

Companion Animal Science CDE

Purpose

This career development event is designed to assess student knowledge, application, analytical, and evaluation abilities in the area of small animal care, veterinary skills, and pet store management.

CDE Outline:

The CDE will follow the following guidelines

| | | |
|-------------|----------------|------------|
| Section I | Written Test | 250 points |
| Section II | Identification | 250 points |
| Section III | Practicums | 180 points |

CDE breeds & species

- Dogs
- Cats
- Birds
- Fish
- Rabbits
- Other Animals

Description of student involvement:

- Four students per team will be allowed to compete in the CDE
- Each member of the team will complete the contest individually
- The top three scores on the team will constitute a team score
- Students will be allowed the following time limits for the contest
- Official Dress or appropriate FFA attire is required. Refer to Rule 1-A-5 on page 1.1.
- Tiebreakers: If team or individual scores are tied when scores are tabulated, ties will be broken in the following order: Total Identification score, then written exam score, then practicum score designated by officials, and finally total practicum score.

CDE Time limit

- Written Exam 50 minutes
- Breed Identification 50 minutes
- Practicums 50 minutes

CDE Details

- **Section 1 Written Test 250 Points**
 - 50 Multiple-choice questions (5 points each)
 - Listed below are topics and the percentage of the test allocated to each topic

| Number (#) | Percentage (%) |
|--|----------------|
| 12 Anatomy, Physiology & Veterinary Terminology | 24 |
| 12 Nutrition and Feeding | 24 |
| 2 Health Care; Prevention, Causes, Symptoms & Treatment | 24 |
| 7 Reproduction, Breeding, Genetics, Breeds and Selection | 14 |
| 7 Safety, Handling & Sanitation; Equipment/Facilities | 14 |

● **Section 2: Identification 250 Points**

- Identification of 50 breeds and species @ 5 pts each (Tables #1-#6)
- Photos, paintings, or live specimens may be used as samples
- The number of samples from each category will be:

| | | |
|---------------|----|------------------------|
| Dog | 20 | Table 1:Dogs |
| Cats | 8 | Table 2: Cats |
| Fish | 6 | Table 3: Fish |
| Birds | 4 | Table 4: Birds |
| Rabbits | 5 | Table 5: Rabbits |
| Other Animals | 7 | Table 6: Other animals |

● **Section 3 Practicums 180 Points**

- There will be three practicums @ 60 points each.

Description of practicums

- Practicum #1: Anatomy – Contestants will identify parts and/or answer questions relating to the topics as listed in the chart below for the current year's event.
 - Refer to Table 7 for list of anatomy terminology
- Practicum #2: Vet Science Problem Solving - Contestants will solve problems relating to the topics as listed in the chart below for the current year's event.
 - Refer to Table 8 for list of possible topics
- Practicum #3: Small animal problem solving – Contestants will solve problems relating to the topics as listed in the chart below for the current year's event.
 - Refer to Table 9 for list of possible topics

| Year | Practicum #1 Anatomy | Practicum #2 Vet Science problem solving | Practicum #3 Small animal problem solving |
|---|---|--|--|
| Odd years: 2025, 2027, 2029,2031 | Digestive, circulatory, respiratory & external anatomy (Table 7A) | Parasite Identification, diagnosis, and treatment. (Table 8A) | Evaluations: procedures & practices Interpretation and selection scenarios (Table 9A) |
| Even years: 2026, 2028, 2030,2032 | Skeletal, reproductive, and external anatomy (Table 7B) | Tools and equipment (identification, use questions) (Table 8B) | Math Application: Business/personal and patient (Table 9B) |

Information

- Table 1: Dogs
- Table 2: Cats
- Table 3: Tropical Fish
- Table 4: Birds
- Table 5: Rabbits
- Table 6: Other animals
- Table 7: Practicum 1 (Anatomy)
 - 7A: Digestive, circulatory, respiratory and external anatomy
 - 7B: Skeletal, reproduction and external anatomy
- Table 8: Practicum 2 (Vet Science Problem Solving)
 - 8A: Parasites
 - 8B: Tools and equipment
- Table 9: Practicum 3 (Small Animal Problem Solving)
 - 9A: Evaluations: Procedures and Practices, Interpretation and Selection Scenarios
 - 9B: Math Applications, Business & Personal: Patient

References

- Small Animal Care and Management: Dean Warren - Cengage
- Introduction to Veterinary Science: Lawhead and Baker - Cengage
- An Illustrated Guide to Veterinary Medical Terminology: Janet Amundson Romich - Cengage
- Introduction to Livestock & Companion Animals: Lee, Hutter & Rudd – Pearson
- www.AKC.org
- www.CFA.org
- www.ARBA.net
- Past National FFA Veterinary Science CDE Materials (Exams)

Companion Animal Science

Identification Word Bank

5 Points each

| Table 1 Dogs (40) | | | | | |
|----------------------------|-------------------------------|-----|----------------------------|-----|-----------------------------|
| 101 | Australian Shepherd | 115 | Doberman Pincher (& Mini) | 129 | Pug |
| 102 | Basset Hound | 116 | English Springer Spaniel | 130 | Rhodesian Ridgeback |
| 103 | Beagle | 117 | French Bulldog | 131 | Rottweiler |
| 104 | Bernese Mountain Dog | 118 | German Shepherd | 132 | Schnauzer (Mini) |
| 105 | Border Collie | 119 | German Shorthaired Pointer | 133 | Shetland Sheepdog |
| 106 | Boston Terrier | 120 | Golden Retriever | 134 | Shih Tzu |
| 107 | Boxer | 121 | Great Dane | 135 | Siberian Husky |
| 108 | Brittany Spaniel | 122 | Havanese | 136 | Vizsla |
| 109 | Bulldog | 123 | Labrador Retriever | 137 | Weimaraner |
| 110 | Cavalier King Charles Spaniel | 124 | Maltese | 138 | Welsh Corgi |
| 111 | Chihuahua | 125 | Mastiff | 139 | West Highland White Terrier |
| 112 | Cocker Spaniel | 126 | Newfoundland | 140 | Yorkshire Terrier |
| 113 | Collie | 127 | Pomeranian | | |
| 114 | Dachshund | 128 | Poodle | | |
| Table 2 Cats (20) | | | | | |
| 201 | Abyssinian | 208 | Maine Coon Cat | 215 | Russian Blue |
| 202 | American Shorthair | 209 | Manx | 216 | Scottish Fold |
| 203 | Birman | 210 | Norwegian Forest Cat | 217 | Siamese |
| 204 | British Shorthair | 211 | Oriental Shorthair | 218 | Siberian |
| 205 | Burmese | 212 | Persian | 219 | Sphynx |
| 206 | Egyptian Mau | 213 | Ragdoll | 220 | Tonkinese |
| 207 | Exotic | 214 | Rex (Cornish & Devon) | | |
| Table 3 Tropical Fish (18) | | | | | |
| 301 | Angelfish | 307 | Chinese Algae Eater | 313 | Neon Tetra |
| 302 | Bala Shark | 308 | Comet Goldfish | 314 | Platy |
| 303 | Betta | 309 | Corydora Catfish | 315 | Plecostomus |
| 304 | Black Skirt Tetra | 310 | Guppy | 316 | Swordtail |
| 305 | Blue Gourami | 311 | Harlequin Rasbora | 317 | Zebra Cichlid |
| 306 | Cherry Barb | 312 | Molly | 318 | Zebra Cichlid |
| Table 4 Birds (10) | | | | | |
| 401 | African Gray Parrot | 405 | Cockatiel | 408 | Scarlet Macaw |
| 402 | Amazon Parrot | 406 | Greater Sulfur Cockatoo | 409 | Sun Conure |
| 403 | Budgerigar | 407 | Peach Faced Lovebird | 410 | Zebra Finch |
| 404 | Canary | | | | |
| Table 5 Rabbits (12) | | | | | |
| 501 | Californian | 505 | Flemish Giant | 509 | Netherland Dwarf |
| 502 | Dwarf Hotot | 506 | Havana | 510 | New Zealand |
| 503 | Dutch | 507 | Jersey Wooly | 511 | Polish |
| 504 | English Lop | 508 | Mini Lop | 512 | Rex (Mini or Standard) |
| Table 6 Other Animals (20) | | | | | |
| 601 | Ball Python | 608 | Fire-bellied toad | 615 | Rat |
| 602 | Bearded Dragon | 609 | Ferret | 616 | Red Foot Tortoise |
| 603 | Blue-Tongued Skink | 610 | Gerbil | 617 | Red-Eared Slider |
| 604 | Chinchilla | 611 | Guinea pig | 618 | Russian Tortoise |
| 605 | Corn Snake | 612 | Hamster | 619 | Sugar Glider |
| 606 | Crested Gecko | 613 | Hedgehog | 620 | White's tree frog |
| 607 | Degus | 614 | Pac Man Frog | | |

Companion Animal Science Word Bank: Even Numbered Convention Years (2026, 2028)

| Practicum #1 | Table 7B | Anatomy | 60 Points | Bottom back side of scantron |
|----------------------------|---------------------|----------------|------------------|-------------------------------------|
| MAMMAL SKELETAL | | | | |
| 151 | Carpus | 159 | Lumbar Vertebrae | 167 Sacral Vertebrae |
| 152 | Caudal Vertebrae | 160 | Mandible | 168 Scapula |
| 153 | Cervical Vertebrae | 161 | Metacarpus | 169 Sternum |
| 154 | Clavicle | 162 | Patella | 170 Tarsus |
| 155 | Cranium | 163 | Pelvis | 171 Thoracic Vertebrae |
| 156 | Femur | 164 | Phalanges | 172 Tibia |
| 157 | Fibula | 165 | Radius | 173 Ulna |
| 158 | Humerus | 166 | Rib | |
| AVIAN SKELETAL | | | | |
| 251 | Carpal | 259 | Keel | 266 Pygostyle |
| 252 | Cervical Vertebrae | 260 | Mandible | 267 Radius |
| 253 | Coracoid | 261 | Maxilla | 268 Ribs |
| 254 | Cranium | 262 | Metacarpal | 269 Scapula |
| 255 | Femur | 263 | Orbit | 270 Tarsometatarsal |
| 256 | Fibula | 264 | Pelvic Girdle | 271 Tibia |
| 257 | Furcula | 265 | Phalanges | 272 Ulna |
| 258 | Humerus | | | |
| MAMMAL REPRODUCTION | | | | |
| 351 | Bulbourethral Gland | 357 | Penis | 363 Testes |
| 352 | Cervix | 358 | Prepuce/Sheath | 364 Uterine Body |
| 353 | Epididymis | 359 | Prostate Gland | 365 Uterine Horn |
| 354 | Infundibulum | 360 | Retractor Muscle | 366 Vagina |
| 255 | Ovary | 361 | Scrotal Sac | 367 Vas Deferens |
| 356 | Oviduct | 362 | Seminal Vesicle | 368 Vulva |
| AVIAN REPRODUCTION | | | | |
| 451 | Cloaca | 455 | Ovary | 458 Uterus |
| 452 | Infundibulum | 456 | Oviduct | 459 Vagina |
| 453 | Isthmus | 457 | Testes | 460 Vas Deferens |
| 454 | Magnum | | | |
| EXTERNAL ANATOMY | | | | |
| 551 | Cephalic Vein | 553 | Jugular Vein | 554 Saphenous Vein |
| 552 | Femoral Vein | | | |

Practicum #2: Table 8B Problem Solving 4 Points each Bottom back side of scantron

| TOOLS AND EQUIPMENT | | | | |
|----------------------------|---------------------------|-----|--------------------------------|-----------------------------------|
| 651 | Ambu Bag | 663 | Comb - Scotch | 674 Muzzle - nylon |
| 652 | Animal Clippers | 664 | Elizabethan Collar | 675 Nail Clippers - guillotine |
| 653 | Brush - Pin | 665 | Endoscope | 676 Nail Clippers - plier |
| 654 | Brush - Slicker | 666 | Endotracheal tubes | 677 Ophthalmoscope |
| 655 | Carmalt Hemostat | 667 | Fecal Floatation Test | 678 Olsen-Hegar Needle Holder |
| 656 | Cat bag | 668 | Feeding tube for small animals | 679 Otoscope |
| 657 | Catch pole (dog snare) | 669 | Laparoscopes | 680 Shedding blade |
| 658 | Centrifuge | 670 | Laryngoscopes | 681 Snook ovariohysterectomy hook |
| 659 | Chemical indicator strips | 671 | Laryngoscopes | 682 Stethoscope |
| 660 | Clipper blades | 672 | Metzenbaum Dissecting Scissor | 683 Syringe - luer lock |
| 661 | Clipper comb | 673 | Muzzle - basket | 684 Syringe - slip tip |
| 662 | Comb - Flea | | | |

Companion Animal Science Word Bank: Odd Number Convention Years (2025,2027,2029)**Practicum #1 Table 7A****Anatomy****60 Points****Bottom back side of scantron****MAMMAL DIGESTIVE**

101 Anus
 102 Bladder
 103 Cecum
 104 Colon
 105 Esophagus
 106 Gall Bladder

107 Kidney
 108 Liver
 109 Mouth
 110 Pancreas
 111 Rectum

112 Small intestine
 113 Spleen
 114 Stomach
 115 Ureter
 116 Urethra

AVIAN DIGESTIVE

201 Ceca
 202 Cloaca
 203 Crop
 204 Duodenum loop
 205 Esophagus

206 Gall bladder
 207 Large intestine
 208 Liver
 209 Mouth/beak
 210 Pancreas

211 Proventriculus
 212 Small intestine
 213 Vent
 214 Ventriculus

MAMMAL CIRCULATORY

301 Aortic arch
 302 Aortic valve
 303 Caudal vena cava
 304 Cranial vena cava
 305 Left atrium

306 Left ventricle
 307 Pulmonary artery
 308 Pulmonary valve
 309 Pulmonary veins

310 Right atrium
 311 Right ventricle
 312 Septum
 313 Ventricular wall

MAMMAL RESPIRATORY

401 Alveoli
 402 Bronchi
 403 Brinchioles
 404 Diaphragm
 405 Epiglottis
 406 Hard palate

407 Larynx
 408 Lungs
 409 Nasal cavity
 410 Nasal pharynx
 411 Nose
 412 Oral cavity

413 Pleural cavity
 414 Pleural membranes
 415 Ring of cartilage
 416 Soft palate
 417 Trachea

EXTERNAL ANATOMY

501 Brisket
 502 Crest
 503 Croup
 504 Dewclaw
 505 Dewlap
 506 Elbow

507 Flank
 508 Flew
 509 Hock
 510 Loin
 511 Muzzle

512 Occiput
 513 Pastern
 514 Shoulder
 515 Stifle
 516 Withers

Practicum #2 Table 8A**Problem Solving****4 points each****Bottom back side of scantron****PARASITES**

601 American dig tick
 602 Anchor worm
 603 Cat warble
 604 Deer tick
 605 Demodectic mote
 606 Earmite
 607 Flea tapeworm egg
 608 Fleas

609 Flukes
 610 Heartworm
 611 Hookworm
 612 Hookworm egg
 613 Giardia
 614 Lice
 615 Lungworm
 616 Mosquito

617 Pinworm
 618 Ringworm
 619 Roundworm
 620 Roundworm egg
 621 Sarcoptic mite
 622 Tapeworm
 623 Whipworm
 624 Whipworm egg

Companion Animal Practicum #3**Table 9A Companion Animal Problem Solving 60 Points Odd Years: 2025,2027,2028**

| EVALUATION: PROCEDURES AND PRACTICES | | |
|---|-------------------------|---------------------------------------|
| Anatomical direction | Injections (SQ, IM, IV) | Physical Exam |
| Aseptic | Orchlectomy | PPE (Personal Protective Equipment) |
| Biosecurity & Biohazards | Ovariohysterectomy | Rectal temp procedure |
| CRT (Capillary Refill Time) | OSHA principles | Sterilize |
| Disinfectant | Patient restraints | TPR (Temperature, Pulse, Respiration) |

| INTERPRETATION AND SELECTION SCENARIOS | | |
|--|------------------------------------|-------------------------------------|
| Animal Requirements | Equipment, supplies and housing | Needle gauge size |
| Breed Requirements | Labels (pet food, health products) | Physical exam data |
| Antibiotics | Manuals and diagrams | Schedules (drug, kennels, vaccines) |
| Clipper Blade Size | MSDS information | Vaccines |
| Drug delivery systems (injection type, oral, nebulized, etc) | | |

Table 9 B Companion Animal Problem Solving 60 points Even Years: 2026,2028,2030

| BUSINESS & PERSONAL | | |
|--------------------------------|-----------------|-------------------------|
| Discounts | Income/Sale | Margins & price-setting |
| Equipment purchases | Interest | Profit/Net Income |
| Expenses/Costs | Kennel problems | Supply orders |
| FICA | | |

| Patient | | |
|-----------------|-----------------|--------------|
| Aquarium weight | Dosages | Health Costs |
| Conversions | Equipment Costs | Medications |
| Dilutions | Feed Costs | Solutions |

| DOSAGES ABBRECIATION INFORMATION | | | | | |
|---|-------------------|--------|-------------------|------|-----------|
| IM | Intramuscular | s.i.d. | Once Daily | o.s. | Left Eye |
| IV | Intravenous | b.i.d. | Twice Daily | o.d. | Right Eye |
| SQ | Subcutaneous | t.i.d. | Three Times Daily | a.s. | Left Ear |
| p.c. | After meals | q.i.d. | Four Times Daily | a.d. | Right Ear |
| a.c. | Before meals | q.d. | Every Day | a.u. | Both Ears |
| p.o. | Orally (by mouth) | q.o.d. | Every Other Day | o.u. | Both Eyes |
| p.r. | Rectally | ss | One Half | cap. | Capsule |
| top. | Topical | D.O.B | Date of Birth | gtt. | A drop |
| | | | | tab. | Tablet |

Example Questions:

Parasite Identification, diagnosis & treatment

Identification and/or questions from table 8A

1. Which of the following parasites is considered an endoparasite?
 - a. Fleas
 - b. Ticks
 - c. Hookworm
 - d. Mites
2. How many different types of tapeworm are known to infect dogs?
 - a. 1
 - b. 2
 - c. 3
 - d. 4
3. What external parasite transmits Lyme disease?
 - a. Fleas
 - b. Flies
 - c. Mosquitoes
 - d. Ticks
4. A whipworm egg under a microscope looks _____ in shape.
 - a. Circle
 - b. Oval
 - c. Cone
 - d. stringy

Tools and Equipment

Identification and/or questions from table 8B

1. Most surgical instruments are manufactured from _____.
 - a. Aluminum
 - b. Copper
 - c. stainless steel
 - d. Lead
2. A machine that spins samples very rapidly to separate elements based on weight is a _____.
 - a. Counter balance
 - b. Centrifuge
 - c. Fecalizer
 - d. Luer lock syringe
3. During a recent exam the vet examined your cats ears. What instrument was most likely used?
 - a. Endoscope
 - b. Laparoscope
 - c. Laryngoscope
 - d. Otoscope
4. A snook hook is typically used during a _____.
 - a. Castration
 - b. Hernia repair
 - c. Spaying
 - d. Declawing

Management Application*Questions from information topics from table 9A*

1. The capillary refill time (CRT) for a dog is 1 second. The dog would be considered _____.
 - a. Abnormally low
 - b. Normal
 - c. Abnormally high
 - d. Not an issue
2. Which of the following answers best completes the statement: Temperature pulse and respiration rates tend to _____ as the size of the animal _____.
 - a. increase, decrease
 - b. decrease, decrease
 - c. remain constant, increases
 - d. remain constant, decreases
3. You have been asked to clean the reception room. What best describes, "cleaning"?
 - a. Destroying most microorganisms on non-living objects by physical or chemical means.
 - b. Destroying all microorganisms on non-living objects by heat or chemical means.
 - c. Destroying all microorganisms and viruses on living and non-living objects.
 - d. Physically removing all visible signs of organic matter such as feces, hair, dirt, etc.
4. When working in a clinic or pet store, you understand the guidelines set forth by OSHA are based on the principle of _____.
 - a. Employee Right to Know
 - b. Employee Basic Knowledge
 - c. Employee Determination of Hazards
 - d. Employee Protection Act
5. The letters PPE in the work place refer to _____.
 - a. People Pets and the Environment
 - b. Personal Protective Equipment
 - c. Proper Protocol for Everyone
 - d. Personal Property Entitlement

Dosage Application*Questions from information topics from table 9B*

Indicate the number of tablets/capsules prescription for the following order:

1. Rx Metronidazole tablets, 250 mg, 1 tablet, p.o., b.i.d. x 10 days
 - a. 10
 - b. 20
 - c. 30
 - d. 40
2. You are advised to give your Golden Retriever 500 mg of amoxicillin s.i.d. and the vet gives you 250 mg tablets. How many tablets will you administer in one day?
 - a. 1
 - b. 2
 - c. 4
 - d. 6

3. 1000 mg of a solution is equal to _____ g.
 - a. 1
 - b. 10
 - c. 100
 - d. 10,000
4. A customer asks how much they should feed their 5 pound Chihuahua. The new dog food label says to feed 1 cup of dog food for every 4 kilograms of weight. Approximately how much should they feed?
 - a. $\frac{1}{2}$ cup
 - b. $\frac{3}{4}$ cup
 - c. 1 cup
 - d. 2 cups
5. You take the pulse rate of a cat and get 10 beats in 5 seconds. What is the heart rate in bpm?
 - a. 50
 - b. 120
 - c. 240
 - d. 300
6. As a grooming assistant you are making \$9.00 an hour. You receive a raise of 15%. How much are you now making per hour?
 - a. \$9.15
 - b. \$9.95
 - c. \$10.15
 - d. \$10.35
7. Your store is having a sale on cat food. Buy one and get 50% off the second. Sales tax is 5%. What would the total bill be for 4 cans of Pretty Kitty if one can costs \$0.70.
 - a. \$2.10
 - b. \$2.21
 - c. \$2.80
 - d. \$2.94
8. The goal of your pet supply business is for a 40% profit margin. What would you have to sell a bottle of shampoo for if your cost is \$2.60.
 - a. \$2.64
 - b. \$3.00
 - c. \$3.64
 - d. \$4.00