

# Veterinary Science



## New for 2022 – 2023

Skills have been renumbered.  
Test plan percentages have changed.  
Time remaining announcements for testing have been clarified.  
Editorial updates have been made for clarity.

## Event Summary

Veterinary Science provides members with the opportunity to gain knowledge and skills required for diagnosis and treatment of animals. This competitive event consists of 2 rounds. Round One is a written, multiple-choice test and the top scoring competitors will advance to Round Two for the skills assessment. This event aims to inspire members to learn more about the field of veterinary care.

## Sponsorship

This competitive event is sponsored by the [American Association of Veterinary Medical Colleges](#)



## Dress Code

Competitors shall wear proper business attire or official HOSA uniform, or attire appropriate to the occupational area, during both rounds. Bonus points will be awarded for [proper dress](#).

### Competitor Must Provide:

- A [photo ID](#)
- Two #2 lead pencils (not mechanical) with eraser
- Sterile non-latex surgical gloves
- Exam non-latex gloves
- 2 - 4 inch wide gauze roll (18 inches or longer)

## General Rules

1. Competitors in this event must be active members of HOSA and in good standing.
2. **Eligible Divisions:** Secondary and Postsecondary / Collegiate divisions are eligible to compete in this event.
3. Competitors must be familiar with and adhere to the "[General Rules and Regulations of the HOSA](#)"

Competitive Events Program (GRR)."

- Per the [GRRs #11](#) and [Appendix H](#), HOSA members may request accommodation in any competitive event. To learn the definition of an accommodation, please read [Appendix H](#). To request accommodation for the International Leadership Conference, [submit the request form here](#) by May 15 at midnight EST.
  - To request accommodation for any regional/state level conferences, please work with your local and state advisor directly. Accommodations must first be done at state in order to be considered for ILC.
4. All competitors shall report to the site of the event at the time designated for each round of competition. At ILC, competitor's [photo ID](#) must be presented prior to ALL competition rounds.

**Official References**

5. All official references are used in the development of the written test and skill rating sheets.
6. [Lawhead, James and Baker. \*Introduction to Veterinary Science\*. Cengage Learning. Latest Edition.](#)
7. [Sirois, Margi. \*Principles and Practice of Veterinary Technology\*. Elsevier Mosby. Latest edition.](#)
8. Reference for Skill VII: [Preparing a Feline for Exam AAFP and ISFM Feline-Friendly Handling Guidelines](#)
9. References for Companion Animal Breeds/Species Identification: (as posted as of Sept. 1, 2022)
- Dogs = American Kennel Club - [www.akc.org](http://www.akc.org)
  - Cats = The Cat Fanciers' Association - [www.cfainc.org](http://www.cfainc.org)

**Round One Test**

10. [Test Instructions](#): The written test will consist of 50 multiple choice items in a maximum of 60 minutes.
11. **Time Remaining Announcements**: There will be NO verbal announcements for time remaining during ILC testing. All ILC testing will be completed in the Testing Center and competitors are responsible for monitoring their own time.
12. **Written Test Plan** (Includes both Large and Small Animals)
- Anatomy and Physiology..... 24%
  - Basic Nutrients..... 10%
  - Animal Behavior..... 6%
  - Diseases/Disease Prevention..... 14%
  - Zoonoses..... 6%
  - Clinical Practice..... 10%
  - Emergency Care/First Aid..... 12%
  - Principles of Surgery..... 12%
  - Veterinary Careers..... 6%
13. The test score from Round One will be used to qualify the competitor for the Round Two.

14. **Sample Test Questions**

1. How many days is the average length of pregnancy for a cat? (Lawhead pp 140)
  - A. 15 - 20
  - B. 30 - 35
  - C. 58 - 65**
  - D. 90 - 112
  
2. Which procedure is used when performing a surgical site prep scrub? (Sirois pp 378)
  - A. Scrub from the area with alcohol after removing the hair
  - B. Scrub from the intended incision area outward in concentric circles**
  - C. Scrub from the outside of the shaved area to the central area
  - D. Scrub in large straight strokes across the surgical area
  
3. What type of organism causes ringworm in animals? (Lawhead pp 248)
  - A. Bacteria
  - B. Parasite
  - C. Virus
  - D. Fungus**

**Round Two Skills**

15. Round Two is the performance of a selected skill(s). The skills approved for this event are:  
 Skill I: **Identify *Instruments/Equipment*** (15 minutes)

Numbered Instruments (15) or photos from list:

Ambu Bag	Endotracheal Tubes & Laryngoscope	Mouth Speculum	Sharps Container
Autoclave	Fecal Floatation Kits	Needle Holders	Splints
Blair Hugger Warming Unit	Hoof Testers	Patient Warming System	Surgical Pack
Balling Gun	Insulin Syringe	Penrose Drains	Tetotomy or Iris Scissors
Barnes Dehorner	Lavage System	Pulse Oximeter	Through the Needle Catheter
Binocular Microscope	Leukopet System	Radiograph Machine	Tissue Forceps
Butterfly Catheter	Mayo Scissors	Reagent Strip Test	Tooth Float
Cattle Prod	Mayo Stands	Scalpel Blades	Trocar
Clipboard	Mobile Crash Cart	Semi-Automated External Defibrillator	Urinary Catheters
Colostrometer	Mobile X-Ray Unit	Senn Or Rake Retractor	Vacutainer

- Skill II: Identification of Companion Animal Breeds/Species (8 minutes)  
 Skill III: Preparation of the Operative Site (7 minutes)  
 Skill IV: Simple Fecal Flotation (5 minutes)  
 Skill V: Lifting and Restraining a Dog (4 minutes)  
 Skill VI: Wrapping a Surgical Pack (3 minutes)  
 Skill VII: Preparing a Feline to Obtain a Temperature (6 minutes)

**(FOR ALL SKILLS, BODY FLUIDS WILL BE A SIMULATED PRODUCT)**

16. Skills I and/or II may be administered with the Round One written test.
17. The selected skill(s) will be presented to competitors as a written scenario at the beginning of the round. The scenario will be the same for each competitor and will include a challenging component that will require the competitors to apply critical thinking skills. A sample scenario can be found [here](#).
18. Timing will begin when the scenario is presented to the competitors and will be stopped at the end of the time allowed.
19. The scenario is a secret topic. Competitors MAY NOT discuss or reveal the secret topic until after the event has concluded or will face penalties per [the GRRs](#).
20. Judges will provide information to competitors as directed by the rating sheets. Competitors may ask questions of the judges while performing skills if the questions relate to patient's condition and will be included in the scenario or judge script.

**Final Scoring**

21. The competitor must earn a score of 70% or higher on the combined skill(s) of the event (excluding the test and ID equipment/animal breeds) in order to be recognized as an award winner at the ILC.
  
22. Final rank is determined by adding the round one test score plus round two skill score. In case of a tie, the highest test score will be used to determined final placement.

# VETERINARY SCIENCE

Competitor #: \_\_\_\_\_ Judge's Initials: \_\_\_\_\_ Total Points (45 poss.) \_\_\_\_\_

**Skill I: Identify Equipment and Instruments (Time: 15 minutes)**

Name of Instrument	Points (1 each for name & spelling)	Purpose or Use	Points (1 point for correct purpose/use)
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			
11			
12			
13			
14			
15			
<b>TOTAL: ID &amp; Spelling (30 poss)</b>		<b>TOTAL: Purpose (15 poss.)</b>	

# VETERINARY SCIENCE

Competitor #: \_\_\_\_\_ Judge's Initials: \_\_\_\_\_ Total Points (30 possible.) \_\_\_\_\_

## Skill II: Identification of Companion Animal Breeds/Species (Time: 8 Minutes)

	Companion Animal Breed Species	One point for correct identification	One point for correct spelling
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			
11			
12			
13			
14			
15			
<b>TOTAL:</b>		<b>TOTAL: ID (15)</b>	<b>TOTAL: Spelling(15)</b>

## VETERINARY SCIENCE

Section # \_\_\_\_\_ Division: \_\_\_\_\_ SS \_\_\_\_\_ PS/Collegiate  
 Competitor # \_\_\_\_\_ Judge's Signature \_\_\_\_\_

<b>Skill III: Preparation of the Operative Site (Time: 7 minutes)</b>	<b>Possible</b>		<b>Awarded</b>
1. Washed hands or used alcohol based hand-rub for hand hygiene.	2	0	
2. Verified the patient's identity.	2	0	
3. Verified surgical skill being performed and surgical site.	2	0	
4. Checked progress notes to assure that patient was bathed and surgical site clipped and scrubbed and urine was expressed from bladder.	2	0	
5. Assembled materials for prep.	1	0	
6. Positioned patient on back and secured legs with tape.	1	0	
7. Opened sterile packages: bowl and gauze using aseptic technique.	2	0	
8. Dropped four (4) gauze sponges into a sterile bowl and then poured germicide to cover sponges, using aseptic technique.	2	0	
9. Donned sterile gloves correctly.	2	0	
10. Handled gauze sponges with sterile sponge forceps or the gloved hand using aseptic technique.	2	0	
11. Began scrub at the intended incision site and continued out in concentric circles to an area of at least two inches larger than expected size of sterile field.	2	0	
12. Sponge discarded after reaching the periphery.	2	0	
13. Repeated steps 9, 10 & 11 two more times.	3	0	
14. Blotted excess germicide solution with sterile gauze sponge(s).	1	0	
15. Sprayed 10% Povidone Iodine solution on site.	1	0	
16. Removed gloves and washed hands or used alcohol based hand-rub for hand hygiene.	2	0	
17. Used appropriate verbal and nonverbal communication with patient and other personnel.	2	0	
<b>TOTAL POINTS -- SKILL I</b>	<b>31</b>		
<b>70% Mastery for Skill I = 21.7</b>			

## VETERINARY SCIENCE

Section # \_\_\_\_\_ Division: \_\_\_\_\_ SS \_\_\_\_\_ PS/Collegiate  
 Competitor # \_\_\_\_\_ Judge's Signature \_\_\_\_\_

<b>Skill IV Simple Fecal Flotation (Time: 5 minutes)</b>	<b>Possible</b>		<b>Awarded</b>
1. Washed hands or used alcohol based hand-rub for hand hygiene	2	0	
2. Applied non-latex exam gloves.	2	0	
3. Assembled equipment and supplies.	1	0	
4. Placed approximately 2 – 5 g of feces in a paper cup.	1	0	
5. Add 30 ml of flotation solution.	1	0	
6. Using the tongue depressor, mix the feces to produce an evenly suspended emulsion.	1	0	
7. Poured the suspension through a 10 cm (4"x4") gauze square into another cup.	1	0	
8. Filled the shell vial (or 15 ml conical centrifuge tube) with the filtered solution to form a convex dome (meniscus) at the rim.	1	0	
9. Placed a cover slip on top of the meniscus.	1	0	
10. Verbalized leaving the cover slip in place for 10 – 20 minutes.	1	0	
11. Picked the cover slip straight up and placed on a glass slide, fluid side down.	1	0	
12. Removed non-latex gloves and washed hands or used alcohol based hand-rub for hand hygiene.	2	0	
<b>TOTAL POINTS – SKILL IV</b>	<b>15</b>		
<b>70% Mastery for Skill IV = 10.5</b>			



## VETERINARY SCIENCE

Section # \_\_\_\_\_ Division: \_\_\_\_\_ SS \_\_\_\_\_ PS/Collegiate  
 Competitor # \_\_\_\_\_ Judge's Signature \_\_\_\_\_

*Note: In this skill, the competitor will lift a small dog, and then will also lift a medium-sized dog. He/she will verbalize the process for lifting a large dog. Simulation of the cephalic venipuncture will be done on the medium dog.*

<b>Skill V: Lifting and Restraining a Dog (Time: 4 minutes)</b>		<b>Possible</b>	<b>Awarded</b>
1.	Washed hands or used alcohol based hand-rub for hand hygiene.	2 0	
2.	Lifted the small dog onto the table, holding the dog draped over a forearm with the other hand holding on to the head just below the mandible.	1 0	
3.	Lifted the small dog off the table and back to the floor, using correct body mechanics and lifting technique.	1 0	
4.	Lifted the medium-sized dog onto the table, with one arm around the neck and the other arm around the rear end.	1 0	
5.	Held the medium-sized dog in a standing position by placing one arm around the dog's neck and the other around the abdomen, and hugging the dog close to the body.	1 0	
6.	Verbalized the proper technique for lifting a large dog. * <b>Judge states "Place the dog in a sitting position for a cephalic venipuncture."</b>	1 0	
7.	Placed patient on the table near one end, facing the edge, in the sitting position.	2 0	
8.	Restrained the patient's head by reaching under the neck, placing the hand behind the jaw and pressing the patient's head against the person's chest.	2 0	
9.	Used other arm to reach around rear of the dog and pull dog close to the body.	2 0	
10.	Moved arm that was holding the rear across the shoulders and grasped the leg opposite his/her body.	2 0	
11.	Held the leg by placing the elbow of the dog into the palm of that hand and pushing the leg forward.	2 0	
12.	Placed thumb on top of the leg, squeezing and rotating laterally, to occlude the vein. * <b>Judge states, "venipuncture is complete and blood is drawn."</b>	2 0	
13.	Released thumb after the blood was drawn.	2 0	
14.	Used appropriate verbal and nonverbal communication with patient and other personnel.	2 0	
15.	Washed hands or used alcohol based hand-rub for hand hygiene.	2 0	
<b>TOTAL POINTS – SKILL II</b>		<b>25</b>	
<b>70% Mastery for Skill II = 17.5</b>			

# VETERINARY SCIENCE

Section # \_\_\_\_\_  
 Competitor # \_\_\_\_\_

Division: \_\_\_\_\_ SS \_\_\_\_\_ PS/Collegiate  
 Judge's Signature \_\_\_\_\_

Skill VI	Wrapping a Surgical Pack (Time: 3 minutes)	Possible		Awarded
1.	Assembled equipment and supplies.	1	0	
2.	Washed hands or used alcohol based hand-rub for hand hygiene.	2	0	
3.	Placed a large unfolded wrap diagonally in front of you.	2	0	
4.	Placed the instrument tray in the center of the wrap so that an imaginary line can be drawn from one corner of the wrap to the opposite corner and is perpendicular to the two sides of the instrument tray.	2	0	
5.	Folded the corner of the wrap that is closest over the instrument tray to its far side, tucked it underneath the tray with a tab out.	2	0	
6.	Folded the right corner over the pack two-thirds of the way to the opposite side.	2	0	
7.	Folded the left corner over the pack two-thirds of the way to the opposite side.	2	0	
8.	Folded the final corner.	2	0	
	a. Folded the final corner down.	2	0	
	b. Tucked the fold under the previous two folds.	2	0	
	c. Folded the tip of the final fold so it is exposed for easy unwrapping.	2	0	
9.	Wrapped the pack in a second layer of cloth or paper, secured the final tab with autoclave or gas sterilization indicator tape for ease of grasping and opening.	2	0	
10.	Returned equipment and supplies.	2	0	
11.	Washed hands or used alcohol based hand-rub for hand hygiene.	2	0	
<b>TOTAL POINTS -- SKILL VI</b>		<b>25</b>		
<b>70% Mastery of Skill = 17.5</b>				

# VETERINARY SCIENCE

Section # \_\_\_\_\_ Division: \_\_\_\_\_ SS \_\_\_\_\_ PS/Collegiate  
 Competitor # \_\_\_\_\_ Judge's Signature \_\_\_\_\_

*Note: Verbalization of the temperature will be provided by judge. In standard practice, please note that all feline visits should be at a minimum of 15 minutes to follow the American Association of Feline Practitioners motto of "Go Slow to Go Fast." For HOSA purposes, this skill time has been reduced in order for competitors to demonstrate sufficient knowledge of the appropriate steps as demonstrated on a stuffed animal.*

<b>Skill VII: Preparing a Feline to Obtain a Temperature (Time: 6 minutes)</b>	<b>Possible</b>		<b>Awarded</b>
1. Washed hands or used alcohol based hand-rub for hand hygiene.	1	0	
2. Gathered and prepared equipment needed for skill.	1	0	
3. Sprayed the area where cat will be seen with a synthetic FFP analog to promote calming and decrease anxiety.	2	0	
4. Greeted cat & client by name with moderated body language & voice.	2	0	
5. Placed the carrier on the exam table and opened the door to the carrier as soon as you enter the room.	1	0	
6. Verbalize "the animal history of the cat has been obtained."	1	0	
<b><i>After obtaining the history, if the cat has left the carrier follow step 7 and skip 8 &amp; 9. If the cat has not come out of the carrier skip step 7 and start again with step 8.</i></b>	-		
7. If the cat has left the carrier: Placed the carrier out of sight until the procedures are completed.	1	0	
8. If the cat will not come out of the carrier: To decrease the cat's anxiety, placed a towel between the two halves of the carrier as you remove the top and front of the carrier.	1	0	
9. Created a "tent" with the towel covering the cat. The cat remains accessible.	1	0	
10. Used a towel to lightly swaddle the cat and placed on exam area (OR if cat is still in carrier, allowed to remain in bottom of carrier for the exam).	1	0	
11. Placed hand on the top of the cat's head with the fingers pointed toward cat's nose using the first and fifth finger to hold each side of the head to prevent movement.	2	0	
12. Attempted to massage or stroke the top of the head to relax the cat.	2	0	
13. Observed for signs of increased anxiety in cat throughout procedure such as posture or facial changes. Reported observations to the judge. <b>*Judge states, "temperature has been taken and skill performed."</b>	4	0	
14. Released cat by unwrapping towel OR removing towel tented on top of carrier.	1	0	

<b>Skill VII Preparing a Feline to Obtain a Temperature (con't) – Items Evaluated</b>	<b>Possible</b>	<b>Awarded</b>
15. Verbalized "Owner will now comfort the cat and return the cat to the carrier."	1 0	
16. Used a calm, positive demeanor and worked at a consistent pace throughout the skill.	2 0	
17. Washed hands or used alcohol based hand-rub for hand hygiene.	2 0	
<b>TOTAL POINTS -- SKILL VII Cat Left Carrier</b>	<b>24</b>	
<b>TOTAL POINTS -- SKILL VII Cat Did Not Leave Carrier</b>	<b>25</b>	
<b>70% Mastery for Skill VII = Cat Left Carrier = 16.8</b>		
<b>70% Mastery for Skill VII = Cat Did Not Leave Carrier = 17.5</b>		