

eDynamic Learning Course Title: Veterinary Science: The Care of Animals

State: TX
State Course Title: Veterinary Medical Applications
State Course Code: 130.9
State Standards: Veterinary Medical Applications
Date of Standards: 2015

TEKS	Unit Name(s)	Lesson(s) Numbers
(1) The student demonstrates professional standards / employability skills as required by business and industry.		
(A) identify career development and entrepreneurship opportunities in the field of veterinary science;	Unit 1: Introduction to Veterinary Science	Lesson 4
(B) demonstrate competencies related to resources, information, interpersonal skills, and systems of operation in veterinary science;	Unit 2: Small Animal Medicine	Lesson 1
(C) demonstrate knowledge of personal and occupational health and safety practices in the workplace;	Unit 1: Introduction to Veterinary Science	Lesson 3
(D) identify employers' expectations, including appropriate work habits, ethical conduct, and legal responsibilities;	Unit 1: Introduction to Veterinary Science	Lesson 5
(E) demonstrate characteristics of good citizenship such as stewardship, advocacy, and community leadership; and	Unit 2: Small Animal Medicine	Lab
(F) research career topics using technology such as the Internet.	Unit 1: Introduction to Veterinary Science	Lesson 4
(2) The student develops a supervised agriculture experience program.		
(A) plan, propose, conduct, document, and evaluate a supervised agriculture experience program as an experiential learning activity;	Unit 2: Small Animal Medicine	Lab
(B) apply proper record-keeping skills as they relate to the supervised agriculture experience;	Unit 2: Small Animal Medicine	Lessons 1-4
(C) participate in youth leadership opportunities to create a well-rounded experience program; and	Unit 2: Small Animal Medicine	Lab
(D) produce and participate in a local program of activities using a strategic planning process.	Unit 2: Small Animal Medicine	Lab
(3) The student researches current topics in veterinary medicine, recognizes the importance of animals in society, and discusses professional ethics and laws that relate to veterinary medicine.		
(A) explain the human-animal bond and how to interact with clients and their animals;	Unit 2: Small Animal Medicine	Lesson 1
(B) identify trends, issues, and historical events that have influenced animal use and care;	Unit 1: Introduction to Veterinary Science	Lesson 2

(C) describe the legal aspects of animal welfare and animal rights;	Unit 1: Introduction to Veterinary Science	Lesson 5
(D) evaluate the principles of veterinary medical ethics; and	Unit 1: Introduction to Veterinary Science	Lesson 5
(E) review policies and procedures in veterinary medicine that reflect various local, state, and federal laws.	Unit 3: Large Animal Medicine	Lab
(4) The student evaluates veterinary hospital management and marketing to determine their importance to the success of veterinary clinics and hospitals.		
(A) identify skills needed to communicate effectively with clients and pet owners in the community;	Unit 8: Holistic Veterinary Science and Medicine	Lab
(B) identify vital information and demonstrate effective communication skills necessary to solve problems;	Unit 8: Holistic Veterinary Science and Medicine	Lab
(C) explain the role and importance of marketing and its effects on the success of a veterinary hospital; and	Unit 1: Introduction to Veterinary Science	Lesson 1
(D) develop skills involving the use of electronic technology commonly found in a veterinary hospital such as centrifuge, autoclave, and radiography positions.	Unit 1: Introduction to Veterinary Science	Lesson 2
(5) The student communicates the importance of medical terminology, evaluates veterinary terms to discover their meanings, and demonstrates the ability to use terms correctly.		
(A) analyze veterinary terms to discover their meanings and recognize common Greek and Latin prefixes, suffixes, and roots;	Unit 2: Small Animal Medicine	All Lessons Associated
(B) use directional anatomical terms appropriately;	Unit 2: Small Animal Medicine	All Lessons Associated
(C) identify anatomical structures of animals;	Unit 2: Small Animal Medicine	All Lessons Associated
(D) describe the major body systems using appropriate medical terminology; and	Unit 2: Small Animal Medicine	All Lessons Associated
(E) recognize, pronounce, spell, and define medical terms relating to diagnosis, pathology, and treatment of animals.	Unit 2: Small Animal Medicine	All Lessons Associated
(6) The student explores the area of animal management as it relates to animal identification, animal characteristics, and behavioral temperament.		
(A) identify a variety of animal species such as companion, exotic, and large animal species according to common breed characteristics;	Unit 3: Large Animal Medicine	Lab
(B) recognize common animal behavioral problems within companion, exotic, and large animals per industry standard;	Unit 1: Introduction to Veterinary Science	Lab
(C) identify correct handling protocols and discuss their relevance to veterinary medical staff; and	Unit 2: Small Animal Medicine	Lesson 1
(D) demonstrate appropriate methods of handling a variety of animal behaviors.	Unit 1: Introduction to Veterinary Science	Lab
(7) The student investigates the body systems and gains a working knowledge of each system's purpose and functions and how each system is affected by disease.		

(A) identify the parts of the skeletal, muscular, respiratory, circulatory, digestive, endocrine, and nervous systems;	Unit 2: Small Animal Medicine	All Lessons Associated
(B) describe the functions of the skeletal, muscular, respiratory, circulatory, digestive, endocrine, and nervous systems;	Unit 2: Small Animal Medicine	All Lessons Associated
(C) identify appropriate anatomical sites for injections, measuring vital signs, and collecting blood samples for various animal species; and	Unit 2: Small Animal Medicine	Lessons 1-5
(D) describe normal animal behavior and vital signs compared to sick animals using medical terminology.	Unit 3: Large Animal Medicine	Lesson 2
(8) The student performs mathematical calculations used in veterinary medicine.		
(A) add, subtract, multiply, and divide whole numbers, fractions, and decimals as related to veterinary medicine;	Unit 4: Exotic Animal Medicine	Lesson 5: Exotic Animal Medicine
(B) apply mathematical skills needed for accurate client assessment such as measurement, conversion, and data analysis;	Unit 4: Exotic Animal Medicine	Lesson 5: Exotic Animal Medicine
(C) solve veterinary problems by calculating percentages and averages;	Unit 4: Exotic Animal Medicine	Lesson 5: Exotic Animal Medicine
(D) convert between English and metric units;		
(E) determine weight, volume, and linear measurements using scientific calculations;		
(F) solve word problems using ratios and dimensional analysis;		
(G) interpret data using tables, charts, and graphs; and	Unit 5: Poisoning & Toxicology	Lab
(H) calculate and prepare chemical concentrations using mathematical equations.	Unit 4: Exotic Animal Medicine	Lesson 5: Exotic Animal Medicine
(9) The student evaluates animal diseases and identifies internal, external, and protozoal parasites.		
(A) identify factors that influence the health of animals;	Unit 6: Veterinary Parasitology	All Lessons Associated
(B) identify pathogens and describe the effects that diseases have on various body systems;	Unit 6: Veterinary Parasitology	Lessons 3-5
(C) explain courses of treatment for common viral and bacterial diseases;	Unit 2: Small Animal Medicine	Lesson 4
(D) describe the process of immunity and disease transmission;	Unit 3: Large Animal Medicine	Lesson 5
(E) identify internal, external, and protozoal parasites using common and scientific names;	Unit 6: Veterinary Parasitology	Lesson 2
(F) describe life cycles of common parasites;	Unit 6: Veterinary Parasitology	Lessons 3-5

(G) explain how parasites are transmitted and their effect on the host;	Unit 6: Veterinary Parasitology	Lessons 3-5
(H) conduct parasitic diagnostic procedures; and	Unit 6: Veterinary Parasitology	Lessons 3-5
(I) describe types of treatments for diseases and parasites.	Unit 6: Veterinary Parasitology	Lessons 3-5
(10) The student evaluates an animal's health during a clinical examination.		
(A) describe the characteristics and signs of a healthy animal;	Unit 3: Large Animal Medicine	Lesson 2
(B) recognize examples of abnormalities and relate them to their associated problems and illnesses;	Unit 3: Large Animal Medicine	Lesson 2
(C) take temperature, pulse, and respiration for a variety of animals;	Unit 2: Small Animal Medicine	Lessons 1-5
(D) describe effects of age, stress, and environmental factors on vital signs of animals;	Unit 8: Holistic Veterinary Science and Medicine	Lab
(E) explain procedures for physical examinations; and	Unit 2: Small Animal Medicine	All Lessons Associated
(F) explain the regional approach to assess an animal's health.	Unit 2: Small Animal Medicine	All Lessons Associated
(11) The student identifies imaging equipment and demonstrates how to safely operate and maintain equipment.		
(A) identify imaging equipment such as an ultrasonograph, endoscope, electrocardiograph, and radiograph;	Unit 2: Small Animal Medicine	Lesson 2
(B) explain safety procedures, maintenance, and operation of imaging equipment; and	Unit 4: Exotic Animal Medicine	Lesson 1: What Risk Does Avian Flu Have for Humans?
(C) demonstrate patient restraint and positioning methods used for imaging purposes.	Unit 4: Exotic Animal Medicine	Lesson 5
(12) The student determines nutritional requirements for ruminant and non-ruminant animals and communicates the importance of animal nutrition in maintaining a healthy animal.		
(A) identify the anatomy of the digestive system of ruminant and non-ruminant animals;	Unit 2: Small Animal Medicine	Lesson 6
(B) describe the process of digestion in ruminant and non-ruminant animals;	Unit 2: Small Animal Medicine	Lesson 6
(C) identify types and sources of nutrients and classes of feeds;	Unit 2: Small Animal Medicine	Lessons 2, 5, 6
(D) identify feed additives and describe how additives affect the food supply;	Unit 2: Small Animal Medicine	Lessons 2, 5, 6
(E) evaluate animal dietary needs and feeding factors;	Unit 5: Poisoning & Toxicology	Lesson 5

(F) calculate energy requirements and formulate rations;		
(G) discuss feeding practices and feed-quality issues; and	Unit 5: Poisoning & Toxicology	Lab
(H) analyze the quality of commercially prepared feeds.		
(13) The student examines various aspects of clinical hematology.		
(A) describe laboratory tests and explain the importance of proper laboratory procedures;	Unit 4: Exotic Animal Medicine	Lesson 3
(B) demonstrate the procedures used in collecting, handling, preparing, and examining fecal, blood, and urine specimens;		
(C) discuss normal and abnormal results obtained in complete blood counts;	Unit 2: Small Animal Medicine	All Lessons Associated
(D) explain sensitivity testing and how to read testing results; and		
(E) prepare microscope slides, preserve specimens, and perform several of the most common laboratory tests such as fecal flotations, microfilaria smear, and packed cell volume.	Unit 1: Introduction to Veterinary Science	Lesson 3
(14) The student identifies hospital procedures, skills, and objectives that are included in the job description of an animal care assistant.		
(A) explain the care, maintenance, and use of equipment and instruments found in veterinary practice;	Unit 1: Introduction to Veterinary Science	Lesson 2
(B) explain appropriate hospital procedures;	Unit 1: Introduction to Veterinary Science	Lesson 2
(C) discuss emergency protocols and describe first aid procedures, including cardiopulmonary resuscitation, control of bleeding, and treatment for shock, for small and large animals;		
(D) demonstrate animal care skills such as administering medications, nail trimming, bathing, grooming, ear cleaning, expressing anal sacs, dental prophylaxis, enema administration, and identification of animals;	Unit 2: Small Animal Medicine	All Lessons Associated
(E) demonstrate therapeutic care such as patient observation, maintaining and administering fluids, applying bandages, caring for open wounds, and managing hydrotherapy and physical therapy; and	Unit 2: Small Animal Medicine	All Lessons Associated
(F) describe skills involved in the reproductive and genetic evaluation of animals.	Unit 2: Small Animal Medicine	Lesson 1
(15) The student identifies and discusses surgical-assisting procedures, skills, and objectives that are included in the job description of an animal care assistant.		
(A) explain the protocol for pre-surgical and post-surgical care of a patient;	Unit 1: Introduction to Veterinary Science	Lesson 2
(B) describe methods used in the sterilization and preparation of small and large animal surgery packs;	Unit 1: Introduction to Veterinary Science	Lesson 2
(C) review skills involved in patient and surgical room preparation;	Unit 1: Introduction to Veterinary Science	Lesson 2

(D) describe surgical procedures such as castration, dehorning, and docking;	Unit 1: Introduction to Veterinary Science	Lesson 2
(E) describe care of newborn, orphan, and recumbent patients; and		
(F) identify and monitor equipment used in surgical procedures.	Unit 1: Introduction to Veterinary Science	Lesson 2
(16) The student identifies pharmacology-assisting procedures, skills, and objectives that are included in the job description of an animal care assistant.		
(A) identify medications according to their classification, form, routes, and methods of administration;	Unit 8: Holistic Veterinary Science and Medicine	Lessons 3, 4
(B) explain handling and distribution, protocol, and laws for controlled substances, including the U.S. Drug Enforcement Agency;	Unit 3: Large Animal Medicine	Lesson 5
(C) calculate dosage using factors such as concentration of drug, weight of animal, and required dosage;	Unit 3: Large Animal Medicine	Lesson 5
(D) complete a prescription label with identifiers that are required by the U.S. Food and Drug Administration; and		
(E) select equipment and instruments used to give medications.		