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Companion Animal Science CDE

Purpose

This career development event is designed to assess students' 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

- **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)

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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)

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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 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
607	Degus	614	Pac Man Frog		

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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	CervicalCarp Vertebrae	161	Metacarous	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	Tarsomentatarsal
256	Fibula	264	Pelvic Girdle	271	Tibia
257	Furcula	265	Phalanges	272	Ulna
258	Humerus				

MAMMAL REPRODUCTION

351	Bulbourenthral Gland	357	Penis	363	Testes
352	Cervix	358	Prepuce/Sheath	364	Ulterine Body
353	Epididymiss	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 ANOTOMY

551	Cephalic Vein	553	Jugular Vein	554	Saphenous Vein
552	Fermoral 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 Floatation Test	679	Otoscope
657	Catch pole (dog snare)	669	Feeding tube for small animals	680	Shedding blade
658	Centrifuge	670	Laparoscopes	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 scrantron

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 Blader				

AVIAN DIGESTIVE

201	Ceca	206	Gall bladder	211	Proventruculus
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	Brinchioles	409	Nasal cavity	415	Ring 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 scrantron

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 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	Ovarlohysterectomy	Rectal temp procedure
CRT (Capiliary 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
Antbiotics	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 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	Subqutaneous	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

***** Be sure to use a 3-digit code when indicated*** Questions will not be formatted as below.**

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 bet 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. ½ cup
   b. ¾ 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