
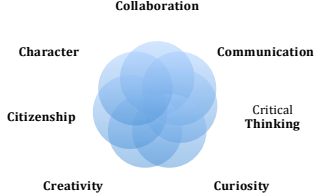


Content Area: Agriscience and Technology DRAFT	Course: Veterinary Assistant Certification Disease Year B	Grade Level: 11/12
	<p>R14 The Seven Cs of Learning</p> 	
Unit Titles	Length of Unit	
<ul style="list-style-type: none"> • <i>Intro to Veterinary Medicine & the Normal Animal</i> 	3 to 5 weeks	
<ul style="list-style-type: none"> • <i>Human & Animal Health</i> 	3 to 5 weeks	
<ul style="list-style-type: none"> • <i>Infectious Diseases</i> 	3 to 5 weeks	
<ul style="list-style-type: none"> • <i>Non-Infectious Diseases</i> 	4 to 6 weeks	
<ul style="list-style-type: none"> • <i>Principles & Methods of Disease Control</i> 	3 to 5 weeks	
<ul style="list-style-type: none"> • <i>Supervised Agricultural Experiences (SAE) Proficiencies</i> 	1 to 2 weeks	
<ul style="list-style-type: none"> • <i>Sterilization & Disinfection</i> 	2 to 4 weeks	
<ul style="list-style-type: none"> • <i>Assisting with Surgery</i> 	3 to 5 weeks	
<ul style="list-style-type: none"> • <i>Regulatory Veterinary Medicine</i> 	4 to 6 weeks	

Strands	Course Level Expectations
Normal Animal Form, Function & Behavior	<ul style="list-style-type: none"> Recognize animal's normal anatomy, physiology, vital signs, and genetics and be able to recognize deviations from these norms.
Diseases	<ul style="list-style-type: none"> Diagnostics, treatment, and prevention of infectious and noninfectious diseases.
Handling and Restraint	<ul style="list-style-type: none"> Properly and safely handle and restrain domesticated animals.
Clinic Skills	<ul style="list-style-type: none"> Principles and methods of disease control, sterilization and disinfection, and assisting with surgery.

Unit Title	Intro to Veterinary Medicine & the Normal Animal	Length of Unit	1 to 2 weeks
Inquiry Questions (Engaging & Debatable)	<ul style="list-style-type: none"> • What is the role a veterinary medicine professional in the office and society? • What are the potential career opportunities for a veterinary assistant? • Why is it important to consider the role of the companion animal in today's society? • How does form dictate function when considering anatomy and physiology of animals? • What role does animal behavior play in the veterinary industry? • Why are vital signs and age significance important to a veterinary professional? • What role does genetics play in the veterinary industry and hat can be determined by breed characteristics? 		
Standards*	<p>Animal Systems (AS) & Career Ready Practices (CRP):</p> <p>CRP.10.01.02.a. Examine career clusters and identify potential career opportunities based on personal interests, talents, goals and preferences.</p> <p>CRP.10.02. Examine career advancement requirements (e.g., education, certification, training, etc.) and create goals for continuous growth in a chosen career.</p> <p>AS.01.01.02.b. Describe the historical and scientific developments of different animal industries and summarize the products, services and careers associated with each.</p> <p>AS.02.01.03.b. Analyze and document animal husbandry practices and their impact on animal welfare.</p> <p>AS.02.01.02.a. Identify major animal species by common and scientific names.</p> <p>AS.02.02.06.c. Explain the impact of animal body systems on performance, health, growth and reproduction.</p>		
Unit Strands & Concepts	<p>Study the profession of veterinary medicine, discover the career opportunities of the veterinary assistant, and study the changing relationships between people and animals. Anatomy and physiology; Reading animal behavior; vital signs; genetics; determining the age of animals; breeds of cats and dogs; and breeds of livestock. Veterinary medical professions in private, public and industry practices, human/animal relationships, animal rights and animal welfare.</p>		
Key Vocabulary	<p>Anatomy, physiology, integumentary, musculoskeletal, cardiovascular, lymphatic, digestive, respiratory, endocrine, urinary, reproductive, nervous, vitals, classification.</p>		

* The agriculture, food and natural resources (AFNR) industry standards

Unit Title	Intro to Veterinary Medicine & the Normal Animal	Length of Unit	1 to 2 weeks
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Critical Content: My students will Know...	Key Skills: My students will be able to (Do)...
<ul style="list-style-type: none"> • the potential career opportunities in the veterinary medical industry. • the potential career opportunities as a veterinary assistant. • the scholastic requirements required for various veterinary medical careers. • the role that animals play in society both historically and today. • the range of viewpoints regarding animal rights and welfare. • anatomy and physiology of body systems. • the difference between normal and abnormal behavior. • normal ranges of an animal's vital signs. • the role that genetics plays in the veterinary industry. • how to properly determine the age in various domesticated animals. • breeds of companion animals, livestock, and exotic pets. 	<ul style="list-style-type: none"> • discuss the career opportunities in the field of veterinary medicine. • compare and contrast the role of the veterinary assistant in private, public, and industry practices. • determine the role that the human/animal relationship plays in society. • identify different anatomical features and describe the physiological functions. • assess animal behavior recognizing abnormal and aggressive behaviors. • properly measure vital signs and recognize normal ranges. • demonstrate methods of age determination for cows, horses, dogs and cats. • identify various breeds of dog, cat, livestock and exotic animals.

Assessments:	<ul style="list-style-type: none"> • Various formative and interim assessments. • Performance Activity
Teacher Resources:	<ul style="list-style-type: none"> ❖ Veterinary Science Teacher-Assisted Curriculum. Texas A&M University. ❖ Various Primary and Industry Sources including Advisory Committee Member Input.

Unit Title	Human & Animal Health	Length of Unit	3 to 5 weeks
Inquiry Questions (Engaging & Debatable)	<ul style="list-style-type: none"> • What does the future hold for genetics and disease control? • What factors contribute to the “battle against disease” and can they be controlled? • Why are zoonotic diseases a global concern? • Are current production practices and processing procedures adequate in the assurance of a safe and wholesome food product? • How do economic losses play a role in the livestock industry? • What impact does animal assisted therapy play on handicapped, elderly and mental health? 		
Standards	<p>Animal Systems (AS): AS.05.03.01.a. Explain genetic inheritance in agricultural animals. AS.03.01.05.a. Identify and describe zoonotic diseases. AS.03.01.03.a. Explain characteristics of causative agents and vectors of diseases and disorders in animals. AS.06.02.01.a. Identify animal production practices that could pose health risks or are considered to pose risks by some.</p>		
Unit Strands & Concepts	<p>Develop an understanding of the role of genetics in disease control. Recognize factors contributing to the spread of disease and develop methods of controlling these factors especially zoonotic diseases. Investigate production practices for the livestock industry including the role that economic losses play on the industry. Recognize the importance of animal assisted therapy. Genetics and disease; the battle against disease; diseases common to humans and animals; food and animal diseases; economic losses; and animal assisted therapy.</p>		
Key Vocabulary	Genetic predisposition, infection, zoonotic, transmission, economic efficiency, animal assisted therapy.		

Unit Title	Human & Animal Health	Length of Unit	3 to 5 weeks
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Critical Content: My students will Know ...	Key Skills: My students will be able to (Do) ...
<ul style="list-style-type: none"> the difference between genetic predisposition and genetic resistance. direct and indirect methods of disease infection. zoonotic diseases transmitted by arthropod, contact, and food products. the relation of disease and a safe food supply. the different animals and the role they play in therapy. 	<ul style="list-style-type: none"> predict an animal's likelihood for a particular disease based on genetics. identify sources of disease. identify possible causes of economic loss in the livestock industry and recommend ways to eliminate or minimize these loses. determine the appropriate animals for an animal assisted therapy program and recommend appropriate programs for specific therapeutic needs.

Assessments:	<ul style="list-style-type: none"> Various formative and interim assessments. Performance Activity
Teacher Resources:	<ul style="list-style-type: none"> ❖ Veterinary Science Teacher-Assisted Curriculum. Texas A&M University. ❖ Various Primary and Industry Sources including Advisory Committee Member Input.

Unit Title	Infectious Diseases	Length of Unit	3 to 5 weeks
Inquiry Questions (Engaging & Debatable)	<ul style="list-style-type: none"> • What causes disease? • Why do certain infectious diseases target particular organ systems? 		
Standards	<p>Animal Systems (AS): AS.03.01.03.a. Explain characteristics of causative agents and vectors of diseases and disorders in animals. AS.03.01.03.b. Evaluate preventive measures for controlling and limiting the spread of diseases, parasites and disorders among animals.</p>		
Unit Strands & Concepts	<p>Investigate the causes of disease and why diseases effect specific organs or organ systems. Causes of infectious diseases; infectious diseases of the digestive system, respiratory and reproductive system, integumentary system, cardiovascular and lymphatic systems, musculoskeletal and nervous systems, and special senses and generalized conditions.</p>		
Vocabulary	<p>Infectious Disease, virus, bacteria, fungus, parasite, prion</p>		

Unit Title	Infectious Diseases	Length of Unit	3 to 5 weeks
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Critical Content: My students will Know ...	Key Skills: My students will be able to (Do) ...
<ul style="list-style-type: none"> • differences of major causative agents. • infectious diseases of the digestive, respiratory, reproductive, integumentary, cardiovascular, lymphatic, musculoskeletal, and nervous systems. 	<ul style="list-style-type: none"> • identify the causative agent of various diseases. • recommend potential preventative measures and treatments for various infectious diseases based on target organ/organ system and causative agent.

Assessments:	<ul style="list-style-type: none"> • Various formative and interim assessments. • Performance Activity
Teacher Resources:	<ul style="list-style-type: none"> ❖ Veterinary Science Teacher-Assisted Curriculum. Texas A&M University. ❖ Various Primary and Industry Sources including Advisory Committee Member Input.

Unit Title	Non-Infectious Diseases	Length of Unit	4 to 6 weeks
Inquiry Questions (Engaging & Debatable)	<ul style="list-style-type: none"> ● What is the role of nutrition and nutritional components in non-infectious disease? ● How can management reduce the occurrence and impact of reproductive non-infectious disease? ● What is the most preventable non-infectious disease? ● Why do animals consume poisonous plants and how can it be prevented? ● 		
Standards	<p>Animal Systems (AS): AS.03.01.03.a. Explain characteristics of causative agents and vectors of diseases and disorders in animals. AS.03.01.03.b. Evaluate preventive measures for controlling and limiting the spread of diseases, parasites and disorders among animals.</p>		
Unit Strands & Concepts	<p>Investigate and consider nutrition and its role in non-infectious diseases, create recommendations for reproductive diseases, recognize situations where chemical poisonings post the greatest risk for animals, consider why animals consume poisonous plants and signs plant related toxicities. Nutritional diseases; reproductive non-infectious diseases; chemical poisoning; toxicity of insecticides; poisonous plants; and miscellaneous non-infectious diseases.</p>		
Vocabulary	<p>Deficiency, toxicity, infertility, dystocia, poisoning, insecticides, endocrine, heat exhaustion and exertion, burn, laceration, fracture, sprain</p>		

Unit Title	Non-Infectious Diseases	Length of Unit	4 to 6 weeks
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Critical Content: My students will Know ...	Key Skills: My students will be able to (Do) ...
<ul style="list-style-type: none"> • importance of water, energy, protein, minerals, and vitamins in diets. • signs of protein deficiency, phosphorous deficiency, grass tetany, milk fever, vitamin deficiency, and mineral deficiency. • economic importance of reproductive problems. • common chemicals responsible animal poisonings. • three major types of insecticides that cause problems in animals. • signs of cyanide and nitrate poisonings. • diseases of the endocrine system, stress disorders, and heat related conditions. • types of burns, cut, fracture, and sprains. 	<ul style="list-style-type: none"> • recognize signs of nutritional related diseases and be able to recommend treatment options to address the issue. • manage reproductive problems in animals. • assist in the diagnostics and treatment of chemical poisonings. • recommend steps that should be taken to treat a poisoned animal. • perform laboratory tests for diagnosing plant poisoning in animals. • treat various types of burns, cuts, fractures, and sprains.

Assessments:	<ul style="list-style-type: none"> • Various formative and interim assessments. • Performance Activity
Teacher Resources:	<ul style="list-style-type: none"> ❖ Veterinary Science Teacher-Assisted Curriculum. Texas A&M University. ❖ Various Primary and Industry Sources including Advisory Committee Member Input.

Unit Title	Principles & Methods of Disease Control	Length of Unit	3 to 5 weeks
Inquiry Questions (Engaging & Debatable)	<ul style="list-style-type: none"> • What management practices are most effective for disease control? • What are the therapy options for disease treatments? • Can parasites be controlled with only one management practice or are multiple practices necessary? • What is the impact of vaccinations on medical fields? • Is utilization of a disinfectant alone enough to fight infectious agents? • Why is dietary management important? • When and why are quarantine and eradication programs necessary? 		
Unit Strands & Standards	<p>Animal Systems (AS) AS.03.01. Prescribe and implement a prevention and treatment program for animal diseases, parasites and other disorders. AS.04.01.02.a. Explain the importance of a balanced ration for animals. AS.03.01.04.c. Perform surgical and nonsurgical veterinary treatments and procedures in animal health care.</p>		
Concepts	<p>Explore management practices and therapy options for disease control. Prevention; treatment; controlling internal parasites; controlling external parasites; veterinary biological products; disinfectants; dietary management of small animals; and quarantines and eradication programs.</p>		
Vocabulary	Prevention, treatment, parasite, disinfectant, quarantine		

Unit Title	Principles & Methods of Disease Control	Length of Unit	3 to 5 weeks
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Critical Content: My students will Know ...	Key Skills: My students will be able to (Do) ...
<ul style="list-style-type: none"> • various management practices targeted towards sources and transmission of diseases. • treatment options for diseases. • types of chemical disinfectants. • the importance of a balanced diet. • why quarantine and eradication programs would be necessary. 	<ul style="list-style-type: none"> • recognize the source and route of transmission of a disease and recommend management practices appropriate for that disease. • prescribe and appropriately administer drug, chemical, nutritional, physical, supportive, and/or surgical therapy. • appropriately recommend nutritional, sanitation, and drug management practices to control internal parasites. • appropriately recommend environmental management and administration of medications to control external parasites. • determine and administer vaccinations according to age, previous vaccination history and risk factors. • properly demonstrate disinfection procedures. • discuss health conditions that respond to dietary management. • design a quarantine and/or eradication program for an animal disease.

Assessments:	<ul style="list-style-type: none"> • Various formative and interim assessments. • Performance Activity
Teacher Resources:	<ul style="list-style-type: none"> ❖ Veterinary Science Teacher-Assisted Curriculum. Texas A&M University. ❖ Various Primary and Industry Sources including Advisory Committee Member Input.

Unit Title	SAE Proficiencies	Length of Unit	1 to 2 weeks
Inquiry Questions (Engaging & Debatable)	<ul style="list-style-type: none"> • How does record keeping relate to evaluation of goals? • How does a student quality growth? • How does a student describe and document success? 		
Standards	<p>Career Ready Practices (CRP): CRP.01. Act as a responsible and contributing citizen and employee. CRP.01.01. Model personal responsibility in the workplace and community CRP.01.02 Evaluate and consider the near-term and long-term impacts of personal and professional decisions on employers and community before taking action. CRP.01.03. Identify and act upon opportunities for professional and civic service at work and in the community. CRP.02. Apply appropriate academic and technical skills. CRP.02.01. Use strategic thinking to connect and apply academic learning, knowledge and skills to solve problems in the workplace and community. CRP.02.02. Use strategic thinking to connect and apply technical concepts to solve problems in the workplace and community.</p>		
Unit Strands & Concepts	Learn the importance of accurate record keeping, personal responsibility, descriptive writing, and goal planning. Record keeping, Descriptive writing, Evaluation of goals and success.		
Vocabulary	Proficiency, financial report, income, expenses, career success, placement, scope, expenditures, gross earnings, net earnings, liabilities, net worth		

Unit Title	SAE Proficiencies	Length of Unit	1 to 2 weeks
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Critical Content: My students will Know ...	Key Skills: My students will be able to (Do) ...
<ul style="list-style-type: none"> • utilize AET • describe and explain the student's' SAE • calculate hours worked and money earned • list skills and identify growth • calculate gross and net income • to set goals 	<ul style="list-style-type: none"> • create a comprehensive multimedia presentation • create a expense report and earning report • write descriptive paragraphs • assemble a collage • create a professional resume • describe and quality success • evaluate goals

Assessments:	<ul style="list-style-type: none"> • Formative and Interim Assessments • Summative: Submission of Proficiency Application (National FFA Proficiency Rubric) • Performance Assessment: SAE Presentation
Teacher Resources:	www.theaet.com and various other primary and industry sources.

Unit Title	Sterilization & Disinfection	Length of Unit	2 to 4 weeks
Inquiry Questions (Engaging & Debatable)	<ul style="list-style-type: none"> • What is the difference between sterilization and disinfection? • What is the importance of sterilization? • What is the importance of disinfection? 		
Standards	<p>Animal Systems (AS): AS.03.01.03.b. Evaluate preventive measures for controlling and limiting the spread of diseases, parasites and disorders among animals. AS.03.01.04.b. Prepare animals, facilities and equipment for surgical and nonsurgical veterinary treatments and procedures. AS.03.01.04.a. Explain the clinical significance of common considerations in veterinary treatments, such as aseptic techniques.</p>		
Unit Strands & Concepts	Study, understand and utilize sterilization, antiseptic and disinfection and their effectiveness. Sterilization and disinfection.		
Vocabulary	Sterilization, disinfection, antiseptic, microorganisms		

Unit Title	Sterilization & Disinfection	Length of Unit	2 to 4 weeks
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Critical Content: My students will Know ...	Key Skills: My students will be able to (Do) ...
<ul style="list-style-type: none"> • difference between sterilization and antiseptics. • characteristics of an ideal antiseptic. • the effectiveness of various sterilizing agents. • time/temperature relationship in destroying microorganisms. 	<ul style="list-style-type: none"> • choose and utilize appropriate sterilization and antiseptic techniques for various situations. • choose an appropriate sterilizing agent for various situations. • demonstrate appropriate usage of the time/temperature relationship in destroying microorganisms. • understand and utilize correct disinfection techniques for surgical suites and surgical instruments. • prepare instruments for sterilization.

Assessments:	<ul style="list-style-type: none"> • Various formative and interim assessments. • Performance Activity
Teacher Resources:	<ul style="list-style-type: none"> ❖ Veterinary Science Teacher-Assisted Curriculum. Texas A&M University. ❖ Various Primary and Industry Sources including Advisory Committee Member Input.

Unit Title	Assisting with Surgery	Length of Unit	3 to 5 weeks
Inquiry Questions (Engaging & Debatable)	<ul style="list-style-type: none"> • Are pre-surgical or post-surgical procedures more important in animal health? • What are the stages of anesthesia and at what stage(s) are surgical procedures performed? • Is a sterile field of operation necessary for animal health? 		
Standards	Animal Systems (AS): AS.03.01.04.b. Prepare animals, facilities and equipment for surgical and nonsurgical veterinary treatments and procedures.		
Unit Strands & Concepts	Investigation of surgical instruments, pre-surgical and post-surgical procedures, washing hands, preparing field of operation, and discussing sources of contamination. Surgical instruments and terminology; surgical preparation and procedures; anesthesia; preparing hands and field of operation; and sterile gloves and gowns.		
Vocabulary	Surgical preparation, anesthesia, field of operation		

Unit Title	Assisting with Surgery	Length of Unit	3 to 5 weeks
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Critical Content: My students will Know ...	Key Skills: My students will be able to (Do) ...
<ul style="list-style-type: none"> • names and uses of surgical instruments. • effects of anesthesia. • types of anesthesia. • stages of anesthesia. • types of germicides. • sources of contamination. 	<ul style="list-style-type: none"> • demonstrate the appropriate use of various surgical instruments. • prep an animal for surgery. • assist in surgery. • manage a post-surgical animal. • describe the monitoring of an animal under anesthesia. • wash hands for surgery. • prep surgery site. • put on gloves and gowns properly.

Assessments:	<ul style="list-style-type: none"> • Various formative and interim assessments. • Performance Activity
Teacher Resources:	<ul style="list-style-type: none"> ❖ Veterinary Science Teacher-Assisted Curriculum. Texas A&M University. ❖ Various Primary and Industry Sources including Advisory Committee Member Input.

Unit Title	Regulatory Veterinary Medicine	Length of Unit	4 to 6 weeks
Inquiry Questions (Engaging & Debatable)	<ul style="list-style-type: none"> • What determines the need for the government to implement a disease control program? 		
Standards	<p>Agribusiness Systems (ABS): ABS.01.03.02.b Assess how local, state, federal, international and industry regulations positively and negatively affect the management of AFNR businesses.</p>		
Unit Strands & Concepts	<p>Understand and implement health regulations required for animals Interstate and international movement of animals; brucellosis and tuberculosis eradication programs; anthrax control program; rabies control program; pseudorabies control program; pullorum-typhoid, avian influenza, and exotic Newcastle disease control programs; bovine trichomoniasis control program; vesicular stomatitis control program; west nile encephalitis control program; food safety program; drug residue avoidance program; and carcass disposal regulations; animal welfare regulations; medical waste disposal; pesticide regulations; and laws related to veterinary medicine.</p>		
Key Vocabulary	<p>Interstate, international, disease control program</p>		

Unit Title	Regulatory Veterinary Medicine	Length of Unit	4 to 6 weeks
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Critical Content: My students will Know ...	Key Skills: My students will be able to (Do) ...
<ul style="list-style-type: none"> • importance of health regulations and requirements for interstate or international travel. • brucellosis, tuberculosis, anthrax, rabies, pseudorabies, pullorum, typhoid, influenza, Newcastle, bovine trichomoniasis, vesicular stomatitis, and west nile encephalitis. • pre-harvest, harvest, and post-harvest food safety protocols. • withdrawal times for drugs and chemicals to prevent drug residue in milk and meat. • carcass disposal regulations. • animal welfare regulations. • medical waste disposal. • pesticide regulations. 	<ul style="list-style-type: none"> • implement health regulations and requirements for interstate and international animal travel. • ensure compliance within the veterinary hospital for all reportable diseases for all animals. • recommend to farmers the appropriate drug residue avoidance program requirements for various medications to ensure avoidance of drug residue in milk and meat products. • design and implement a carcass disposal program that aligns with regulations. • design medical waste disposal plan and consider economics and legal regulations.

Assessments:	<ul style="list-style-type: none"> • Various formative and interim assessments. • Performance Activity
Teacher Resources:	<ul style="list-style-type: none"> ❖ Veterinary Science Teacher-Assisted Curriculum. Texas A&M University. ❖ Various Primary and Industry Sources including Advisory Committee Member Input.