



## Curriculum Development Team Training

### Instructional Scenario

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# The Buck Stops Here!

## Duty/Concept Area(s): Understanding Laboratory Procedures

### Scenario:

Charlie is an experienced and reliable veterinary assistant. This Monday however, he is feeling overwhelmed. Charlie is in charge of running all of the laboratory bloodwork today because his colleague called out sick. Charlie's shift started at 7 a.m. It is now 2:30 p.m. and he has skipped his lunch to get the laboratory testing caught up. He is very hungry and feeling exhausted. There are eight blood samples remaining in the refrigerator that Charlie has not been able to complete, and his supervisor needs the results to make the respective diagnoses.

Charlie opens the refrigerator, takes out all eight samples and decides to run them simultaneously, because they all require the same analysis: a microhematocrit (PCV).

All samples are labeled correctly on the test tubes, but he forgets to number each microhematocrit sample when he puts them into the centrifuge and turns on the machine.

Just as he realizes his mistake, his supervisor walks into the laboratory area and impatiently asks if the samples are finally ready. Charlie hesitates to answer as a million thoughts run through his mind. He feels intimidated by his supervisor and does not want to be yelled at. He also does not want to risk losing the pay raise he was promised, because his family depends on his income. He knows he can fudge the records of each patient and considers doing so.

### Big Question:

What ethical, professional, and personal dilemmas does Charlie face, and how will they determine his next steps and his answer?

### Focused Questions:

- What circumstances put Charlie in this predicament?
- Charlie is wrestling with several problems at the same time. How is he trying to cope? What are his primary motivators?
- If Charlie does not provide the correct results, how might this affect the patients, the clients, the diagnosing veterinarian, and the reputation of the veterinary hospital? How might he be affected?



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### **Project-Based Assessment:**

Conduct a microhematocrit test for three blood samples provided by the instructor, from beginning to finish (including labeling, storing, performing technique, and recording data). Remember that you have classmates with whom you must share the equipment. Before, during, and after you complete this assignment, communicate with your cohorts on how to best proceed and correctly complete the work in a timely fashion.

### **SOL Correlation:**

English: 11.5, 12.5

Science: CH.1



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# The Pyramid

## Duty/Concept Area(s): Demonstrating Hospital Procedures

### Scenario:

A young boy found a stray kitten in his backyard. His parents are initially less than pleased but quickly fall in love with and decide to keep the capricious kitten. They make an appointment and bring the kitten to the veterinary clinic where you work as an assistant. One of your job duties is to take the patient's history, temperature, pulse, and respiration (TPR) on arrival, and to explain the appropriate services for the first year of pet ownership. The services include the spaying or neutering of kittens and cats.

You know how important it is to communicate information regarding spaying or neutering with . Your boss has instructed you to clearly lay out the lifetime benefits of spaying and neutering kittens and expects you to market it to each client according to the veterinary clinic's training manual.

### Big Question:

How will you ensure that you meet your supervisor' expectations when communicating with the new clients?

### Focused Questions:

- What supplies do you need to gather before inviting the clients into the examination room?
- Where can you find visuals of cat overpopulation and cat reproduction cycles that are client-friendly?
- How do you explain the value of unsexing a kitten?
- How do you address clients' concerns regarding some of the more prevalent myths associated with unsexing kittens?

### Project-Based Assessment:

- Research peer-reviewed cat overpopulation charts and the feline reproductive cycle.
- Create a virtual poster which provides information to lay persons to learn interactively about cat overpopulation in our country.



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- Present your poster at your local community center during a community event.

### **Resources:**

“SpayUSA, Low-cost Spay and Neuter,” North Shore Animal League America  
(<https://www.animalleague.org/get-involved/spay-usa/>)

ASPCA.org (<https://www.aspca.org/>)

### **SOL Correlation:**

English: 11.3, 11.5, 12.3, 12.5



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## Watch Those Sharps!

### Duty/Concept Area(s): Demonstrating Hospital Procedures

#### Scenario:

Sophia is getting ready to clean the surgical instruments. After finishing her last surgical case, Dr. Brown left the used instruments on the Mayo stand. The last time Sophia processed instruments, she got a painful cut from the sharp tips of a towel clamp. Sophia knows it is very important that the packs are ready for the next day's surgical cases. She wants to clean the instruments quickly, as the clinic has afternoon appointments, but she also wants to avoid any injuries.

#### Big Question:

What does Sophia need to do to ensure the pack is ready for the next surgery and prevent a similar injury from occurring again to either herself or a co-worker?

#### Focused Questions:

- Which instruments are sharps, and why should Sophia identify them before cleaning?
- How can Sophia prevent blood and tissue from drying on the instruments before she has time to process them?
- How will Sophia wash the instruments to prevent damage to them? What equipment does she need to assemble?
- How will Sophia place instruments that have hinges or boxlocks in the ultrasonic cleaner? Why?
- Why would sorting the instruments by type help Sophia to pack surgical packs more efficiently?
- What instruments will go into a basic spay pack?
- How will the veterinarian be able to tell that the contents of the pack are indeed sterile?
- Who should be notified in the event of an injury?

#### Project-Based Assessment:

- Create a standard operating procedure (SOP) for instrument processing; outlining the appropriate steps for cleaning and processing surgical equipment.
- Assemble packs using the SOP.

#### Resources:

"Surgical Instruments: Manufacturing and Care," North American Veterinary Community's VetFolio, (<https://www.vetfolio.com/learn/article/surgical-instruments-manufacturing-and-care>)



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### **SOL Correlation:**

English: 11.3, 11.5, 12.3, 12.5



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## All By Myself

### Duty/Concept Area(s): Understanding Disease and Disease Prevention

#### Scenario:

You are shadowing an equine veterinarian, and today's first visit is to a local equine rescue facility. There, you see an emaciated horse in a pen located away from the other horse residents. The horse is agitated, whinnies for the other horses, and appears to have very little hay in its pen compared to the other horses. You feel sad at this pitiful display of horse behavior and want to give the horse a treat. You ask the veterinarian if you can pet the horse and give it a treat. The veterinarian, who is currently busy with another equine patient, sternly says, "No!" but doesn't have time to immediately give you an explanation.

#### Big Question:

Why did the veterinarian say "No!" without hesitation and so sternly?

#### Focused Questions:

- Why is this horse kept by itself when it appears that it suffers from anxiety caused by the separation from the rest of the herd?
- Why might this horse not have as much feed available compared to other horses, when it is clearly emaciated?
- Explain the Body Conditioning Score Chart of the equine patient. What diseases can contribute significantly to a low BCS in equine patients? Can those diseases be prevented and/or treated, and, if so, how?

#### Project-Based Assessment:

Go to the "Rescue and Retirement" section of the American Association of Equine Practitioners website (<https://aaep.org/guidelines/rescue-and-retirement>). Click "View the Care Guidelines for Equine Rescue and Retirement Facilities." Choose three of the available chapters, and prepare a slideshow that outlines the content of the chosen chapters. Highlight and explain at least two requirements per chapter. Present your report to your classmates and teacher without the use of anything other than your presentation. Don't forget to properly cite your source.

#### Resources:

American Veterinary Medical Association (<https://www.avma.org/>)

American Association of Equine Practitioners (<https://aaep.org/>)



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### **SOL Correlation:**

English: 11.3, 11.5, 12.3, 12.5

Science: BIO.3, BIO.4





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## Filling Prescriptions

### Duty/Concept Area(s): Understanding Veterinary Pharmacology

#### Scenario:

Kayla is a veterinary assistant at a small animal care practice. She is tasked to fill prescriptions to send home with Jack, a 75-pound mixed breed dog who had orthopedic surgery today. Dr. Jones writes the orders for the medications, and Kayla needs to create the labels as well as dispense the medications into bottles to go home. The orders are as follows:

Carprofen 75mg PO BID x 7 days  
Cephalexin 750mg PO BID x 14 days.

Note: Carprofen strength that this vet clinic carries comes in 25mg and 100mg tablets; Cephalexin comes in 250mg and 500mg capsules.

#### Big Question:

How will Kayla determine the correct medication strength and quantity to send home with Jack?

#### Focused Questions:

- What is BID? How should this be written?
- What is PO?
- What strength tablet should Kayla dispense for the Carprofen?
- How many Carprofen will she need to dispense?
- What should the label say for the Carprofen?
- What strength capsule of Cephalexin should Kayla dispense?
- How many capsules of Cephalexin should she send home?
- What should the label say for Cephalexin?
- Do either of these medications have special instructions? Can they be given at the same time?

#### Project-Based Assessment:

Provide students with a variety of word problems involving calculations and conversions. Have students convert pounds to kg and kg to pounds. Have students determine doses of medications based on body weight and number of mg/kg of drug needed. Include other routes of administration and use additional abbreviations.



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### **SOL Correlation:**

English: 11.3, 11.5, 11.8, 12.3, 12.5, 12.8

History and Social Science: GOVT.8, GOVT.14, GOVT.15, VUS.8

Mathematics: AII.3



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## Calculating Medication Dose and Quantity

### Duty/Concept Area(s): Performing Mathematical Operations (Posology)

#### Scenario:

Marcy is a veterinary technician working at Small Paws Animal Hospital. She is assisting with an appointment for Bruce, a seven-year-old boxer. Bruce has a bacterial infection and will need antibiotics to go home. Dr. Jones needs to prescribe the medication. Bruce weighs 75 pounds. Dr. Jones asks for Marcy to convert Bruce's weight to kilograms for her so that she can calculate the dose. Marcy is told that Bruce will need 44mg of Cephalexin per kg per day divided into two doses (one dose every twelve hours) for two weeks. Marcy calculates the dose and needs to determine how many capsules to send home. (Note: The Cephalexin is in capsule form, and Small Paws Animal Hospital carries both the 250mg and 500mg capsules).

#### Big Question:

How will Marcy determine the proper strength and quantity of medications to send home?

#### Focused Questions:

- What conversion equation does Marcy need to use to calculate Bruce's weight from pounds to kg?
- What is Bruce's weight in kg?
- Why is medication dosage determined by weight?
- What if Marcy calculated the medication dose based on Bruce's weight in pounds instead of kg?
- How should Marcy determine each dose?
- What is Bruce's dose of Cephalexin?
- Which strength of Cephalexin capsules should Marcy dispense to Bruce?
- How many capsules of Cephalexin does Marcy need to dispense?
- Does Marcy need someone to double-check her calculations before dispensing the medication? Who should check these calculations?

#### Project-Based Assessment:

Provide students with a variety of word problems involving calculations and conversions. Have students convert pounds to kg and kg to pounds. Have students determine doses of medications based on body weight and number of mg/kg of drug needed. Include other routes of administration and use additional abbreviations.



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### **SOL Correlation:**

English: 11.3, 11.5, 11.6, 12.3, 12.5, 12.6

Mathematics: AII.3

Science: CH.1



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## Calculating Medication Dose and Quantity

### Duty/Concept Area(s): Exploring First Aid on Animals

#### Scenario:

Drew is a veterinary technician working at Small Paws Emergency Veterinary Hospital. This is a 24-hour emergency hospital, and she is currently working the evening shift. She is working as the triage technician today, assessing emergency walk-in patients. It is now 7:30 p.m., a busy time for this clinic due to many day practices being closed now. Four cases show up within a ten-minute period.

The first to arrive is Jack, a seven-year-old hound mix with a broken toenail. The owner is concerned because Jack is still bleeding, even with a bandage on his paw. The owner worries that, if Jack isn't seen soon, he will get the toenail caught on something and tear it completely off.

The second case is a five-year-old neutered male domestic shorthair feline who is not eating or drinking, has vomited once, and has been hiding. The owner thinks the cat might be constipated, because, though it has visited the litterbox often during the past couple of days, the litterbox it is still clean. When Drew triaged this patient, the cat is very dull and lethargic.

The third patient to arrive is a nine-year-old golden retriever that was attacked by another dog while on a walk. He has a few puncture wounds on his neck and face but is otherwise bright, alert, and responsive (BAR). The wounds are oozing but not actively bleeding. One wound is deep, and the owner is worried that it will become infected if he waits to take the dog to his regular vet tomorrow.

The fourth is a six-month-old lab puppy that ate an entire pan of double-chocolate brownies about 20 minutes prior to arrival. The owner has already called poison control and has a case number. The puppy is currently BAR and acting normal.

#### Big Question:

How will Drew determine which pet gets seen by the vet first?

#### Focused Questions:

- How should Drew triage these patients? Should they be seen in the order that they arrived?
- Which of these patients is the most critical and should be assessed by the doctor first? Why?
- Which of these four patients is the least critical? Why?



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- What should be the order in which each of these patients are seen?
- How should Drew communicate to the clients the order that the patients are seen by the doctor?
- What kind of questions should Drew be asking each owner about their pet?

#### **Project-Based Assessment:**

Provide students with a variety of case examples. Have them work in pairs to triage. Students could also role-play these scenarios.

#### **SOL Correlation:**

English: 11.3, 11.5, 12.3, 12.5



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## Animal Welfare Assessment

### Duty/Concept Area(s): Maintaining Professional and Ethical Standards

#### Scenario:

Compare the two types of working dogs. Based on the information provided below, determine which living and working situation is more favorable for the welfare of the dog.

#### Background for dog 1: Police Dog

A four-year-old, neutered male German shepherd dog is used for patrolling, law enforcement officer protection, and narcotics detection. The dog is assumed to be working whenever its harness is on. His handler is a male police officer with 25 years of service, 18 of which have been with the K9 unit.

#### Background for dog 2: Guide Dog

A six-year-old, spayed female Labrador retriever dog is used to assist the blind in getting to and from destinations safely. The dog is assumed to be working whenever she is wearing her harness. Her owner is a blind woman in her mid-30s, and this is the owner's second guide dog.

### Housing

#### Police Dog

The dog lives in a 1,700-square foot home with a fenced one-acre yard. The dog lives with the officer, his wife, their two children (aged eight and ten years), and one other dog, a non-working, spayed female German shepherd. The dog is assigned to a police office in a mid-sized city in Virginia.

#### Guide Dog

The dog lives in a 1,000-square foot first-floor apartment in a large city in Oregon with her owner and her owner's husband. The apartment does not have a yard, but there is a dog-friendly park across the street.

### Temperament Testing and Medical Assessment

#### Police Dog

At 18 months of age, the breeder and the trainer for the K9 unit interested in the dog assessed his temperament. He was found to be confident, not fearful or skittish, and was able to focus on tasks. Orthopedic, ophthalmologic, and stress



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test examinations were performed, and it was determined that the dog was fit for K9 service.

### **Guide Dog**

The dog's temperament was assessed by the guide dog organization. She was calm and alert; non-aggressive; able to focus and ignore distraction; desensitized to her surroundings; sensitive to slight corrections; and showed no signs of carsickness. The dog passed medical examinations (orthopedic, ophthalmologic, and stress tests) and met the organization's physical criteria (height and height-weight proportion) for service. She had minimal scars, a proper bite, and no missing teeth.

### **Job-Specific and Ongoing Training**

#### **Police Dog**

From 18 to 21 months of age, the K9 unit trainer worked with the dog on job-specific tasks, agility, and endurance. The handler receiving the dog, worked with him to continue the training from 21 to 30 months of age, and the dog became an active K9 officer at the age of 30 months.

The dog was trained for two purposes in the K9 unit: providing protection and detecting narcotics. Training methods included a combination of positive reinforcement, negative reinforcement, and punishment, depending on the task being taught. Food rewards are never used. For narcotic detection, the dog was taught to associate the smell of a drug with a favorite toy; the dog learned to work to find narcotics and receive the toy. Associative learning is very important to police work.

During his service as a K9 officer, the dog has a scheduled training day once weekly and short training sessions during workdays, time permitting. The dog and his handler occasionally participate in training conferences or camps with other K9 units.

#### **Guide Dog**

All advanced training was conducted by the guide dog organization from 12 to 17 months of age. The person receiving the dog worked with the dog and trainers onsite for an additional month, and the dog was placed with her owner at 18 months of age.

Advanced training included learning tasks such as avoiding obstacles, assessing traffic, and finding sidewalks. Positive reinforcement and repetition under a wide range of conditions were used for training, including clicker training, pattern training, and food and verbal praise as rewards.





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The guide dog receives no formal ongoing training once placed with her owner; it is assumed that she will not need further training. The owner occasionally practices infrequently used commands.

### **Nutrition and Body Condition**

#### **Police Dog**

The dog is fed dry food two-and-a-half hours before and two hours after work, but none is provided during the work shift. Occasional treats are offered in the evening. Unlimited water is available at home, but water intake is limited during the work shift.

The dog has a body condition score of 4.0 on a 1–9 scale.

#### **Guide Dog**

The dog is offered free-choice dry food and water at home. The owner carries a collapsible bowl and regularly offers the dog water throughout the day. Rawhide chews are given two or three times per day and treats are given regularly in the evenings.

The dog has a body condition score of 6.5 on a 1–9 scale

### **Work Schedule**

#### **Police Dog**

Three days a week, the dog's day begins at 5:00 a.m. with a trip outside and breakfast, followed by reporting to work at the station at 7:30 a.m. From 7:45 a.m. to 9:30 a.m., the dog and his handler conduct drug sweeps at two local high schools and report back to the station. From 10:00 a.m. to 6:00 p.m., the dog and his handler perform patrol shifts, traffic checks, security stops, and other duties. The dog is transported in an SUV with a specialized dog compartment in the rear. From 6:00 p.m. to 7:00 p.m., the handler takes the dog for a run prior to returning home at 7:00 p.m. Dinner is fed at 9:00 p.m., and bedtime is 10:00 p.m..

One day a week, there is a full day of training instead of a normal workday. The dog and his handler work every other weekend.

#### **Guide Dog**

The guide dog's day begins at 6:30 a.m. with a trip outside and breakfast. The dog and her owner leave the apartment at 8:00 a.m. and take the commuter bus downtown to the owner's place of work. From 9:00 a.m. to 12:30 p.m., the dog accompanies the owner in the office and to occasional meetings and breaks. From 12:30 p.m. to 1:15 p.m., the dog guides the owner through busy streets to and from lunch. The owner and dog leave work at 5:00 p.m. to catch the bus back



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home, arriving home at 5:45 p.m. After dinner at 6:00 p.m., the dog accompanies the owner on walks and the occasional errand until bedtime at 10:00 p.m.

### Physical and Social Enrichment

#### Police Dog

The dog is allowed toys when not working. The toys are rotated and replaced regularly, and include rubber Kong toys, puzzle toys, and balls. The older children play with the dog most days using the toys. Meals are sometimes fed using puzzle toys. The officer takes the dog for a 30–60 minute run each evening.

The dog receives attention from the officer and his family, consisting of petting and routine care. The other officers at the station also interact with the dog when he's not on patrol, but the dog is not allowed to receive attention from other officers or the public when he's working. The dog cohabitates amicably with the other (pet) dog, but they do not appear to play.

#### Guide Dog

The dog is allowed toys when not working and is trained to keep her toys on a small rug to avoid pathway hazards for her blind owner. Toys include Nylabones, chew ropes, and a Frisbee. The owner's husband occasionally plays fetch with the dog at the dog-friendly park across the street and takes her on walks through the park twice weekly.

The dog receives attention from the owner and her husband in the form of petting, playing, and routine care. She has little or no social contact with other people or dogs. When she's working, the dog does not socialize with any person other than the owner.

### Veterinary and Home Care

#### Police dog

The dog was neutered at six months of age and is vaccinated by a veterinarian according to AAHA vaccination guidelines against canine parvovirus, canine distemper, canine adenovirus, Bordetella, rabies, Lyme disease, and leptospirosis. Heartworm and internal parasite preventives are administered year-round, and a topical flea and tick preventive is administered monthly. The dog is examined twice yearly by a veterinarian, including fecal parasite screening. Routine blood testing is performed yearly.

He's bathed monthly, and his coat is brushed daily by his handler. His teeth are brushed four times weekly, and his nails are trimmed monthly with a guillotine-type trimmer. He is calm and accepts grooming, bathing, and toothbrushing.



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During his nail trims, however, he is tense, his tail is tucked, and he tries to withdraw his paw.

### **Guide Dog**

The dog was spayed at four months of age and is vaccinated by a veterinarian based on AAHA vaccination guidelines against canine parvovirus, canine distemper, canine adenovirus, and rabies. Heartworm preventive medication is administered monthly from March through October, and flea baths are given as needed. She receives a yearly veterinary examination with fecal parasite screening and routine blood testing.

She is bathed as needed, and her coat is brushed every other week or more often as needed. Her teeth are cleaned yearly by a veterinarian, and she has had one tooth extracted. Her nails are trimmed monthly with a rotating nail grinder. She is very calm and relaxed about all grooming situations, and sometimes rolls on her back during grooming.

### **End of Career Decision-Making**

#### **Police dog**

The dog is scheduled for retirement at eight years of age, at which time ownership is transferred to his handler and the retired dog becomes a pet. He will occasionally be used for public outreach/public relations work. The officer will begin training a new dog when this dog retires.

#### **Guide dog**

Between 10 and 12 years of age, the dog will be retired from guide dog service, returned to the guide dog organization, and placed in an adoption program.

### **Big Question:**

Which of the two dogs' welfare is overall more favorable?

**Focused Questions:** (Answer the question by either stating the police dog, the guide dog or the two situations are equal.)

1. Based on the information provided, which dog's housing situation is more favorable for the welfare of the dog? Why?
2. Based on the information provided, which dog's temperament testing and medical assessment situation are more favorable for the welfare of the dog? Why?
3. Based solely on this information, which dog's training situation is more favorable for the welfare of the dog? Why?
4. Based solely on this information, which dog's nutritional situation and body condition is more favorable for the welfare of the dog? Why?



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5. Based solely on this information, which dog's work schedule situation is more favorable for the welfare of the dog? Why?
6. Based solely on this information, which dog's physical and social enrichment situation is more favorable for the welfare of the dog?
7. Based solely on this information, which dog's veterinary and home care situations are more favorable for the welfare of the dog?
8. Based solely on this information, which dog's end of career decision-making situation is more favorable for the welfare of the dog?

#### **Project-Based Assessment:**

Create a poster or presentation listing what makes each of the eight situations more favorable for the welfare of the dog.

#### **Resources:**

"Animal welfare assessments: Test your knowledge," American Veterinary Medical Association (<https://www.avma.org/resources/animal-health-welfare/animal-welfare-assessments-test-your-knowledge>)

"Animal welfare: What is it?," American Veterinary Medical Association (<https://www.avma.org/resources/animal-health-welfare/animal-welfare-what-it>)

"Animal Welfare Assessment Contest," American Veterinary Medical Association (<https://www.awjac.org/>)

#### **SOL Correlation:**

English: 11.5, 12.5

History and Social Science: GOVT.11, GOVT.15, GOVT.16