

Companion Animal Science CDE

Revised 11/2022

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 pts. each
 - Listed below are the topics and the percentage of the test allocated to each topic:

TOPIC	
#	%
✓ 12 Anatomy, Physiology & Veterinary Terminology	24
✓ 12 Nutrition and Feeding	24
✓ 12 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:
 - ✓ Dogs 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: 2023,2025, 2027	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: 2024,2026, 2027	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)	128	Poodle
102	Basset Hound	116	English Springer Spaniel	129	Pug
103	Beagle	117	French Bulldog	130	Rhodesian Ridgeback
104	Bernese Mountain Dog	118	German Shepherd	131	Rottweiler
105	Border Collie	119	German Shorthaired Pointer	132	Schnauzer (Mini)
106	Boston Terrier	120	Golden Retriever	133	Shetland Sheepdog
107	Boxer	121	Great Dane	134	Shih Tzu
108	Brittany Spaniel	122	Havanese	135	Siberian Husky
109	Bulldog	123	Labrador Retriever	136	Vizsla
110	Cavalier King Charles Spaniel	124	Maltese	137	Weimaraner
111	Chihuahua	125	Mastiff	138	Welsh Corgi
112	Cocker Spanie	126	Newfoundland	139	West Highland White Terrier
113	Collie	127	Pomeranian	140	Yorkshire Terrier
114	Dachshund				

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 Danio

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

Companion Animal Science Word Bank (Even Numbered Convention Years) (2024,2026, 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
355	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 loop	678	Olsen-Hegar Needle Holder
656	Cat bag	668	Fecal Flotation Test	679	Otoscope
657	Catch pole (dog snare)	669	Feeding tube for small animals	680	Shedding blade
658	Centrifuge	670	Laparoscope	681	Snook ovariohysterectomy hook
659	Chemical indicator strips	671	Laryngoscopes	682	Stethoscope
660	Clipper blades	672	Metzenabum 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 Numbered Convention Years) (2023,2025,2027)

Practicum #1 Table 7A Anatomy

60 Points

Bottom back side of scantron

MAMMAL DIGESTIVE

101 Anus	107 Kidney	112 Small intestine
102 Bladder	108 Liver	113 Spleen
103 Cecum	109 Mouth	114 Stomach
104 Colon	110 Pancreas	115 Ureter
105 Esophagus	111 Rectum	116 Urethra
106 Gall Bladder		

AVIAN DIGESTIVE

201 Ceca	206 Gall bladder	211 Proventriculus
202 Cloaca	207 Large intestine	212 Small intestine
203 Crop	208 Liver	213 Vent
204 Duodenum loop	209 Mouth/beak	214 Ventriculus
205 Esophagus	210 Pancreas	

MAMMAL CIRCULATORY

301 Aortic arch	306 Left ventricle	310 Right atrium
302 Aortic valve	307 Pulmonary artery	311 Right ventricle
303 Caudal vena cava	308 Pulmonary valve	312 Septum
304 Cranial vena cava	309 Pulmonary veins	313 Ventricular wall
305 Left atrium		

MAMMAL RESPIRATORY

401 Alveoli	407 Larynx	413 Pleural cavity
402 Bronchi	408 Lungs	414 Pleural membranes
403 Bronchioles	409 Nasal cavity	415 Rings of cartilage
404 Diaphragm	410 Nasal pharynx	416 Soft palate
405 Epiglottis	411 Nose	417 Trachea
406 Hard palate	412 Oral cavity	

EXTERNAL ANATOMY

501 Brisket	507 Flank	512 Occiput
502 Crest	508 Flew	513 Pastern
503 Croup	509 Hock	514 Shoulder
504 Dewclaw	510 Loin	515 Stifle
505 Dewlap	511 Muzzle	516 Withers
506 Elbow		

Practicum #2 Table 8A Problem Solving

4 Points each

Bottom Back side of scantron

PARASITES

601 American dog tick	609 Flukes	617 Pinworm
602 Anchor worm	610 Heartworm	618 Ringworm
603 Cat warble	611 Hookworm	619 Roundworm
604 Deer tick	612 Hookworm egg	620 Roundworm egg
605 Demodectic mite	613 Giardia	621 Sarcoptic mite
606 Ear mite	614 Lice	622 Tapeworm
607 Flea tapeworm egg	615 Lungworm	623 Whipworm
608 Fleas	616 Mosquito	624 Whipworm egg

Companion Animal Science Practicum #3

Practicum #3 Table 9A

Companion Animal Problem Solving

60 Points possible

Odd Years: 2023, 2025, 2027

Evaluations: Procedures and Practices

Anatomical directions	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, vaccinations, kennels, etc)
Clipper blade size	MSDS information	Vaccines
Drug delivery systems (injection type, oral, nebulized, etc)		

Practicum #3 Table 9B

Companion Animal Problem Solving

60 points possible

Even Years: 2024, 2026, 2028

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 abbreviation 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

Which of the following parasites is considered an endoparasite?

- A. fleas
- B. ticks
- C. hookworm
- D. mites

How many different types of tapeworm are known to infect dogs?

- A. 1
- B. 2
- C. 3
- D. 4

What external parasite transmits Lyme disease?

- A. Fleas
- B. Flies
- C. Mosquitoes
- D. Ticks

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

Most surgical instruments are manufactured from _____.

- A. aluminum
- B. copper
- C. stainless steel
- D. lead

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

During a recent exam the vet examined your cats ears. What instrument was most likely used?

- A. Endoscope
- B. Laparoscope
- C. Laryngoscope
- D. Otoscope

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

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

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

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.

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

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:

Rx Metronidazole tablets, 250 mg, 1 tablet, p.o., b.i.d. x 10 days

- A. 10
- B. 20
- C. 30
- D. 40

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

1000 mg of a solution is equal to _____ g.

- A. 1
- B. 10
- C. 100
- D. 10,000

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

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

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

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

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