

VETERINARY SCIENCE

3 or 4 Member Team

Revised 2/12/21

I. PURPOSE

To promote career and post-secondary readiness by providing opportunities to develop knowledge and demonstrate skills in the field of veterinary science.

II. COMMON CORE REFERENCES

7th Grade:

MS-LS4-5. Gather and synthesize information about the technologies that have changed the way humans influence the inheritance of desired traits in organisms.

8th Grade:

MS-LS1-3. Use argument supported by evidence for how the body is a system of interacting subsystems composed of groups of cells.

9-10th Grade:

CCSS.Math.Content.HSS-MD.B.7 (+) Analyze decisions and strategies using probability concepts (e.g., product testing, medical testing, pulling a hockey goalie at the end of a game).

11-12th Grade:

CCSS.ELA-Literacy.RST.11-12.3 Follow precisely a complex multistep procedure when carrying out experiments, taking measurements, or performing technical tasks; analyze the specific results based on explanations in the text.

III. EVENT FORMAT

1. The event will be a team event consisting of three or four students. The top three scores will count toward the team total.
2. Team members may wear medical scrubs, medical scrubs are not required for this event
3. Time allowed to complete the various event components is contingent on the practicums being conducted. The event provider shall exercise discretion in determining time allowed.

IV. Equipment/Materials

1. Transparent clipboards will be provided at the state event.
2. Contestants must bring his/her own pencil and scan sheet to the contest
 - a. Students will use the Horticulture CDE scantron #105482
 - b. Scantron sheets are provided at state
3. No notes, books, pictures, or other materials are permitted.
4. Non-programmable calculators will be provided at the state event.
5. Blank paper will be provided at the contest site.
6. Section or group leaders will not return scan sheets after a student has turned them in.

V. Classes/Practicums

A. Written Test (100 points)

The test will consist of 50 questions, each question worth two points. The questions on the nmffa.org website will serve as a study guide. The actual test questions will be drawn from the contest references. Participants will have a maximum of 30 minutes to complete the exam. Questions will come from the following areas:

- Behavior
- Disease
(causes and sources, signs and symptoms)
- Medical terminology
- Medical records
- Anatomy/physiology
- Regulations (federal OSHA, MSDS)
- Patient management
- Facility management
- Genetics

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

What route of administration deposits a drug into the blood vessel?

- A. Intravenous
- B. Intracardiac
- C. Intraperitoneal
- D. Intradermal

B. IDENTIFICATION (100 points)

The identification portion will consist of equipment/materials, exotic animal breeds and domestic animal breeds. There will be 50 stations with items taken from all applicable identification sheets. (two points each). The breeds and equipment will come from a file on the veterinary science CDE link located nmffa.org. Breeds and equipment may be high quality pictures, real animals or equipment. (Thirty minute time limit.)

C. MATH APPLICATIONS PRACTICUM (100 points)

The number of practicum questions will vary based on the type of activity that is assigned. Participants will have 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 reestablishing veterinarian relations at your clinic. Sophie's owner has provided you with her health records from their previous veterinarian. Sophie had 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 with you. 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 lb. How many pounds did Sophie lose since the last weighing? ANSWER: Sophie has lost 1.4 lb. since the last recorded weighing.

D. Skills Practicums (200 points)

1. Individual- Parasite and Animal Body Part Assessment and Solution (100 points)

The student may correctly position slides, set up a microscope to identify internal and external parasites. The student will also correctly identify internal organs from cats, dogs, swine, cattle, sheep, goats, or horses. Each identification item will be worth four points. Animal body part may be high quality pictures or real body parts. Any online veterinary resource may be used from reference.

2. Individual Skill Practicum (100 points)

Students will have the opportunity to demonstrate multiple veterinary skills. No more than 2 skills will be taken from the list that is located on the veterinary science nmffa.org website

- This practicum is designed to evaluate participant's knowledge of and ability to evaluate common laboratory, radiology and examination procedures performed in a veterinarians' clinic. Some skills may require participants to complete posology calculations. A practicum may combine more than one skill which is listed for the designated contest year. In some cases, contestants may be provided a written scenario that they must assess to determine correct solutions.

- **2021 Veterinary Science Skills Individual Practicum Rotation**

Opening a surgical pack

Administering a subcutaneous injection

Fecal flotation with fecalyzer

Removing a cat from a cage and placing in a cat bag

Handling ruminants

Applying an Elizabethan Collar

VI. TOTAL TEAM SCORE

Written Exam	100 points
Math Component	100 points
Identification	100 points
Skills practicum part 1	100 points
Skills practicum part 2	100 points

TOTAL POINTS

INDIVIDUAL500 points
TEAM.....1500 points

VII. TIEBREAKER

See General Rules

VIII. REFERENCES

- Veterinary Assistant handbook- First Edition Author: Floron C. Faries, Jr.
 - Instructional Materials Service, Texas A&M University
 - Cornell Veterinary Curriculum (Vet. Terminology, Clinical exams, Hospital Procedures, Parasitology, Laboratory Techniques, Animal Nutrition, posology, and Principles of Disease).
 - Veterinary Instruments and Equipment-A Pocket Guide Author: Teresa F Sonsthagen, BS, LVT
 - Elsevier Mosby ISBN-13: 978-0-323-03203-2
 - Review Questions and Answers for Veterinary Technicians Author: Thomas P Colville, DVM
 - Mosby ISBN-13 978-0-323-01926-2
 - American Kennel Club Breed Website - www.akc.org/breeds/
 - Cat Fanciers' Association Breed Website - www.cfainc.org/breeds.html
 - Oklahoma State University-Animal Science Website - <http://www.ansi.okstate.edu/breeds/>
- Surgical tool resources - www.jorvet.com; www.spectrumsurgical.com; <http://www.Sonteclnstruments.com>

NOTE:

Agriculture, Food and Natural Resources (AFNR) Career Cluster Content Standards With the recommendation of the National FFA Board of Directors, all national FFA programs have incorporated these standards to guide the direction and content of program materials and activities. Refer to Appendix A in the National FFA handbook for a complete list of the measurable activities that participants will carry out in this event. For details about the incorporation of AFNR standards, refer to the Introduction chapter of the National FFA CDE handbook.

NOTE: All national score sheets are attached. In a normal rotation only 2-3 may be used each year.