



School District of Horicon

Course Outline

Learning Targets

Companion Animal Science

UNIT: Pet Portfolio Project

- **Why a Good Choice** – what makes this kind of animal an ideal choice for a pet? Who is this pet best for?
- **Cost** – what is the average cost (either per week, per month, per year, or over the pet's lifetime)? What are the biggest expenses?
- **Feeding** – what does this kind of pet eat, how much does it eat, and how do you best feed it?
- **Housing** – what is needed to house this animal? A house? An aquarium? A bed? A fence? Describe.
- **Handling** – what is needed to handle this animal, and how do you handle this animal safely? How do you properly hold or move the animal? What equipment do you need (e.g. leash? Carrier?)
- **Problems & Concerns** – what are 3 or more common problems, concerns, diseases, or disorders that can affect your ownership of this pet? What is the treatment or response to each problem?

UNIT: Animal Handling

- State techniques that reduce the stress of treated animals.
- Describe how to properly approach an animal to reduce their stress and reduce your likelihood of injury.
- Determine where to treat an animal based on size (e.g. floor or table).
- Describe how to remove an animal from a carrier or cage.
- Demonstrate how to carry an animal properly.
- Summarize the benefits of proper restraint for both the animal and the examiner.
- Provide proper examples of verbal, physical, and chemical restraint.
- State how a leash, come-along pole, and other tools can be used to safely restrain an animal.
- Identify and demonstrate the following restraints: ,Reclining, Hugging, Kneeling, Sternal Recumbency, Sitting, Standing, Stretch, Muzzling, Muzzling short-nosed animals
- Describe the steps necessary to create an Elizabethan Collar.

UNIT: Physical Exams

- Describe how to take a dog's temperature
- List the normal bodily temperatures for animals
- Identify abnormal temperatures and what they indicate

- Summarize how to assess the color of mucus membranes and what they indicate
- Conduct a CRT test, state what it means, and how to respond to different CRT results.
- Define a capillary
- Describe how to measure heart and breathing rates
- Calculate normal heart and breathing rates using a stethoscope
- Calculate HR and BR per minute from 10 seconds or 15 second intervals
- Define and describe dyspnea.
- State when deep pain stimulation is appropriate.
- Identify different responsiveness levels and state what they indicate.

UNIT: Wound Repair

- Define and provide examples of each of the following kinds of wounds: puncture, abrasion, avulsion, incision, laceration.
- Identify each of the following stages of healing by their symptoms: hemostasis, inflammation, debridement, repair, and maturation.
- Define and summarize the role of hemorrhage in wound healing.
- Summarize the steps by which a platelet blood cell forms a plug to stop bleeding.
- Show the relationship between a platelet and the collagen that is exposed after an injury.
- Summarize how degranulation enables the platelet plug to form.
- Review the properties of platelets and state how they enable a wound to heal.
- Summarize how platelets enable the formation of a fibrin mesh scab.
- Compare and contrast coagulants and anticoagulants and state the role they play in wound healing.
- Compare and contrast vasodilation and vasoconstriction and state when each occurs in healing and why.
- Define exudate and describe the role it plays in healing.
- Identify the problem or problems created by excess exudate formation.
- Summarize the role each of the following play in wound repair: fibroblasts, granulation tissue, myofibroblasts, capillaries, platelets.
- State the symptoms that indicate when a wound has matured and fully healed. Identify common sources of delay in the process of wound repair.

UNIT: Bandaging

- Identify common contaminants of wounds.
- Demonstrate how to prep a wound for bandaging.
- Describe how to clip the fur of an animal prior to bandaging to reduce the risk of infection.
- Summarize the differences between an antibiotic and an antiseptic and describe how to use them properly during bandage.
- Recap the problem of antibiotic resistance and expand on how to prevent this problem during the bandaging process.
- Summarize the benefits of proper bandaging.
- Define edema, seroma, hematoma, and desiccation as they apply to bandages.
- Restate the rules of bandaging.
- Define and state the properties of the primary, secondary, and tertiary layer of bandage.
- Identify common household items that could replace each component of the bandage.
- Choose from common sources of dressing for the primary layer based on the conditions of the wound and defend each choice on the basis of the dressing's properties.

- Summarize how to properly apply the secondary and tertiary layer.
- Describe the pro's and con's of each of three kinds of wound-closure materials.
- Demonstrate how to properly apply a bandage to different areas of a dog's body.

UNIT: Suturing

- Summarize elements that comprise the aseptic technique.
- Summarize how to prep a wound for suturing in regards to shaving, washing, and drying.
- Identify tools needed for suturing and their function.
- Compare and contrast the benefits and drawbacks of continuous and interrupted suturing.
- Identify a proper suture based on its shape when viewed from the side.
- Demonstrate and describe how to properly perform a suture using a needle, needle holder, forceps, and suture material.
- Identify the proper distance from the wound to begin a suture.
- Demonstrate how to properly hold a needle with a needle holder.
- Summarize key principles of knot tying in sutures.
- Summarize the steps needed to remove sutures.

UNIT: Emergency Response

- Students will describe in detail how to save a pet in the following emergencies:
 - Car accidents
 - Poisoning
 - Choking
 - Electrocutation and burns
 - Heat stroke
 - Injured or bloody paws

UNIT: Pet Nutrition

- Define, identify the characteristics of, and state the symptoms of misfeeding carbohydrates, fats and oils, proteins, vitamins, minerals, and water.
- Defend why a dog's diet should not include milk using evidence.
- Compare and contrast saturated to unsaturated fats.
- Describe how a dog incorporated carbohydrates into its diet prior to domestication.
- Compare and contrast plant-based vs. animal-based proteins.
- Identify water-soluble vs. fat-soluble vitamins
- Describe symptoms of overfeeding and underfeeding carbohydrates, fats and oils, proteins, vitamins, minerals, and water.

UNIT: Choosing a Pet Food

- Summarize how pet food sales are regulated in the US
- Use the 95%/25%/3%/Flavor Rules to determine the amount of meat product a dog food must contain based on its name.
- State how the Net Quantity Statement helps a customer.
- State how to determine the prevalence of an ingredient based on the ingredient list.
- Compare and contrast meat vs. meat meal as an ingredient in dog food.
- State what items require a maximum value listing on pet food and why.
- State what items require a minimum value listing on pet food and why.
- Summarize how closely feeding directions on pet food should be followed.
- Define each of the following as they pertain to pet food: premium; organic; natural
- Compare brands of pet food for quality and price and assess their comparative value by selecting a brand that is better. Defend this choice with reasons.
- Summarize how to switch the brand of pet food you feed with your pet.
- Identify the organization that regulates pet food sales in the US.
- State the importance of water in a dog's diet.

UNIT: Pet Obesity

- State the percent of dogs in the US that suffer from obesity.
- Identify the health problems associated with dog obesity.
- State how much longer a non-obese dog lives on average.
- Determine a healthy and an unhealthy BCS score.
- List the causes of obesity.
- Define Body Condition Score and diagnose different scores for different dogs.
- Identify key bodily characteristics and symptoms of each BCS score.
- Identify a dog's BCS score based on its bodily shape.
- Identify a dog's BCS score based on its fat cover and palpability of its bones.
- Determine what percent weight loss of body weight is healthy for a dog.
- Identify how excess weight loss will impact a dog's health and bodily performance.
- Determine the best evidence to use when prescribing a weight-loss program.
- Justify the costs of a low-calorie dog food using its benefits compared to just cutting a dog's consumption down.
- Justify the use of treats for a dieting dog.
- Prescribe how often a dog should exercise per day.

UNIT: Reproductive Health

- Describe why spaying and neutering is a humane choice
- Understand the function and physiology of the reproductive organs of dogs and cats
- Explain why sexual reproduction is biologically advantageous
- Understand the basic process of removing the sexual organs
- Explain how the process of spaying and neutering can prevent sexual reproduction without inhibiting any other physiological processes
- Describe complications that can arise from spaying and neutering as well as the symptoms

of these problems

- Correctly use veterinary terms related to the processes of spaying and neutering

UNIT: Grooming and Clipping

- List the supplies needed for proper grooming of a small, long-haired dog
- Describe how to prepare your grooming area, and what location works best for this purpose.
- State the ideal temperature for a dog's bath.
- Determine how one would know if the water is too hot or cold.
- List precautions that need to be taken before immersing the dog.
- State how to prevent unnecessary apprehension in your dog before and during a bath
- State action is necessary to ensure that all of the water spray reaches a dog's underside
- Describe how to immobilize the dog in the bath.
- Describe how to properly apply a shampoo before lathering.
- State the outcome of not properly rinsing a dog's fur after shampooing.
- Compare and contrast the benefits of using a conditioner and describe how to do this.
- Describe what portion of a dog's face should get special attention.
- State what to do if a dog's hair is severely matted.
- Describe what should be done with any hair that grows into a dog's eyes or is obscuring its vision.
- Outline how to properly care for a dog's ears while grooming.
- List three conditions that can be found during ear-cleaning that require an appointment with a vet.
- Determine how to properly clip a dog's nails.

Students will be able to meet the learning targets above as evidenced by formative and summative classroom assessments.