



Veterinary Science

Purpose

The purpose of the New Jersey FFA 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.

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.

Event Rules

The complete rules, policies and procedures relevant to all New Jersey FFA Career and Leadership Development Events may be found in the CDE & LDE Event Participation Policy:

https://nj.gov/agriculture/ag_ed/ffa/activity/CDE_LDE_Policy.pdf

- Teams will consist of four members, and all four scores will count toward the team score.
- The team score is comprised of the combined scores of each individual and the team activity in which all team members will participate.
- All participants must wear either scrubs (solid-color tops and bottoms) or a polo with slacks for the practical application of the event. All participants must wear closed-toe, closed-heel and flat shoes (no clogs, sandals or flip-flops). No jewelry may be worn during the practicums. This includes rings, bracelets, earrings and exposed body piercings.
- Under no circumstances will any participant be allowed to touch or handle identification items or other specimens during the event except as expressly permitted in certain practicums.
- Any communication between participants during the event will be sufficient cause to eliminate the team from the event.
- Any participant caught cheating during the event will be expelled from the event.
- Participants are NOT allowed to use (or have visible) electronic devices during the event, unless for medical reasons or a portion of the event requires usage. This includes cell phones, tablets, etc. Participants will be allowed to use calculators, if specified for that event; however, cell phone calculators and graphing calculators are not permitted! Failure to adhere to these rules will result in disqualification.
- All individuals participating will judge in a cooperative manner following the rules set forth by the event coordinator.
- No school/chapter will use Rutgers University or Delaware Valley University facilities or locations for the training of teams. Contact with University faculty and staff is permissible. **Penalty will be disqualification.**
- This event will be scored using "Scan-tron" sheets. It is important for students to listen to

directions and fill out the sheets correctly in order to receive credit. Sample scan-tron sheets are available for practice on the State Activity Guide. This event uses the Horticulture (Multipurpose #105482) scan-tron sheet.

- There will be no separate alternate teams.
- A student may not compete in more than one event during the New Jersey FFA Spring Career Development Events.
- The State level competition fee of \$11 per contestant will be paid by the competing school. If a chapter is at least blue affiliated, registration to state FFA career development events is waived.

Event Format

TOOLS AND EQUIPMENT

Materials to be provided by the student:

- Two no. 2 pencils
- Calculator (cell phone and programmable calculators will not be permitted)
- Clipboard

FFA will provide the specific tools and equipment needed to complete practicums.

Any participant in possession of an electronic device in the event area is subject to disqualification.

FLOW OF EVENT

- Written Exam, Math Applications Exam & Identification (partial) – 60 minutes
- Practicums (1 Handling and 1 Clinical) and Identification (partial) – 60 minutes
- Team Activity – 40 minutes

INDIVIDUAL ACTIVITIES - 300 POINTS

GENERAL KNOWLEDGE – PATIENT REVIEW AND CLINICAL APPLICATION

The objective of general knowledge is designed to determine team members' broad understanding of the veterinary science field. General knowledge will be demonstrated during the history and scenario demonstrations.

Topics for the exam may include the following:

- Behavior
- Disease (causes and sources, signs and clinical signs)
- Medical records
- Medical terminology
- Anatomy/physiology
- Body Condition Score: Dog, Cat, Beef Cattle, Dairy Cattle, Equine
- Regulations (OSHA: Federal Occupational Safety and Health Administration; GHS: Globally Harmonized System for Hazard Communication; SDS: Safety Data Sheets)
- Patient management
- Facility management
- Practice management
- Genetics
- Nutrition
- Husbandry

MATH APPLICATIONS

The math applications will vary based on scenario. Questions may include conversions, dose calculations dilutions, cost calculations and invoices.

IDENTIFICATION

Participants will identify equipment, parasites and breeds/species. Identification lists are located at the end of this handbook.

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

CLINICAL APPLICATIONS

Participants will be given one clinical and one handling /restraint activity to complete. Five minutes will be allotted for each activity. Participants are expected to talk through the steps to a judge as they are being scored. Judges may ask participants for clarification on steps performed.

CLINICAL PROCEDURE PRACTICUM

- Administer Oral Tablets/Capsule
- Administering Aural Medication
- Administering an Intramuscular Injection
- Administering Ophthalmic Medication
- Administering a Subcutaneous Injection
- Applying a Lower Leg Bandage to a Horse
- Applying a Standing Wrap on a Horse
- Bandage Removal
- Fecal Flotation with Fecalyzer
- Filling a Syringe for Injection
- Opening a Surgery Pack
- Prepare a Surgical Pack for Sterilization
- Prescription Filling
- Removal of Sutures
- Surgical Site Preparation

HANDLING AND RESTRAINING PRACTICUM

- Applying a Cat Muzzle
- Removing a Cat from a Cage and Wrap in a Fear-Reduced Manner
- Restraint of the Cat for Cephalic IV Catheter Placement
- Restraint of the Cat for Jugular Venipuncture
- Restraint of the Cat in Lateral Recumbency for Femoral Venipuncture
- Applying Elizabethan Collar
- Applying Gauze Dog Muzzle
- Applying Nylon Dog Muzzle
- Removing Dog from Floor Level Cage to Restrain for Lateral Saphenous Venipuncture
- Restraint of the Dog for Cephalic Venipuncture
- Restraint of the Small Dog for Jugular Venipuncture
- Haltering a Horse
- Applying a Lead Chain on a Horse Under the Chin
- Lifting a Hind Foot of a Horse
- Handling Ruminants
- Restraint of a Rabbit
- Placing a Tail Tie
- Snare Restraint of the Pig

TEAM ACTIVITY (200 POINTS)

Teams will utilize the information they gathered from the scenario(s) presented during the individual activities to complete the team activity. After each student completes their individual components, the team will convene to discuss the scenario they just completed. Students may be provided additional data needed to present their findings as a team. The team will have 40 minutes to respond to the prompts and finalize their findings.

Resources provided for the team activity may include diagnostic information like blood work, synopsis of disease state, treatment recommendations and cost information. The team should be prepared to direct their findings in a variety of manners that could include presenting to a client, general public or a veterinary professional.

Scoring

Activities	Individual Points	Team Points
Written exam, Identification, Math Applications	300	1200
Handling and restraining practicum	30	120
Clinical procedures practicum	50	200
Team activity		200
TOTAL	380	1,720

TIEBREAKERS

If ties occur, the following events will be used in order to determine award recipients:

Teams

1. Team Activity
2. Combined general knowledge
3. Combined Practicum

Individuals

1. Combined general knowledge
2. Combined Practicum

Awards

Awards will be presented to individuals and the first team based on their rankings at the CDE awards ceremony at the New Jersey State FFA Convention. Awards are sponsored by the National FFA Foundation and the New Jersey FFA Association.

The 1st place team will represent New Jersey at the National FFA Convention in October.

Individuals

- Overall Medals
 - Medals – Top three individuals
- H.O. Sampson Certificates (hands-on sections ONLY)
 - Certificate – Top five individuals

Teams

- Plaque Sponsored by the National FFA Foundation – 1st place

References

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 FFA.org.

- 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
- Veterinary Instruments and Equipment: A Pocket Guide. Sonsthagen. ISBN: 978-0323032032
- American Kennel Club, <http://www.akc.org/index.cfm>
- Cat Fanciers' Association, <https://cfa.org/breeds/>
- American Rabbit Breeders Association, <http://www.arba.net/>
- Cattle Breeds, <http://afs.okstate.edu/breeds/>
- Medical Mathematics and Dosage Calculations for Veterinary Professionals. Bill, Robert. ISBN: 978-08138263
- National Vet Science Math Practicum Units of Measurement, common formulas and conversions for students to use as they may appear on the Math Practicum, FFA.org

SUPPLEMENTAL RESOURCES

- <https://todaysveterinarypractice.com/>
- atdove.com

BODY CONDITION SCORES:

- Cat & Dog: <https://www.purinainstitute.com/centresquare/nutritional-and-clinical-assessment/purina-body-condition-system>
- Horse: <https://ker.com/wp-content/uploads/body-condition-score-chart.pdf>

Request for Reasonable Accommodations

The New Jersey FFA Association is committed to providing equal access to our events and activities for all people. Use this form to request a reasonable accommodation or assistance at least 3 weeks before any state-level events:

<https://form.jotform.com/NJFFA/accommodations-request>. A new form will need to be submitted for each event in which a reasonable accommodation is being requested. This information will be kept confidential and will be used only to process the request. Our staff will review the request upon receipt and contact the requestor with additional information. The association cannot guarantee accommodations or assistance if a form is received less than 3 weeks before an event. Accommodations being requested that require the assistance of another person (nurse, interpreter, scribe, reader, etc.) is the responsibility of the school/requestor. It is also the school/requestor's responsibility to provide any approved equipment to aide in the accommodation process, if applicable.

Equipment and Materials Identification List

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

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

Team Activity Rubric

200 POINTS

Indicator	Very strong evidence of skill 5–4 points	Moderate evidence of skill 3–2 points	Weak evidence of skill 1–0 points	Points Earned	Weight	Total Score
Content – 200 points						
Veterinary topic research	Demonstrates prior research and preparedness of the veterinary topic	Demonstrates some prior research and preparedness of the veterinary topic	Does not demonstrate prior research and preparedness of the veterinary process.		X 5	
	Full understanding of disease and/or veterinary process	Some understanding of disease and/or veterinary process	Does not understand the disease and/or veterinary process		X 5	
	Full understanding of treatment protocols and/or recommendation for the topic	Some understanding of treatment protocols and/or recommendation for the topic	Does not understand the treatment protocols and/or recommendation for the topic		X5	
Demonstrates knowledge of topic	Responses support strong knowledge of the subject with good evidence of support.	Responses support some knowledge of the subject with fair evidence of support.	Responses support little knowledge of the subject with poor evidence of support.		X 15	
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 concise by remaining on target, is completely focused with 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.		X5	
Spelling/grammar	Spelling and grammar are extremely high quality. • Two or fewer spelling errors are present. • Two or fewer grammar errors are present.	Spelling and grammar are adequate. • Three to five spelling errors are present. • Three to five grammar errors are present.	Spelling and grammar are less than adequate. • Six or more spelling errors are present. • Six or more grammar errors are present.		X5	
					TOTAL POINTS	

Clinical Procedures Practicum

ADMINISTERING AURAL MEDICATION

Participant must talk through practicum steps with judge.

Criteria	Points Possible	Points Earned
The student successfully administered the proper amount of medication into the ear canal. <ul style="list-style-type: none"> • Ear pinna held upright • Correct amount of medication was administered without contamination 	20	
The student massages the base of the outside of the ear canal causing a swishing sound from the medication moving around in the ear canal.	15	
The student wipes any solution that may have leaked onto the outside of the ear flap or hair.	15	
TOTAL POINTS	50	

Clinical Procedures Practicum

ADMINISTERING OPHTHALMIC MEDICATION

Participant must talk through practicum steps with judge.

Criteria	Points Possible	Points Earned
The student wipes any discharge from the patient's eye using a gauze sponge or cotton ball.	8	
The student opens the end of the ophthalmic medicine	6	
The student uses the index finger and thumb to pull the upper and lower lids apart to open the eye. The student's thumb pulls the lower lid down and the index finger pulls the upper lid upward. The student's other finger may rest on the head of the animal.	12	
While resting the hand holding the medication on the head of the patient, the student applies the drops or ointment gently into the eye without touching the eye, counting each drop or applying the proper amount of ointment without contamination.	12	
The student releases the eyelids.	6	
The student allows the animal to blink to move the medication throughout the eye.	6	
TOTAL POINTS	50	

Clinical Procedures Practicum

ADMINISTERING AN INTRAMUSCULAR INJECTION

Participant must talk through practicum steps with judge.

Criteria	Points Possible	Points Earned
The student selected the proper site for administration.	10	
The student directs the needle through the skin and into the muscle.	10	
The student aspirates; if no blood is noted, injects.	10	
The student withdraws the needle and places in the sharps container.	10	
The student massages the area where the injection was given and praises the patient.	10	
TOTAL POINTS	50	

Clinical Procedures Practicum

ADMINISTERING A SUBCUTANEOUS INJECTION

Participant must talk through practicum steps with judge.

Criteria	Points Possible	Points Earned
The student lifts the skin using the thumb and forefinger forming a triangle or tent with the skin.	10	
The student inserts the needle into the skin at the base of the tent or triangle parallel to the body.	10	
The student aspirates, looking for any signs of blood entering the syringe; if no blood enters the syringe, the student administers the injection.	10	
The student withdraws the needle and places in the sharps container.	10	
The student rubs the injection site and praises the patient.	10	
TOTAL POINTS	50	

Clinical Procedures Practicum

BANDAGE REMOVAL

Participant must talk through practicum steps with judge.

Criteria	Points Possible	Points Earned
The student chooses the bandage scissors and holds in proper orientation.	10	
The student keeps the blade flat against the body and the tip raised slightly upward in contact with bandage.	10	
The student begins cutting each layer from the distal end moving proximally.	10	
The student gently removes each layer of bandage.	10	
The student notes the status of the unbandaged area and states if it is normal or if there are any problems.	6	
The student cleans up work area.	4	
TOTAL POINTS	50	

Clinical Procedures Practicum

FILLING A SYRINGE FOR INJECTION

Participant must talk through practicum steps with judge.

Criteria	Points Possible	Points Earned
The student determines the amount to be placed 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 student 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 expels the air by pushing the end of the plunger.	6	
The student places syringe in the sharps container.	6	
TOTAL POINTS	50	

Clinical Procedures Practicum

FECAL FLOTATION WITH FECALYZER

Participant must talk through practicum steps with judge.

Criteria	Points Possible	Points Earned
The student selects about 1/4 teaspoon of feces and places it into a fecalyzer.	6	
The student adds enough flotation solution to fill the fecalyzer about half full.	6	
The student mixes the feces into solution until no large fecal particles remain.	6	
The student places insert into fecalyzer.	6	
The student fills the vial with more solution until there is a visible meniscus at the top.	6	
The student places a cover slip on top of the fecalyzer.	6	
The student allows the vial to sit undisturbed for 10 to 15 minutes.	6	
The student carefully removes the cover slip without tilting it and places it on a microscope slide.	8	
TOTAL POINTS	50	

Clinical Procedures Practicum

OPENING A SURGERY PACK

Participant must talk through practicum steps with judge.

Criteria	Points Possible	Points Earned
The student places the surgery pack on a clean, dry surface.	4	
The student removes or tears the tape securing the package.	4	
The student opens the first flap away from them.	8	
The student opens the side flaps without reaching across open pack.	8	
The student opens the last flap toward them.	8	
The student opens the pack without contamination.	12	
The student steps away so the surgeon or scrub nurse can complete the opening of the pack.	6	
TOTAL POINTS	50	

Clinical Procedures Practicum

PREPARE A SURGICAL PACK FOR STERILIZATION

Participant must talk through practicum steps with judge.

Criteria	Points Possible	Points Earned
The student gathers the appropriate instruments and instrument pan if applicable.	5	
The student gathers additional supplies if applicable.	10	
The student selects the appropriate packaging material and chemical indicator.	10	
The student assembles the pack correctly by following the instructions on the checklist or recipe.	10	
The student places the chemical indicator in the correct area of the pack.	10	
The student properly wraps, secures and labels the pack.	5	
TOTAL POINTS	50	

Clinical Procedures Practicum

SURGICAL SITE PREPARATION

Participant must talk through practicum steps with judge.

Criteria	Points Possible	Points Earned
The student applies antiseptic scrub to clipped area.	8	
The student preps the clipped area with a clean surgical sponge beginning at the incision site moving in a circular motion and works toward the edges.	8	
The student does not bring the sponge back to the incision site once it is moved away from the incision site.	8	
The student discards the sponge once it reaches the edge of the clipped area.	8	
The student wipes the clipped area with a rinse solution using a clean surgical sponge following the same pattern as when scrubbing with the antiseptic.	8	
The student repeats the scrub and rinse a minimum of three times or until the final rinse sponge was clean.	10	
TOTAL POINTS	50	

Clinical Procedures Practicum

PRESCRIPTION FILLING

Participant must talk through practicum steps with judge.

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 or 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 or 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 transfers 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	

Clinical Procedures Practicum

REMOVAL OF SUTURES

Participant must talk through practicum steps with judge.

Criteria	Points Possible	Points Earned
The student clearly visualizes and inspects the incision site.	10	
If there are problems with the incision site, the student informs the veterinarian. If there are no problems, the student removes the sutures.	10	
The student chooses the correct tool to remove the sutures.	10	
The student places the curved blade underneath the suture for removal and removes the suture.	15	
The student does not cause unnecessary harm or discomfort to the patient.	5	
TOTAL POINTS	50	

Clinical Procedures Practicum

ADMINISTER ORAL TABLET/CAPSULE

Participant must talk through practicum steps with judge.

Criteria	Points Possible	Points Earned
The student reads and interprets the veterinarian's order.	10	
The student selects the correct drug and concentration.	20	
The student is able to open the mouth of the animal.	5	
The student maintains control of the head or muzzle during the administration of the medication.	5	
The student uses an appropriate technique to encourage the patient to swallow.	5	
The student is able to control the animal in a manner that is adequate to administer the medication yet did no harm to the patient.	5	
TOTAL POINTS	50	

Clinical Procedures Practicum

APPLYING A LOWER LEG BANDAGE TO A HORSE

Participant must talk through practicum steps with judge.

Criteria	Points Possible	Points Earned
The student assembles the correct material for bandaging a lower limb with a wound. (primary-gauze or dressing; secondary-rolled cotton; tertiary- Vetrap™).	10	
The student covers the wound with the correct material.	4	
The student places the secondary bandage material in the correct direction to the limb ensuring that they do not create any restriction of joints above or below the wound.	6	
The student ensures the secondary layer is snug and smooth around the limb.	4	
The student applies the first layer of the tertiary bandage to the limb applying even pressure and ensuring it is wrinkle free.	5	
The student applies the second layer of the tertiary bandage beginning a ½ inch distal of the first layer.	5	
The student stretches the second layer of the tertiary bandage to 50% then applies it to the limb.	5	
The student ensures that each wrap of the second layer of the tertiary bandage overlaps the last by half and is wrinkle free.	4	
The student applies the last layer of the tertiary bandage to the top of the bandage without tension.	3	
The student applies the last layer of the tertiary bandage to the bottom of the bandage without tension.	3	
TOTAL POINTS	50	

Resource: https://emc.vetmed.vt.edu/content/dam/emc_vetmed_vt_edu/Files/equine-bandaging_lower-limb.pdf

Clinical Procedures Practicum

APPLYING A STANDING WRAP ON A HORSE

Participant must talk through practicum steps with judge.

Criteria	Points Possible	Points Earned
The student assembles the correct material for applying a standing wrap. (No-bow wraps aka quilts and standing wrap.)	10	
The student places the edge of the first layer along the inside of the cannon bone and wraps ensuring they do not create any restriction of the joints above or below the wrap.	10	
The student continues around the lower leg of the horse making sure to apply even pressure with no wrinkles and keeps the proximal and distal edges of the wrap even.	6	
The student starts the next layer halfway down the leg, in the same direction as first layer, and ensures the wrap is even and lays flat.	6	
The student pulls the wrap snugly over the cannon bone and continues to wrap distally applying steady and even pressure.	6	
The student overlaps the bandage evenly, so no pressure points are created.	6	
The student leaves ½" of the first layer showing when they reach the fetlock then continue to wrap the limb proximally.	3	
Once the student reaches the proximal edge, they leave ½" of the first layer showing and wrap down the leg until the wrap can be secured with the Velcro strap.	3	
TOTAL POINTS	50	

Resource: <https://www.farmhousetack.com/blogs/barn-blog/how-to-wrap-a-standing-wrap>

Handling and Restraining Practicum

REMOVING A CAT FROM A CAGE AND PLACING IN CAT BAG

Participant 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.	3	
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 his or her body and closes the cage door with his or her free hand.	3	
The student carries the cat to the exam table while holding the cat close to his or her body.	3	
The student scruffs the cat and lifts it into the bag in one swift motion while supporting the hind end.	4	
The student wraps the Velcro strap around the cat's neck and immediately zips up the bag.	4	
The student uses the proper zippered opening to expose the front limb.	4	
To remove the cat, the student removes the Velcro strap first, then unzips the bag and removes the cat by scruffing and supports the hind end.	5	
TOTAL POINTS	30	

Handling and Restraining Practicum

APPLYING A CAT MUZZLE

Participant 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 his or her body and closes the cage door with his or her 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 sitting or sternal position on exam table.	2	
The student positions the muzzle properly in his or 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 IN LATERAL RECUMBENCY FOR FEMORAL VENIPUNCTURE

Participant must talk through practicum steps with judge.

Criteria	Points Possible	Points Earned
The student places the cat on an examination table.	3	
The student scruffs the cat with one hand and lifts it off the table enough to grasp both hind legs with his or her other hand and reaches under cat to grasp both hind limbs.	8	
The student lays the cat on its side with the hind legs stretched rearward.	7	
The student tucks top rear leg and tail while occluding with side of hand.	8	
The student speaks to the patient in a calm and affectionate manner during the procedure.	4	
TOTAL POINTS	30	

Handling and Restraining Practicum

RESTRAINT OF THE CAT FOR JUGULAR VENIPUNCTURE

Participant must talk through practicum steps with judge.

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 speaks to the patient in a calm and affectionate manner during the procedure.	4	
TOTAL POINTS	30	

Handling and Restraining Practicum

RESTRAINT OF THE CAT FOR CEPHALIC IV CATHETER PLACEMENT

Participant must talk through practicum steps with judge.

Criteria	Points Possible	Points Earned
The student places the cat in sternal recumbency on an examination table.	4	
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 extends the left front limb forward by grasping the elbow in the palm of his or her hand with thumb on the top of the elbow joint.	7	
The student allows the judge to grasp the left front paw and extend the limb toward him or her.	5	
The student occludes the vein by pressing down on the top of the elbow joint with his or her thumb and then rotating his or her thumb laterally.	7	
TOTAL POINTS	30	

Handling and Restraining Practicum

APPLYING A GAUZE DOG MUZZLE

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	30	

Handling and Restraining Practicum

APPLYING A NYLON DOG MUZZLE

Participant must talk through practicum steps with judge.

Criteria	Points Possible	Points Earned
The student selects appropriate muzzle.	4	
The student places the dog in sitting or sternal position on exam table or floor.	2	
The student comes from behind the dog's head with the muzzle in one hand in the correct position.	7	
The student brings the muzzle up to the dog's face and slips it on while grasping the strap with the other hand.	6	
The student secures the muzzle.	5	
The student checks for proper fit (one finger inserted under the strap).	6	
TOTAL POINTS	30	

Handling and Restraining Practicum

REMOVING DOG FROM FLOOR LEVEL CAGE TO RESTRAIN FOR LATERAL SAPHENOUS VENIPUNCTURE

Participant must talk through practicum steps with judge.

Criteria	Points Possible	Points Earned
The student places a leash in one hand with a large loop open in the correct position (in the "P") and ready to place over the dog's head.	2	
While blocking the opening, the student opens the cage door enough to slip the hand holding the leash into the cage.	2	
The student slips the leash over the neck of the dog and gently tightens the leash around the neck.	2	
The student opens the door and allows the dog to exit the cage.	1	
The student lifts the dog and places on the table.	1	
The student places his or her right arm across the dog's neck and reaches between the front legs to grasp the dog's right forelimb in right hand.	4	
The student places left arm over the dog's back and reaches for the dog's right rear limb, just proximal to the hock.	5	
With the dog's body close, the student gently lifts the limbs while allowing the dog's body to lay on the table; the dog should be on its right side.	5	
The student allows the dog to relax for a couple seconds, not releasing the grasp on the limbs.	3	
The student uses left hand to hold the limb tightly in the area just distal to the stifle, which will occlude the vein.	5	
TOTAL POINTS	30	

Handling and Restraining Practicum

RESTRAINT OF THE SMALL DOG FOR JUGULAR VENIPUNCTURE

Participant must talk through practicum steps with judge.

Criteria	Points Possible	Points Earned
The student puts a noose leash on the dog and has the dog sit.	3	
The student places one arm around the dog's neck and places the other arm around the dog's back to grasp the forelimbs.	6	
The student pushes the dog's back with his or her body to encourage the dog to lie down.	6	
The student holds the head up under the jaw, away from the chest (can be achieved by cupping hand underneath the muzzle and by pushing the head upward).	8	
The student's other hand grasps the front legs and extends them over the end of the table.	7	
TOTAL POINTS	30	

Handling and Restraining Practicum

RESTRAINT OF THE DOG FOR CEPHALIC VENIPUNCTURE

Participant must talk through practicum 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 side, wrapping his or her right arm around the dog's neck.	5	
The student holds the dog's left forelimb with elbow in the palm of his or her hand and extend the limb forward toward the person performing the procedure.	6	
With the elbow of the dog in his or her palm, the student rotates his or her thumb up so it is on top of the limb at the bend of the elbow.	6	
The student occludes the vessel with the thumb and rotates the thumb laterally.	6	
TOTAL POINTS	30	

Handling and Restraining Practicum

RESTRAINT OF A RABBIT

Participant must talk through practicum steps with judge.

Criteria	Points Possible	Points Earned
The student approaches the rabbit calmly and quietly.	4	
The student scruffs the rabbit with one hand while gently lifting the front end.	6	
The student's other hand immediately reaches under the hind limbs and holds them (not allowing the hind limbs to dangle).	7	
The student rests the rabbit's body on the arm with the hand holding the hind limbs.	6	
The scruffing hold is released, and the hand is moved to hold the rabbit's outside front leg.	7	
TOTAL POINTS	30	

Handling and Restraining Practicum

HALTERING RUMINANTS

Participant must talk through practicum steps with judge.

Criteria	Points Possible	Points Earned
Without quick movements and loud noises, the student properly approaches the patient at a 45-degree angle to the patient's left shoulder.	5	
The student places crown piece of halter over ears, then slips nose through nosepiece.	6	
The student properly adjusts the halter such that the nose band crosses over bridge of nose halfway between the nostrils and eyes.	7	
The student ensures that the adjustable portion of the nose band is under the chin, not across the bridge of the nose.	6	
The student keeps the standing end or lead rope portion on the left side of the patient.	6	
TOTAL POINTS	30	

Handling and Restraining Practicum

HALTERING A HORSE

Participant must talk through practicum steps with judge.

Criteria	Points Possible	Points Earned
Without quick movements and loud noises, the student properly approaches the patient at a 45-degree angle to the patient's left shoulder.	5	
The student places end of the lead rope over the horse's neck and passes sufficient length of lead to form a handheld loop around the horse's neck.	5	
Holding the handheld loop in his or her right hand, the student uses his or her left hand to slip the nose-band of the halter over the nose.	5	
Student releases the lead rope and with their right hand under the horse's neck, the student passes the crown strap over the head and behind the ears and attaches the end to the appropriate place on the halter.	5	
The student snaps the end of the lead to the lead ring of the halter and undrapes the lead rope from the horse's neck.	4	
The student adjusts the halter, so it is snug enough that the nose piece could not fall over the end of the nose but not so tight that the halter cuts or rubs the horse or restricts jaw movement or breathing.	6	
TOTAL POINTS	30	

Handling and Restraining Practicum

PLACING A TAIL TIE

Participant must talk through practicum steps with judge.

Criteria	Points Possible	Points Earned
The student lays the rope over the tail at the tip of the tail bone.	6	
The student folds all the tail hairs up over the rope.	6	
The student passes the short end of the rope behind the tail, and makes a fold or bight in it.	6	
The student passes the fold or bight over the folded tail and under the rope, which is looped around the tail.	6	
The student pulls tight.	6	
TOTAL POINTS	30	

Handling and Restraining Practicum

APPLYING ELIZABETHAN COLLAR

Participant must talk through practicum steps with judge.

Criteria	Points Possible	Points Earned
The student chooses the correct size of E-collar for the patient.	6	
The student correctly prepares the E-collar for placement.	6	
The student correctly places the E-collar on the animal.	6	
Placement is adequately secured so the animal cannot remove the E-collar.	6	
The E-collar is secured such that the animal's breathing is not restricted.	6	
TOTAL POINTS	30	

Handling and Restraining Practicum

SNARE RESTRAINT OF THE PIG

Participant must talk through practicum steps with judge.

Criteria	Points Possible	Points Earned
The student, standing next to the patient, guides the loop of the snare into the mouth and over the nose or upper jaw.	4	
The student makes sure the loop is inserted far enough into the patient's mouth.	5	
The student pulls the loop tight when it is in the proper position.	5	
The student keeps the loop tight while moving to the front of the patient.	5	
The student maintains the pressure on the snare so that the patient cannot escape.	5	
The student keeps control of the patient until the patient ceases to struggle.	4	
The student releases the patient after the procedure is completed	2	
TOTAL POINTS	30	

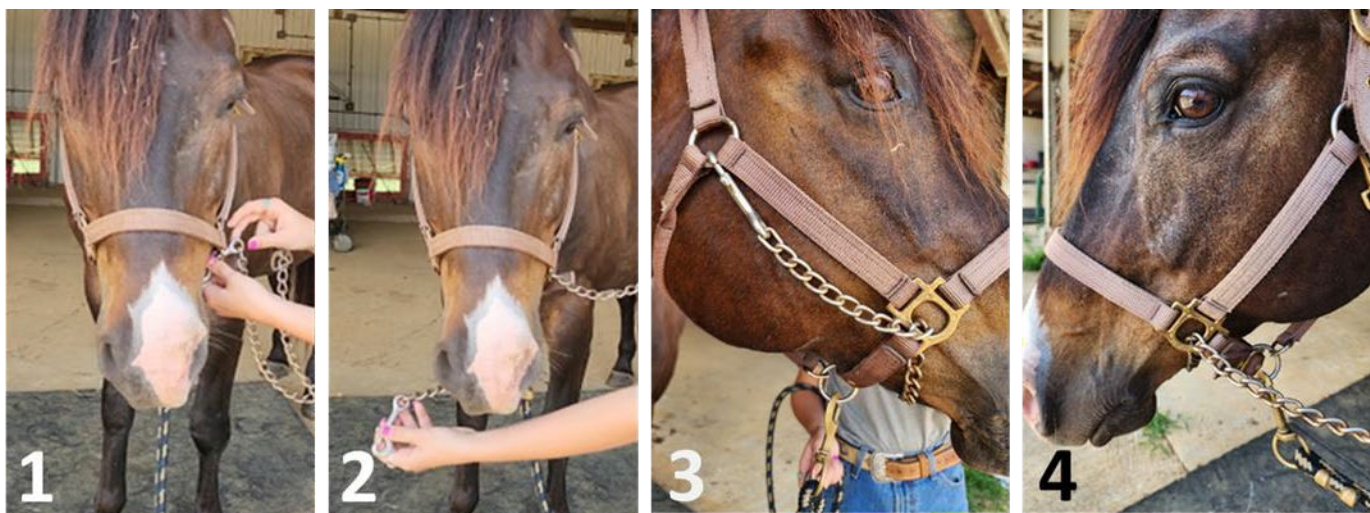
Handling and Restraining Practicum

APPLYING A LEAD WITH CHAIN ON A HORSE UNDER THE CHIN

Participant must talk through practicum steps with judge.

Criteria	Points Possible	Points Earned
Without quick movements and loud noises, the student properly approaches the haltered patient at a 45-degree angle to the patient's left shoulder.	5	
The student runs the snap through the lower metal ring on the left side of the halter from the outside in.	5	
The student carefully guides the chain under the horse's jaw.	5	
The student will run the snap through the lower metal ring on the opposite side of the halter.	5	
The student will continue up the cheekpiece of the halter and snap the lead onto the top ring of the halter.	5	
The student ensures the thumb tab is facing out on the snap.	5	
TOTAL POINTS	30	

Resource: <https://www.youngrider.com/how-to-safely-use-a-stud-chain/>



Handling and Restraining Practicum

LIFTING A HIND FOOT OF A HORSE

Participant must talk through practicum steps with judge.

Criteria	Points Possible	Points Earned
Without quick movements and loud noises, the student properly approaches the haltered patient at a 45-degree angle to the patient's hip.	5	
The student will stand beside the horse facing caudally (facing the hindquarters).	5	
The student will slide their hand over the hip and down the caudal aspect of the leg.	5	
The student will continue down the leg with their hand cupped around the palmar aspect, over the tendons behind the cannon bone.	5	
The student will apply light pressure to either side of the tendons near the fetlock until the horse lifts its leg. The student will then cup the hoof to support the animal.	5	
The student will gently place the foot back on the ground and move away in a safe manner.	5	
TOTAL POINTS	30	

Resource: <https://youtube.com/shorts/E6tp7FwA6tQ>



HORTICULTURE

CDE# 105482

Incorrect Mark Correct Mark
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Team Name

This sheet is for demonstration and practice only. You must use a real scan sheet for actual competition.

Team Number	State	Last Name	First Name
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1111	A	A A A A A A A A A A A A A A A A A A	A A A A A A A A
2222	B	B B B B B B B B B B B B B B B B B B	B B B B B B B B
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5555	E	E E E E E E E E E E E E E E E E E E	E E E E E E E E
6666	F	F F F F F F F F F F F F F F F F F F	F F F F F F F F
7777	G	G G G G G G G G G G G G G G G G G G	G G G G G G G G
8888	H	H H H H H H H H H H H H H H H H H H	H H H H H H H H
9999	I	I I	I I I I I I I I I I
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	R	R R	R R R R R R R R
	S	S S	S S S S S S S S
	T	T T	T T T T T T T T
	U	U U	U U U U U U U U
	V	V V	V V V V V V V V
	W	W W	W W W W W W W W
	X	X X	X X X X X X X X
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Place	Class	Placing Classes									Place	
		1	2	3	4	5	6	7	8	9		
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2	1243										1243	2
3	1324										1324	3
4	1342										1342	4
5	1423										1423	5
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21	4213										4213	21
22	4231										4231	22
23	4312										4312	23
24	4321										4321	24

Code

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Exam		Exam 2/Team	
1	A B C D	26	A B C D
2	A B C D	27	A B C D
3	A B C D	28	A B C D
4	A B C D	29	A B C D
5	A B C D	30	A B C D
6	A B C D	31	A B C D
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22	A B C D	47	A B C D
23	A B C D	48	A B C D
24	A B C D	49	A B C D
25	A B C D	50	A B C D

Team Activity		Practicums (Judges)					
Team	Ind.	1	2	3	4	5	6
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111	111						
222	222						
333	333						
444	444						
555	555						
666	666						
777	777						
888	888						
999	999						

Assessment and Solution									
1	A B C D	6	A B C D	11	A B C D	16	A B C D	21	A B C D
2	A B C D	7	A B C D	12	A B C D	17	A B C D	22	A B C D
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4	A B C D	9	A B C D	14	A B C D	19	A B C D	24	A B C D
5	A B C D	10	A B C D	15	A B C D	20	A B C D	25	A B C D

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Number of Specimen	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
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	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	
	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	
	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	
	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	
	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	
	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7
	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8
	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9
25	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50			