- 351. Siberian Husky

CATS

- 352. Abyssinian
- 353. American Shorthair
- 354. Burmese
- 355. Maine Coon
- 356. Manx
- 357. Persian
- 358. Ragdoll
- 359. Russian Blue
- 360. Siamese
- 361. Sphynx

BIRDS

- 362. African Gray Parrot
- 363. Canary
- 364. Cockatiel
- 365. Cockatoos
- 366. Love Birds
- 367. Macaw
- 368. Parakeet
- 369. Sun Conure
- 370. Zebra Finch

REPTILES

- 371. Bearded Dragon
- 372. Chameleon
- 373. Gecko
- 374. Iguana
- 375. Ball Python
- 376. Burmese Python
- 377. Corn Snake

POULTRY

- 378. Chicken — Cornish
- 379. Chicken — Leghorns
- 380. Chicken — Plymouth Rock
- 381. Chicken — Rhode Island Red
- 382. Duck
- 383. Turkey

SMALL MAMMALS

- 384. Ferret
- 385. Guinea Pig
- 386. Hamster
- 387. Hedgehog
- 388. Mouse
- 389. Rat

RABBITS

- 390. Angora
- 391. Californian
- 392. Dutch
- 393. English Spot
- 394. Holland Lop
- 395. Mini-Rex
- 396. Netherland Dwarf
- 397. New Zealand

DAIRY CATTLE

- 398. Ayrshire
- 399. Brown Swiss
- 400. Guernsey
- 401. Holstein
- 402. Jersey

BEEF CATTLE

- 403. Angus
- 404. Brahman
- 405. Charolais
- 406. Hereford
- 407. Shorthorn

HORSE

- 408. Appaloosa
- 409. Arabian
- 410. Belgian
- 411. Clydesdale
- 412. Morgan
- 413. Paint
- 414. Percheron
- 415. Quarter Horse
- 416. Saddlebred
- 417. Tennessee Walking Horse
- 418. Thoroughbred

GOAT

- 419. Nubian
- 420. Angora
- 421. Boer
- 422. LaMancha

SHEEP

- 423. Columbia
- 424. Dorper
- 425. Dorset
- 426. Hampshire
- 427. Merino
- 428. Rambouillet
- 429. Southdown
- 430. Suffolk

SWINE

- 431. American Landrace
- 432. Berkshire
- 433. Chester White
- 434. Duroc
- 435. Hampshire
- 436. Yorkshire

Veterinary Science CDE
Math Practicum Conversions and Formulas

The following conversions and formulas are commonly used in veterinary medicine and may be needed for the math practicum. These should be memorized, as they are used daily in practice. Other needed conversions can be calculated using these given equations.

Units of Volume:

$$1 \text{ cc} = 1 \text{ mL}$$

$$1 \text{ cup (C)} = 8 \text{ oz}$$

$$1 \text{ teaspoon (tsp)} = 5 \text{ mL}$$

$$1 \text{ pints (pt)} = 2 \text{ C}$$

$$1 \text{ Tablespoon (Tbsp)} = 15 \text{ mL}$$

$$1 \text{ quart (qt)} = 2 \text{ pt}$$

$$1 \text{ ounce (oz)} = 30 \text{ mL}$$

$$1 \text{ gallon (gal)} = 4 \text{ qt}$$

Units of Mass:

$$1 \text{ kilogram (kg)} = 2.2 \text{ pounds (lb)}$$

$$2 \text{ Tbsp} = 1 \text{ oz}$$

$$1 \text{ pound} = 454 \text{ grams (g)}$$

$$1 \text{ lb} = 16 \text{ oz}$$

$$1 \text{ oz} = 28.35\text{g}$$

$$1 \text{ grain (gr)} = 64.8\text{mg}$$

Units of length:

$$1 \text{ inch (in)} = 2.54 \text{ centimeters (cm)}$$

Units of temperature:

$$^{\circ}\text{C} = \frac{5}{9} (^{\circ}\text{F} - 32)$$

$$^{\circ}\text{F} = \frac{9}{5} (^{\circ}\text{C}) + 32$$

**In addition to the information above, students should be fluent in metric conversions. (Most veterinary calculations will use the following prefixes: kilo, unit (no prefix), milli, and micro)

RESOURCES

This list of references is not intended to be all inclusive.

Other sources may be utilized, and teachers are encouraged to make use of the very best instructional materials available. Make sure to use discretion when selecting website references by only using reputable, proven sites. The following list contains references that may prove helpful during event preparation. The most current edition of resources will be used.

Past CDE materials and other resources are available by logging in to <https://www.ffa.org/participate/cdes/veterinary-science>

WRITTEN EXAM:

- Small Animal Care and Management. Warren. ISBN: 978-1-4180- 4105-2
- McCurnin's Clinical Textbook for Vet Technicians 8th edition- ISBN 978-1-4377-2690-0
- An Illustrated Guide to Veterinary Medical Terminology. Romich. ISBN:978-1-4354-2012-0
- Official Guide: Maintaining and Cleaning Surgical Instruments. Stow.: https://www.ffa.org/SiteCollectionDocuments/cde_vetsci_guide_maintaining_clearing_surgical_instruments.pdf
- Veterinary Science: Preparatory Training for the Veterinary Assistant. Faries. ISBN: 978-0-9849115-0-9. Order online: https://agrillifebookstore.org/publications_browse2.cfm?keywordid=4
- Introduction to Veterinary Science. Lawhead, Baker. ISBN: 978-1- 4283-1225-8
- <http://todaysveterinarypractice.navc.com/>
- Veterinary Assisting: Fundamentals and Applications. Vanhorn, Clark. ISBN: 978-1-4354-5387-6
- Clinical Procedures & Handling/Restraining Practicums
- Veterinary Assisting: Fundamentals and Applications. Vanhorn, Clark. ISBN: 978-1-4354-5387-6
- McCurnin's Clinical Textbook for Vet Technicians 8th edition- ISBN 978-1-4377-2690-0
- Manual of Clinical Procedures in Dogs, Cats, Rabbits & Rodents. Crow, Walshaw, Boyle. ISBN: 978-0813813042
- Veterinary Science: Preparatory Training for the Veterinary Assistant. Faries. ISBN: 978-0-9849115-0-9. Order online: https://agrillifebookstore.org/publications_browse2.cfm?keywordid=4

IDENTIFICATION:

- Veterinary Instruments and Equipment: A Pocket Guide. Sonsthagen. ISBN: 978-0323032032 <http://loudoun.nvcc.edu/vetonline/vet121/instruments.htm>
- <https://www.spectrumsurgical.com/product/10-0227/Surgical-Instrument-Flash-Cards.php>
- 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/>

MATH PRACTICUM:

- Medical Mathematics and Dosage Calculations for Veterinary Professionals. Bill, Robert. ISBN: 978-08138263
- Essential Calculations for Veterinary Nurses and Technicians. Terry Lake and Nicola Green. ISBN 978-0-7020-2930-1
- <https://www.ffa.org/SiteCollectionDocuments/Math%20Resource.pdf>

CLINICAL PROCEDURES & HANDLING/RESTRAINING PRACTICUMS:

- Veterinary Assisting: Fundamentals and Applications. Vanhorn, Clark. ISBN: 978-1-4354-5387-6
- McCurnin's Clinical Textbook for Vet Technicians, 8th edition. ISBN 978-1-4377-2690-0
- Manual of Clinical Procedures in Dogs, Cats, Rabbits & Rodents. Crow, Walshaw, Boyle. ISBN: 978-0813813042
- Veterinary Science: Preparatory Training for the Veterinary Assistant. Faries. ISBN: 978-0-9849115-0-9. Order online, <https://www.agrilifebookstore.org/Veterinary-Science-Preparatory-Training-p/vm-001w.htm>

Clinical Procedures Practicum rubrics can be found at National FFA.org

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