VETERINARY SCIENCE CAREER DEVELOPMENT EVENT

RULES AND REGULATIONS

TEAM COMPETITION

ALABAMA FFA ASSOCIATION
# TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Purpose</td>
<td>3</td>
</tr>
<tr>
<td>Eligibility and Regulations</td>
<td>3</td>
</tr>
<tr>
<td>State Awards/Sponsors</td>
<td>3</td>
</tr>
<tr>
<td>Event Rules</td>
<td>4</td>
</tr>
<tr>
<td>Tools and Equipment</td>
<td>4</td>
</tr>
<tr>
<td>Written Exam</td>
<td>4</td>
</tr>
<tr>
<td>Scenario Questions</td>
<td>5</td>
</tr>
<tr>
<td>Identification</td>
<td>5</td>
</tr>
<tr>
<td>Math Applications Practicum</td>
<td>5</td>
</tr>
<tr>
<td>Tiebreakers</td>
<td>6</td>
</tr>
<tr>
<td>Identification List</td>
<td>7</td>
</tr>
<tr>
<td>References</td>
<td>14</td>
</tr>
</tbody>
</table>

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Alabama State Department of Education, Philip C. Cleveland, Ed.D., Interim State Superintendent of Education

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Revised August 2016
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.

Teams will report directly to the state event. There will be no elimination at the county or district level.

If a cell phone 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 name on the scorecard or they will receive a score of zero. Judges will not attempt to figure out to whom the card belongs.

Official FFA dress is required for the event. Participants must wear black closed toe, closed heel and flat shoes (no clogs, sandals or flip-flops.)

NO jewelry may be worn on the day of the event, including rings, bracelets, ear rings and exposed body piercing. Wrist watches are permitted.

STATE AWARDS/SPONSOR(S):

Refer to Alabama FFA Contests and Awards Booklet at http://www.alabamaffa.org/forms_applications.htm
STATE EVENT RULES

1. The state event will be held during the State FFA Convention. 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 translucent clipboards.

3. Alabama FFA and the Auburn University College of Veterinary Medicine will provide paper, specific tools and equipment needed to complete practicums.

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.

5. State finals will consist of the following phases:

   Written Exam – 150 points
   Scenario Questions – 50 points
   Identification – 150 points
   Math Practicum – 100 points
   Total Individual Score – 450
   Total Team Score – 1350

   **WRITTEN EXAMINATION** (150 points) - Each participant will have 90 minutes to complete the 75 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.

   Sample written exam questions:

   Which of the following is the intermediate host for the dog tapeworm?
   a. Mosquito
   b. Rodent
   c. Flea
   d. Tick

   What is the primary body defense against bacteria that may cause disease?
   a. Skin
   b. Antibiotics
   c. Antigens
   d. Lymph nodes

TEST BANK will be available at the Alabama FFA Web site under contest tab.
**SCENARIO QUESTIONS** (50 points per scenario) – The questions associated with the scenarios will allow students to utilize critical thinking and problem-solving skills. Thirty (30) minutes will be allowed to complete the scenario question. Participants will be given one scenario based on the topic rotation listed below.

2017: Clinical/wellness  
2018: Regulations (OSHA: Occupational Safety & Health Administration; GHS: Globally Harmonized System for Hazard Communication; SDS: Safety Data Sheets)  
2019: Animal Behavior

Sample Scenario Question:  
Write a persuasive letter on the issue below to portray your point of view using the provided resource.

In 2006, a nationwide ruling was established banning the slaughter of horses. Since the ruling, there have been serious concerns with the welfare and high number of unwanted/neglected horses in the United States. Currently several states are considering reversing the 2006 ban. What are the pros and cons of the original ban and the proposal to reverse it?


**IDENTIFICATION** (150 points total) – Participants will identify equipment, parasites and breeds/species for a total of 150 points (2 points per item). Seventy-five (75) 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 identity 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) – The number of practicum questions will be four or five based on the type of activity that is assigned. 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.
6. 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

7. In the event of an individual tie, tiebreakers will be settled in the following order: combined practicum score; written exam score.
100. Ambubag
101. Anesthetic machines
102. Animal clippers
103. Autoclave
104. Autoclave tape indicator
105. Backhaus towel clamps
106. Balling gun
107. Bands (castration or docking)
108. Bandaging material- Elasticon
109. Bandaging material- roll gauze
110. Bandaging material- vet wrap
111. Basket muzzle
112. Betadine
113. Brush - Body (soft bristle)
114. Brush - Dandy (stiff bristle)
115. Brush - Slicker
116. Brush - Pin
117. Bulb syringe
118. Cat bag
119. Carmalt
120. Catch pole (dog snare)
121. Catheter - IV
122. Catheter - butterfly
123. Catheter - urine
124. Centrifuge
125. Chain twitch
126. Chemical indicator strips
127. Clipper blades
128. Clipper comb
129. Surgical drapes
130. Cold sterile tray
131. Comb - Curry
132. Comb - Flea
133. Comb - Scotch
134. Cover slips
135. Dehorner - Barnes
136. Dehorner - electric
137. Dehorner - scoop or tube
138. Dental floats
139. Dental retractor
140. Dental scaler
141. Disposable hypodermic needles
142. Drench gun
143. Ear notcher
144. Ear tags
145. Ear tag (metal) pliers
146. Elastrator
147. Elizabethian collar
148. Emasculators
149. Endotracheal tubes
150. Fecal loop
151. Fiscalizers
152. Feeding tube for small animals
153. Fetal extractor
154. Fingertip toothbrush
155. Forceps - Alligator
156. Forceps - Allis tissue
157. Forceps - Babcock tissue
158. Forceps - Brown-Adson thumb
159. Forceps - Crile
160. Forceps - Halstead mosquito hemostatic
161. Forceps - Kelly
162. Forceps - Halstead mosquito hemostatic
163. Forceps - Rat tooth thumb
164. Mouth gag speculum (small)
165. Mouth gag speculum (large)
166. Gavage needle
167. Gravity feeder / J tube
168. Halter
169. Head chute
170. Hog snare
171. Hoof knife
172. Hoof nippers
173. Hoof pick
174. Hoof rasp
175. Hoof trimmers
176. Humane twitch
178. Identification tag applicator
179. IV fluids
180. IV administration
181. Laryngoscopes
<table>
<thead>
<tr>
<th>Equipment and Materials Identification List - Page 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>182. Lead rope</td>
</tr>
<tr>
<td>183. Lead shank</td>
</tr>
<tr>
<td>184. Needle holder - Mayo-Hegar</td>
</tr>
<tr>
<td>185. Needle holder - Olsen-Hegar</td>
</tr>
<tr>
<td>186. Microscope slides</td>
</tr>
<tr>
<td>187. Muzzle - commercial</td>
</tr>
<tr>
<td>188. Nail clippers - guillotine</td>
</tr>
<tr>
<td>189. Nail clippers - plier</td>
</tr>
<tr>
<td>190. Obstetrical chain and handle</td>
</tr>
<tr>
<td>191. Ophthalmoscope</td>
</tr>
<tr>
<td>192. Otoscope</td>
</tr>
<tr>
<td>193. Paste gun</td>
</tr>
<tr>
<td>194. Pig tooth nippers</td>
</tr>
<tr>
<td>195. Pill counting tray</td>
</tr>
<tr>
<td>196. Radiology personal protective equipment</td>
</tr>
<tr>
<td>197. Rumen magnet</td>
</tr>
<tr>
<td>198. Scalpel blade</td>
</tr>
<tr>
<td>199. Scalpel handle</td>
</tr>
<tr>
<td>200. Scissors - Bandage</td>
</tr>
<tr>
<td>201. Scissors - Lister bandage</td>
</tr>
<tr>
<td>202. Scissors - Littauer suture removal</td>
</tr>
<tr>
<td>203. Scissors - Mayo dissecting</td>
</tr>
<tr>
<td>204. Scissors - Metzenbaum dissecting</td>
</tr>
<tr>
<td>205. Shedding blade</td>
</tr>
<tr>
<td>206. Silver nitrate sticks</td>
</tr>
<tr>
<td>207. Small animal oxygen cage</td>
</tr>
<tr>
<td>208. Snook ovariohysterectomy hook</td>
</tr>
<tr>
<td>209. Squeeze chute</td>
</tr>
<tr>
<td>210. Staple remover</td>
</tr>
<tr>
<td>211. Steel lift table</td>
</tr>
<tr>
<td>212. Stethoscope</td>
</tr>
<tr>
<td>213. Surgical cap</td>
</tr>
<tr>
<td>214. Surgical gloves</td>
</tr>
<tr>
<td>215. Surgical gown</td>
</tr>
<tr>
<td>216. Surgical masks</td>
</tr>
<tr>
<td>217. Surgical tray</td>
</tr>
<tr>
<td>218. Suture materials</td>
</tr>
<tr>
<td>219. Suture needle</td>
</tr>
<tr>
<td>220. Suture wire cutting scissors</td>
</tr>
<tr>
<td>221. Syringe - leur lock</td>
</tr>
<tr>
<td>222. Syringe - slip tip</td>
</tr>
<tr>
<td>223. Syringe - automatic, multi-dose</td>
</tr>
<tr>
<td>224. Tattooing instruments - small &amp; large</td>
</tr>
<tr>
<td>225. Tourniquet</td>
</tr>
<tr>
<td>226. Trocar &amp; cannula</td>
</tr>
<tr>
<td>227. Weight tape</td>
</tr>
</tbody>
</table>
Parasite Identification List

300. Blowfly (Family Calliphoridae)
301. Blowfly Maggot (Family Calliphoridae)
302. Cat Warble (Genus Cuterebra)
303. Cattle Grub (Genus Hypoderma)
304. Coccidia (Genus Isospora or Eimeria)
305. Demodectic Mite (Genus Demodex)
306. Ear Mite (Family Ascarididae; Genus Otodectes)
307. Fleas* (Genus Ctenocephalides)
308. Flea Larva (Genus Ctenocephalides)
309. Flea Tapeworm* (Genus Dipylidium)
310. Flea Tapeworm Egg* (Genus Dipylidium)
311. Flea Tapeworm Segment* (Genus Dipylidium)
312. Giardia (Genus Giardia)
313. Hard Tick (Family Ixodidae; Genus Amblyomma or Dermacentor)
315. Heartworm Adult* (Genus Dirofilaria)
316. Heartworm Microfilaria* (Genus Dirofilaria)
317. Hookworm Adult* (Family Ancylostomatidae; Genus Ancylostoma, Uncinaria, Bunostomum or Globocephalus)
318. Hookworm Egg* (Family Ancylostomatidae; Genus Ancylostoma, Uncinaria, Bunostomum or Globocephalus)
319. Horse Bots* (Genus Gasterophilus)
320. Horse Strongyles* (Family Strongylidae; Genus Strongylus)
321. Lice - Biting (Order Mallophaga; Genus Bovicola or Trichodectes)
322. Lice - Sucking (Order Anoplura; Genus Linognathus or Hematopinus)
323. Liver Fluke (Class Trematoda; Genus Fasciola, Fascioloides or Dicrocoelium)
324. Lungworm (Family Metastrongylidae; Genus Metastrongylus, Dictyocaulus or Aelurostrongylus)
325. Mosquito Adult (Family Culicidae; Genus Anopheles, Culex or Aedes)
326. Mosquito Larva (Family Culicidae; Genus Anopheles, Culex or Aedes)
327. Pinworm (Genus Oxyurus)
328. Roundworm Adult* (Family Ascarididae or Toxocariidae; Genus Toxocara, Toxascaris, Ascaris, Parascaris or Neoascaris)
329. Roundworm Egg* (Family Ascarididae or Toxocariidae; Genus Toxocara, Toxascaris, Ascaris, Parascaris or Neoascaris)
330. Sarcoptic Mite (Family Ascarididae; Genus Sarcoptes or Notoedres)
331. Taenia Tapeworm* (Family Taeniidae; Genus Taenia)
332. Taenia Tapeworm Egg* (Family Taeniidae; Genus Taenia)
333. Taenia Tapeworm Segment* (Family Taeniidae; Genus Taenia)
335. Whipworm* (Genus Trichuris)
336. Whipworm Egg* (Genus Trichuris)

*Asterisk indicates which parasite life cycles could have questions.
<table>
<thead>
<tr>
<th>Cats</th>
<th>Birds</th>
<th>Reptiles</th>
</tr>
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<tbody>
<tr>
<td>500. Abyssinian</td>
<td>528. Cockatiel</td>
<td>548. Chameleon</td>
</tr>
<tr>
<td>503. Cornish Rex</td>
<td>531. Parakeet</td>
<td>551. Lizard</td>
</tr>
<tr>
<td>505. Exotic</td>
<td>533. Canary</td>
<td>553. Snake</td>
</tr>
<tr>
<td>506. Maine Coon</td>
<td>534. Macaw</td>
<td>554. Turtle</td>
</tr>
<tr>
<td>507. Manx</td>
<td>535. Mynah</td>
<td>556. Frog</td>
</tr>
<tr>
<td>508. Persian</td>
<td>536. Rainbow Lorikeet</td>
<td>557. Toad</td>
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<tr>
<td>509. Ragdoll</td>
<td>537. Society Finch</td>
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<td>510. Russian Blue</td>
<td>538. Sun Conure</td>
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<tr>
<td>511. Siamese</td>
<td>539. Zebra Finch</td>
<td></td>
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<tr>
<td>512. Sphynx</td>
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<tr>
<td>513. Turkish Angora</td>
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<tr>
<td><strong>Rabbits</strong></td>
<td><strong>Small Mammals</strong></td>
<td><strong>Reptiles</strong></td>
</tr>
<tr>
<td>515. Angora</td>
<td>541. Degus</td>
<td>559. Chicken- Leghorns</td>
</tr>
<tr>
<td>516. Californian</td>
<td>542. Ferret</td>
<td>560. Chicken- Rhode Island Red</td>
</tr>
<tr>
<td>518. Dwarf Hotot</td>
<td>544. Guinea Pig</td>
<td>562. Duck</td>
</tr>
<tr>
<td>519. English Spot</td>
<td>545. Hamster</td>
<td>563. Geese</td>
</tr>
<tr>
<td>520. Flemish Giant</td>
<td>546. Hedgehog</td>
<td>564. Quail</td>
</tr>
<tr>
<td>521. Jersey Wooly</td>
<td>547. Sugar Glider</td>
<td>565. Turkey</td>
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<tr>
<td>522. Holland Lop</td>
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<tr>
<td>523. Netherland Dwarf</td>
<td></td>
<td></td>
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<tr>
<td>524. New Zealand</td>
<td></td>
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</tr>
<tr>
<td>525. Polish</td>
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<tr>
<td>526. Mini-Rex</td>
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<td>527. Satin</td>
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<tr>
<td><strong>Dogs</strong></td>
<td><strong>HERDING GROUP</strong></td>
<td><strong>TOY GROUP</strong></td>
</tr>
<tr>
<td><strong>SPORTING GROUP</strong></td>
<td>425. Australian Cattle Dog</td>
<td>451. Cavalier King Charles Spaniel</td>
</tr>
<tr>
<td>400. Brittany</td>
<td>426. Australian Shepherd</td>
<td>452. Chihuahua</td>
</tr>
<tr>
<td>404. German Shorthaired Pointer</td>
<td>430. German Shepherd Dog</td>
<td>456. Papillon</td>
</tr>
<tr>
<td>407. Labrador Retriever</td>
<td>433. Shetland Sheepdog</td>
<td>459. Poodle</td>
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<tr>
<td>408. Weimaraner</td>
<td>434. Akita</td>
<td>460. Pug</td>
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<tr>
<td><strong>NON-SPORTING GROUP</strong></td>
<td>435. Alaskan Malamute</td>
<td>461. Shih Tzu</td>
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<tr>
<td>412. Chinese Shar-Pei</td>
<td>439. Doberman Pinscher</td>
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<tr>
<td>414. Dalmatian</td>
<td>441. Great Dane</td>
<td>466. American Foxhound</td>
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<tr>
<td>415. Lhasa Apso</td>
<td>442. Great Pyrenees</td>
<td>467. Basenji</td>
</tr>
<tr>
<td>416. Poodle</td>
<td>443. Mastiff</td>
<td>468. Basset Hound</td>
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<tr>
<td>419. Miniature Schnauzer</td>
<td>446. Rottweiler</td>
<td>471. Bloodhound</td>
</tr>
<tr>
<td>421. Scottish Terrier</td>
<td>448. Samoyed</td>
<td>473. English Foxhound</td>
</tr>
<tr>
<td>422. Smooth Fox Terrier</td>
<td>449. Siberian Husky</td>
<td>474. Greyhound</td>
</tr>
<tr>
<td>423. West Highland White Terrier</td>
<td>450. Standard Schnauzer</td>
<td>475. Whippet</td>
</tr>
<tr>
<td>424. Wire Fox Terrier</td>
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</tr>
</tbody>
</table>

**Poultry**

- 558. Chicken- Cornish
- 559. Chicken- Leghorns
- 560. Chicken- Rhode Island Red
- 561. Chicken- Plymouth Rock
- 562. Duck
- 563. Geese
- 564. Quail
- 565. Turkey

**Other**

- 566. Potbellied Pig
**Dairy Cattle**
600. Ayrshire
601. Brown Swiss
602. Guernsey
603. Holstein
604. Jersey

**Beef Cattle**
605. Angus
606. Brahman
607. Charolais
608. Hereford
609. Simmental
610. Shorthorn

**Swine**
611. American Landrace
612. Berkshire
613. Chester White
614. Duroc
615. Hampshire
616. Yorkshire

**Horse**
617. Appaloosa
618. Arabian
619. Belgian
620. Clydesdale
621. Haflinger
622. Miniature
623. Morgan
624. Paint
625. Paso Fino
626. Percheron
627. Quarter Horse
628. Saddlebred
629. Standardbred (w/cart)
630. Tennessee Walking Horse
631. Thoroughbred
632. Donkey
633. Mule

**Goat**
635. Alpine
636. Nubian
637. Angora
638. Boer
639. LaMancha
640. Oberhasli
641. Pygmy
642. Saanen
643. Toggenburg

**Sheep**
645. Cheviot
646. Columbia
647. Dorset
648. Hampshire
649. Jacob
650. Merino
651. Montadale
652. Rambouillet
653. Southdown
654. Suffolk
### Veterinary Science Career Development Event

**Written Scenario Scorecard – 50 points**

**Participant Name:** ________________________

#### Written Communication

<table>
<thead>
<tr>
<th>Indicators</th>
<th>Very strong evidence skill is present</th>
<th>Moderate evidence skill is present</th>
<th>Strong evidence skill is not present</th>
<th>Points Earned</th>
<th>Weight</th>
<th>Total Score</th>
</tr>
</thead>
</table>
| A. Spelling/grammar (sentence structure, verb agreement, etc.) | Spelling and grammar are extremely high quality.  
- 2 or fewer spelling errors are present.  
- 2 or fewer grammar errors are present. | Spelling and grammar are adequate.  
- 3-5 spelling errors are present.  
- 3-5 grammar errors are present. | Spelling and grammar are less than adequate.  
- 6 or more spelling errors are present.  
- 6 or more grammar errors are present. | X 1 | | |
| B. Message | Communicates ideas extremely clearly as well as extremely focused. Thoughts are very interesting and understandable.  
- All main ideas are supported by clear and vivid details.  
- Clearly organized and concisely presented.  
- Remaining on target is completely focused on the obvious construction and strong introduction, body and conclusion layout. | Communicates ideas clearly and concisely, and message is interesting and understandable.  
- Most of the main ideas are supported by sufficient details.  
- Good organization with few statements out of place or lacking in clear construction. | Communicates ideas clearly, but message is difficult to understand.  
- None of the main ideas are supported by sufficient details.  
- Little to no organization is present and is sometimes awkward and lacking construction. | | | |
| C. Writing style | Writing style is selectively appropriate for the intended audience.  
- The style chosen has obviously been well thought-out based on the specific audience. | Thought was given to the intended audience, and the style reflects the purpose for communicating with that audience.  
- Most language is appropriate for the intended audience. | Writing style does not show intent to connect with different types of audiences, style is more for a generic reader.  
- Some language used might be confusing for some audiences | | | |

#### Written Content

| Indicators | Covers topic in-depth with details and examples.  
- Subject knowledge is excellent. | Includes essential knowledge about the topic.  
- Subject knowledge appears to be good. | Includes essential information about the topic but these are 1-2 factual errors. | X 3 | | |
| E. Critical thinking/problem-solving skills | Uses general methods, in an orderly manner, for finding solutions to specific problems.  
- Evaluates evidence and assesses conclusions.  
- Develops and defends a reasonable position or argument. | Uses limited critical thinking skills in determining solutions to problems.  
- Develops moderate defense to conclusion for position or argument. | Uses weak critical thinking skills in determining solutions to problems.  
- Develops weak defense to conclusion for position or argument. | X 2 | | |
| F. Inductive reasoning skills | Establishes a logical, systematic process of achieving certain ends with accuracy and efficiency.  
- Gathers together particular observations in the form of premises.  
- Moves from specific premises to a general conclusion. | Establishes a shallow reasoning process of achieving certain ends.  
- Gathers together limited observations in the form of premises.  
- Moves from incomplete specific premises to a general conclusion. | Establishes an inadequate reasoning process of achieving certain ends.  
- Incompletely gathers observations in the form of specific premises.  
- Inadequately formulates a general conclusion. | X 2 | | |

**Total Points**
National Vet Science Math Practicum
Units of Measurements

These are common formulas and conversions that students should be prepared to use as they may appear on the Math Practicum.

Units of Mass

1 kilogram (kg) = 2.2 pounds
1 pound = 0.45 kg
1 gram (g) = 1000 milligrams (mg)
1 pound = 453.59 g
60 grains (gr) = 1 dram (dr)
3 teaspoons (tsp) = 1 tablespoon (tbsp) = 1/2 oz = 14.3 g
2 tbsp = 1/8 cup = 1 oz = 28.3 g
4 tbsp = 1/4 cup = 2 oz = 56.7 g
5 1/3 tbsp = 1/3 cup = 2.6 oz = 75.6 g
8 tbsp = 1/2 cup = 4 oz = 113.4 g
12 tbsp = 3/4 cup = 6 oz = 0.375 pound
32 tbsp = 2 cups = 16 oz = 1 pound

Units of Volume

1 tsp = 5 milliliters (ml)
2 tbsp = 1 fluid ounce (fl oz) = 30 ml
1/4 cup = 2 fl oz = 60 ml
1/2 cup = 4 fl oz = 125 ml
1 cup = 8 fl oz = 250 ml
1 1/2 cups = 12 fl oz = 375 ml
2 cups or 1 pint = 16 fl oz = 500 ml
4 cups or 1 quart = 32 fl oz = 1000 ml = 1 liter (L)
1 gallon = 128 fl oz = 4 L
2 pints = 1 quart
4 quarts = 1 gallon

Units of Length

1 millimeter (mm) = 0.001 of a meter (m)
25 mm = 1 inch

Units of Temperature

Celcius (°C) and Fahrenheit (°F)

°C = 5/9 (°F-32) or (°F-32) x 5/9
°F = 9/5 (°C) + 32 or °C x 9/5 + 32
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:

- http://todaysveterinarypractice.navec.com/
- Clinical Procedures & Handling/Restraining Practicums

IDENTIFICATION:

  http://loudoun.nvcc.edu/ vetonline/vet121/instruments.htm
- American Kennel Club – http://www.akc.org/index.cfm
- 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