VETERINARY SCIENCE STANDARDS

This document was prepared by:

Office of Career, Technical and Adult Education
Nevada Department of Education
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State Board for Career and Technical Education on
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NEVADA STATE BOARD OF EDUCATION
NEVADA STATE BOARD FOR CAREER AND TECHNICAL EDUCATION

CTE MISSION STATEMENT:

The Office of Career, Technical and Adult Education is dedicated to developing innovative educational opportunities for students to acquire skills for productive employment and lifelong learning.

NEVADA DEPARTMENT OF EDUCATION

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ACKNOWLEDGEMENTS

The development of Nevada Career and Technical standards and assessments is a collaborative effort sponsored by the Office of Career, Technical and Adult Education at the Department of Education and the Career and Technical Education Consortium of States. The Department of Education relies on teachers and industry representatives who have the technical expertise and teaching experience to develop standards and performance indicators that truly measure student skill attainment. Most important, however, is recognition of the time, expertise and great diligence provided by the writing team members in developing the Career and Technical Standards for Veterinary Science.

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BUSINESS AND INDUSTRY VALIDATION

All CTE standards developed through the Nevada Department of Education are validated by business and industry through one or more of the following processes: (1) the standards are developed by a team consisting of business and industry representatives; or (2) a separate review panel was coordinated with industry experts to ensure the standards include the proper content; or (3) the adoption of nationally-recognized standards endorsed by business and industry.

The Veterinary Science standards were validated through the active participation by business and industry on the development team.

PROJECT COORDINATOR

Sue Poland, Education Programs Professional
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Nevada Department of Education

AGRICULTURE AND NATURAL RESOURCES
Program Requirements

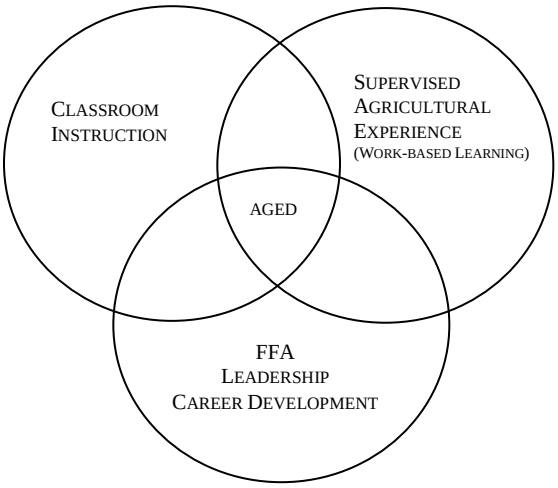
Occupations associated with agriculture production, natural resources, processing and distribution of food and fiber are important to the national interests and provide significant employment opportunities. Occupational education and training in agriculture and agri-business are essential to the continued economic health of Nevada and the nation, as it provides the needed competent and trained work force.

Agriculture education provides high school students with technical and specialized knowledge in production agriculture and natural resources as well as other specific agriculture occupations. The programs are designed to meet students' occupational objectives, interests, and abilities for entry into chosen occupations and can prepare them for advanced education and training. Agriculture education is a coordinated program of group and individual instructional activities consisting of classroom instruction, laboratory experiences, and leadership development. Integral to these activities are FFA (leadership development) and Supervised Agricultural Experience (work-based learning), Nevada Revised Statute 385.110. Federal/Public law#105-225 which was passed in August, 1998, states "Congress of the United States recognizes the importance of the FFA as an integral part of the program of Vocational Agriculture." All students enrolled in Agriculture Education will be recognized as members of the FFA organization. All secondary agriculture education programs and school districts will purchase a curriculum packet consisting of the New Horizons agriculture career and technical magazine, the FFA manual, and the Nevada Record Book on a yearly basis for every student enrolled in agriculture education in their program. Areas of study at the secondary level are divided into Agriculture Science and Specialized Advanced Agriculture Career and Technical Areas.

Agriculture and Society, Plant and Soil Science, Agriculture Mechanical Engineering and Technology, Animal Science, Leadership/FFA, Agriculture Business, Sales, Marketing and Supervised Agriculture Experience, Natural Resources, and Employability are included in the Agriculture Science introduction division.

Instruction in business/specialized agriculture provides training in specific occupational skills, duties, and tasks, as determined by the business and industry needs. Specialized career and technical agriculture programs will include, but are not limited to, the following: ornamental horticulture, floriculture design, turf and landscape management, equine science and technology, forestry technology, wildlife management and enforcement, food science and processing, feedlot management, animal science, veterinary science, agriculture power systems, natural resources and reclamation, mining science and operations, nursery and greenhouse management, landscape architecture, irrigation and chemical management, lawn care and maintenance, and agriculture construction.

NEVADA
AGRICULTURE EDUCATION
Model of Instruction



INTRODUCTION

The standards in this document are designed to clearly state what the student should know and be able to do upon completion of an advanced high school Veterinary Science program. These standards are designed for a three-credit course sequence that prepares the student for a technical assessment directly aligned to the standards.

These exit-level standards are designed for the student to complete all standards through their completion of a program of study. These standards are intended to guide curriculum objectives for a program of study.

The standards are organized as follows:

Content Standards are general statements that identify major areas of knowledge, understanding, and the skills students are expected to learn in key subject and career areas by the end of the program.

Performance Standards follow each content standard. Performance standards identify the more specific components of each content standard and define the expected abilities of students within each content standard.

Performance Indicators are very specific criteria statements for determining whether a student meets the performance standard. Performance indicators may also be used as learning outcomes, which teachers can identify as they plan their program learning objectives.

The crosswalk and alignment section of the document shows where the performance indicators support the English Language Arts and Mathematics Common Core State Standards, and the Nevada State Science Standards. Where correlation with an academic standard exists, students in the Veterinary Science program perform learning activities that support, either directly or indirectly, achievement of one or more Common Core State Standards.

All students are encouraged to participate in the career and technical student organization (CTSO) that relates to their program area. CTSOs are co-curricular national associations that directly enforce learning in the CTE classroom through curriculum resources, competitive events, and leadership development. CTSOs provide students the ability to apply academic and technical knowledge, develop communication and teamwork skills, and cultivate leadership skills to ensure college and career readiness.

The Employability Skills for Career Readiness identify the “soft skills” needed to be successful in all careers, and must be taught as an integrated component of all CTE course sequences. These standards are available in a separate document.

CONTENT STANDARD 1.0 : DEMONSTRATE SAFETY, SANITATION, AND LEGAL PRACTICES USED IN THE VETERINARY CLINICAL SETTING	
PERFORMANCE STANDARD 1.1 : UNDERSTAND SAFE PRACTICES IN THE CLINICAL SETTING	
1.1.1	Categorize and classify chemical, physical, zoonotic and biological hazards associated with the clinical practice environment
1.1.2	Perform infection control practices including hand washing, gloving, gowning, and masking
1.1.3	Demonstrate the appropriate handling and disposal of biohazardous materials
PERFORMANCE STANDARD 1.2 : PRACTICE ACCEPTED SANITATION METHODS IN THE CLINICAL SETTING	
1.2.1	Differentiate between sanitation, disinfection, and sterilization practices
1.2.2	Operate the equipment used in sanitizing, disinfecting, and sterilizing clinical equipment
PERFORMANCE STANDARD 1.3 : UNDERSTAND VETERINARY LAWS AND REGULATIONS	
1.3.1	Read and interpret a Materials Safety Data Sheet
1.3.2	Recognize and explain what the Occupational Safety and Health Administration (OSHA) regulations mean in the workplace
1.3.3	Interpret laws and regulations as pertaining to the veterinary clinic
1.3.4	Assess the laws and regulations regarding drug use, herd health and safety pertaining to regulatory medicine

CONTENT STANDARD 2.0 :	USE STANDARD MEDICAL TERMINOLOGY AS IT IS RELATED TO THE VETERINARY FIELD
PERFORMANCE STANDARD 2.1 :	**UNDERSTAND AND APPLY APPROPRIATE MEDICAL TERMINOLOGY**
2.1.1	Define both Greek and Latin prefixes, suffixes, and roots to build their medical vocabulary
2.1.2	Define the meaning of veterinary terms
2.1.3	List and apply abbreviations commonly used in the veterinary practice
PERFORMANCE STANDARD 2.2 :	**IDENTIFY AND COMPARE ANIMAL BREEDS**
2.2.1	Recognize, classify, define, and spell terms related to small animal breeds
2.2.2	Recognize, classify, define, and spell terms related to exotic breeds

CONTENT STANDARD 3.0 :	UNDERSTAND THE PRINCIPLES OF ANIMAL ANATOMY AND PHYSIOLOGY
PERFORMANCE STANDARD 3.1 :	**UNDERSTAND AND IDENTIFY THE EXTERNAL ORGANS OF ANIMALS**
3.1.1	Identify and label the external parts of domesticated small animals using accepted species terminology
3.1.2	Identify and label the external parts of domesticated recreational and draft animals using accepted species terminology
PERFORMANCE STANDARD 3.2 :	**UNDERSTAND AND IDENTIFY THE ANATOMY AND FUNCTIONS OF THE MUSCULOSKELETAL, NERVOUS, AND INTEGUMENTARY SYSTEMS**
3.2.1	Identify the major muscle groups and explain their functions
3.2.2	Identify the skeletal structures and explain their functions
3.2.3	Identify the central and peripheral nervous systems structures and explain their functions
3.2.4	Identify the different types of skin tissues and explain their functions
3.2.5	Analyze the relationship between the musculoskeletal, nervous, and integumentary systems
PERFORMANCE STANDARD 3.3 :	**UNDERSTAND THE ANATOMY AND FUNCTIONS OF DIGESTIVE AND URINARY SYSTEMS**
3.3.1	Identify, locate, and describe the parts and functions of digestive systems of ruminant and non-ruminant animals
3.3.2	Analyze the relationship of types of digestive systems to the ability of ruminants and non-ruminants to digest and absorb different classes of feed
3.3.3	Identify, locate, and describe the parts and functions of the urinary system
3.3.4	Analyze the relationship between the digestive and urinary systems
PERFORMANCE STANDARD 3.4 :	**UNDERSTAND THE ANATOMY AND FUNCTIONS OF THE REPRODUCTIVE AND ENDOCRINE SYSTEMS**
3.4.1	Identify, locate, and describe the male and female reproductive organs and their functions based on species
3.4.2	Identify, locate, and describe the endocrine glands and explain their functions
3.4.3	Analyze the relationship between the reproductive and endocrine systems

PERFORMANCE STANDARD 3.5 :	UNDERSTAND THE ANATOMY AND FUNCTIONS OF THE CARDIOVASCULAR, HEMOLYMPHATIC, AND RESPIRATORY SYSTEM
3.5.1	Identify, locate, and describe the parts of the cardiovascular system and their functions based on species
3.5.2	Identify, locate, and describe parts of the hemolymphatic system and explain their functions
3.5.3	Identify, locate, and describe parts of the respiratory system and explain their functions
3.5.4	Analyze the relationship between the cardiovascular, hemolymphatic, and respiratory systems

CONTENT STANDARD 4.0 : USE MEDICAL MATH IN THE CLINICAL SETTING	
PERFORMANCE STANDARD 4.1 : UNDERSTAND BASIC MATH PRINCIPLES	
4.1.1	Complete basic addition, subtraction, multiplication, and division problems using whole numbers, fractions, and decimals
4.1.2	Evaluate a given word problem to identify the important information that will be used in solving the problem
PERFORMANCE STANDARD 4.2 : APPLY MATHEMATICAL APPLICATIONS TO THE VETERINARY CLINICAL SETTING	
4.2.1	Complete advanced ratios dealing with dosage, dilution, and weight conversions
4.2.2	Complete word problems dealing with percent, temperature conversion, and liquid and linear measurement

CONTENT STANDARD 5.0 : DEMONSTRATE PROPER PROCEDURES USED IN CLINICAL EXAMINATIONS	
PERFORMANCE STANDARD 5.1 : ASSESS ANIMAL HEALTH USING APPROPRIATE METHODS	
5.1.1	Chart temperature, pulse, and respiration rates for livestock and small animals
5.1.2	Operate veterinary instruments including stethoscope, otoscope, and ophthalmoscope
PERFORMANCE STANDARD 5.2 : RECOGNIZE ANIMAL WELLNESS THROUGH SIGNS AND SYMPTOMS	
5.2.1	Interpret animal behavior as related to its health
5.2.2	Evaluate animals through body condition scoring systems

CONTENT STANDARD 6.0 : DEMONSTRATE PROPER LABORATORY TECHNIQUES USED IN THE VETERINARY CLINIC	
PERFORMANCE STANDARD 6.1 : DEMONSTRATE SKILLS USED IN MICROBIOLOGY	
6.1.1	Identify common diagnostic equipment and describe its function
6.1.2	Prepare media for biotic culture
6.1.3	Construct sample cultures and slides for observation
PERFORMANCE STANDARD 6.2 : DEMONSTRATE SKILLS USED IN HEMATOLOGY	
6.2.1	Compare the types of blood cells, structure and their function
6.2.2	Prepare and stain a blood smear slide for evaluation
6.2.3	Demonstrate and complete a Packed Cell Volume test
6.2.4	Complete a blood chemistry screen and evaluation using in-house materials
PERFORMANCE STANDARD 6.3 : DEMONSTRATE SKILLS USED IN PARASITOLOGY	
6.3.1	Collect and prepare feces for examination
6.3.2	Prepare a fecal smear for examination and evaluation
6.3.3	Prepare a fecal flotation to separate eggs from fecal material for identification
6.3.4	Identify eggs of parasitic worms and giardia in a fecal exam
PERFORMANCE STANDARD 6.4 : DEMONSTRATE SKILLS OF URINALYSIS	
6.4.1	Collect and prepare a urine sample for observation
6.4.2	Perform a visual and chemical test of a urine sample and analyze the results

CONTENT STANDARD 7.0 :	UNDERSTAND THE PRINCIPLES OF ANIMAL DISEASES AND DISORDERS
PERFORMANCE STANDARD 7.1 :	**RECOGNIZE, DESCRIBE, AND IDENTIFY COMMON INFECTIOUS DISEASES**
7.1.1	Summarize the etiology, clinical signs, treatment, prevention, pathology, and contagious nature of common bacterial diseases
7.1.2	Summarize the etiology, clinical signs, treatment, prevention, pathology, and contagious nature of common viral diseases
7.1.3	Summarize the etiology, clinical signs, treatment, prevention, pathology, and contagious nature of common parasitic diseases as pertaining to their life cycle
7.1.4	Summarize the etiology, clinical signs, treatment, prevention, pathology, and contagious nature of common mycotic diseases
7.1.5	Summarize the etiology, clinical signs, treatment, prevention, pathology, and contagious nature of common zoonotic diseases
PERFORMANCE STANDARD 7.2 :	**RECOGNIZE, DESCRIBE, AND IDENTIFY COMMON NON-INFECTIOUS DISEASES**
7.2.1	Summarize the etiology, clinical signs, treatment, prevention, and pathology of nutritional deficit and excess diseases
7.2.2	Summarize the etiology, clinical signs, treatment, prevention, and pathology of genetic diseases, including somatic and cell mutations
7.2.3	Differentiate between genetic and congenital diseases, including inherited diseases
7.2.4	Summarize the etiology, clinical signs, treatment, prevention, and pathology of environmental diseases
7.2.5	Summarize the etiology, clinical signs, treatment, prevention, and pathology of developmental diseases
7.2.6	Summarize the etiology, clinical signs, treatment, prevention, and pathology of traumatic injuries in domestic animals
7.2.7	Connect clinical signs and symptoms to toxic plant species

CONTENT STANDARD 8.0 :	UNDERSTAND THE PRINCIPLES OF ANIMAL NUTRITION
PERFORMANCE STANDARD 8.1 :	**UNDERSTAND THE IMPORTANCE OF NUTRITION IN MAINTAINING A HEALTHY ANIMAL**
8.1.1	Define and explain the function of the nutrients, including how they supply energy
8.1.2	Discuss the major factors that affect an animal's need for nutrients
8.1.3	Illustrate the difference between dietary essential and nonessential nutrients
PERFORMANCE STANDARD 8.2 :	**DESCRIBE THE PROCEDURES IN DETERMINING NUTRITIONAL NEEDS OF ANIMALS**
8.2.1	Compare and contrast the different nutrient and feed requirements between species
8.2.2	Compare the different methods of feeding animals
PERFORMANCE STANDARD 8.3 :	**DESCRIBE THE COMPONENTS OF FEED AND PACKAGING FOR ANIMALS**
8.3.1	Formulate a balanced feed ration
8.3.2	Describe various methods of feed analysis
8.3.3	Describe the functions of an appropriate ration
8.3.4	Read and interpret information from a feed tag and label
8.3.5	Distinguish between the different types of feedstuffs used in ration formulation
8.3.6	Distinguish between the different types of feed preparation and processing
8.3.7	Examine feed for differences in quality

CONTENT STANDARD 9.0 : DEMONSTRATE CLINICAL PRACTICE PROCEDURES	
PERFORMANCE STANDARD 9.1 : UNDERSTAND BASIC TRAUMA CARE IN THE CLINICAL SETTING	
9.1.1	Assess and determine the handling of emergency situations
9.1.2	Demonstrate wound cleaning and bandaging
9.1.3	Apply common splint, casts, and wraps on animals
9.1.4	Demonstrate proper restraint methods for large and small animals
PERFORMANCE STANDARD 9.2 : UNDERSTAND BASIC PROCEDURES IN DISPENSING AND ADMINISTERING COMMON MEDICATIONS	
9.2.1	Demonstrate appropriate administration of oral, aural, topical, ophthalmic, and injectable medication
9.2.2	Interpret and create medication labels
PERFORMANCE STANDARD 9.3 : UNDERSTAND AND PERFORM BASIC SURGICAL PROCEDURES	
9.3.1	Verbalize understanding of surgical aseptic principles
9.3.2	Identify surgical instruments
9.3.3	Demonstrate preparation for surgical procedures including preparing and sterilizing equipment and preparing patient
9.3.4	Perform basic suture patterns

CONTENT STANDARD 10.0 : DEMONSTRATE OFFICE PROCEDURES PRACTICED IN THE VETERINARY CLINIC	
PERFORMANCE STANDARD 10.1 : UNDERSTAND AND MAINTAIN RECORDS USED IN THE CLINICAL PRACTICE	
10.1.1	Create and label medical records
10.1.2	Identify various forms included in the medical records
10.1.3	Create a cage card
10.1.4	Create an invoice for billing
10.1.5	Create a calendar for office scheduling
PERFORMANCE STANDARD 10.2 : UNDERSTAND THE VERBAL AND NONVERBAL COMMUNICATION PRACTICES USED IN THE VETERINARY OFFICE	
10.2.1	Demonstrate the ability to communicate with and educate clients through written and electronic means
10.2.2	Outline the steps of the client grieving process
10.2.3	Effectively address client/clinic conflicts

CONTENT STANDARD 11.0 : DESCRIBE PROPER ETHICAL AND ANIMAL WELFARE ISSUES RELATING TO THE VETERINARY PRACTICE	
PERFORMANCE STANDARD 11.1 : UNDERSTAND PHILOSOPHIES SURROUNDING ANIMAL WELFARE	
11.1.1	Compare and contrast animal welfare versus the concept of animal rights
11.1.2	Research and report the basis for general concerns regarding animal welfare
PERFORMANCE STANDARD 11.2 : UNDERSTAND PRINCIPLES OF ANIMAL BEHAVIOR	
11.2.1	Define, compare and contrast the patterns of animal behavior
11.2.2	Demonstrate various methods of animal behavior modification
PERFORMANCE STANDARD 11.3 : UNDERSTAND CULTURAL AND CONTROVERSIAL ISSUES RELATED TO ANIMAL USE AND KEEP	
11.3.1	Compare and contrast current controversial issues in animal usage
11.3.2	Distinguish between fact and propaganda when analyzing animal usage issues and their impact on the environment
11.3.3	Compare and contrast cultural differences and their impact on animal use

CONTENT STANDARD 12.0 : EXPLORE CAREER OPPORTUNITIES IN THE VETERINARY FIELDS	
PERFORMANCE STANDARD 12.1 : UNDERSTAND EMPLOYMENT FIELDS IN THE VETERINARY INDUSTRY	
12.1.1	List and describe the types of employment opportunities in the veterinary industry
12.1.2	Explore education and training for different veterinary careers
12.1.3	Understand the process of choosing a career path in the veterinary industry

CONTENT STANDARD 13.0 : PARTICIPATE IN LEADERSHIP TRAINING THROUGH MEMBERSHIP IN FFA	
PERFORMANCE STANDARD 13.1 : RECOGNIZE THE TRAITS OF EFFECTIVE LEADERS AND PARTICIPATE IN LEADERSHIP TRAINING THROUGH INVOLVEMENT IN FFA	
13.1.1	Expand leadership experience by serving as a chapter officer or on a committee
13.1.2	Exhibit leadership skills by demonstrating proper parliamentary procedure
13.1.3	Participate in a career development event at the local level or above
PERFORMANCE STANDARD 13.2 : UNDERSTAND THE IMPORTANCE OF SCHOOL AND COMMUNITY AWARENESS	
13.2.1	Participate in a school improvement or community development project

CONTENT STANDARD 14.0 :	DESCRIBE THE RELATIONSHIP BETWEEN A SUPERVISED AGRICULTURAL EXPERIENCE (SAE) AND PREPARATION OF STUDENTS FOR A CAREER IN AGRICULTURE
PERFORMANCE STANDARD 14.1 :	**MAINTAIN A SUPERVISED AGRICULTURAL EXPERIENCE**
14.1.1	Accurately maintain SAE record books
14.1.2	Investigate the proficiency award areas related to SAE program area
14.1.3	Actively pursue necessary steps to receive higher degrees in FFA

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CROSSWALK AND ALIGNMENTS OF VETERINARY SCIENCE STANDARDS AND THE COMMON CORE STATE STANDARDS, THE NEVADA SCIENCE STANDARDS, AND THE COMMON CAREER TECHNICAL CORE STANDARDS

CROSSWALK (ACADEMIC STANDARDS)

The crosswalk of the Veterinary Science Standards shows links to the Common Core State Standards for English Language Arts and Mathematics and the Nevada Science Standards. The crosswalk identifies the performance indicators in which the learning objectives in the Veterinary Science program support academic learning. The performance indicators are grouped according to their content standard and are crosswalked to the English Language Arts and Mathematics Common Core State Standards and the Nevada Science Standards.

ALIGNMENTS (MATHEMATICAL PRACTICES)

In addition to correlation with the Common Core Mathematics Content Standards, many performance indicators support the Common Core Mathematical Practices. The following table illustrates the alignment of the Veterinary Science Standards Performance Indicators and the Common Core Mathematical Practices. This alignment identifies the performance indicators in which the learning objectives in the Veterinary Science program support academic learning.

CROSSWALK (COMMON CAREER TECHNICAL CORE)

The crosswalk of the Veterinary Science Standards shows links to the Common Career Technical Core. The crosswalk identifies the performance indicators in which the learning objectives in the Veterinary Science program support the Common Career Technical Core. The Common Career Technical Core defines what students should know and be able to do after completing instruction in a program of study. The Veterinary Science Standards are crosswalked to the Agriculture, Food & Natural Resources Career Cluster™ and the Animal Systems Career Pathway.

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CROSSWALK OF VETERINARY SCIENCE STANDARDS AND THE COMMON CORE STATE STANDARDS

CONTENT STANDARD 1.0: DEMONSTRATE SAFETY, SANITATION, AND LEGAL PRACTICES USED IN THE VETERINARY CLINICAL SETTING

Performance Indicators	Common Core State Standards and Nevada Science Standards
1.1.1	**Science: Life Science** L.12.C.1 Students know relationships of organisms and their physical environment.
1.1.2	**Science: Nature of Science** N.12.A.4 Students know how to safely conduct an original scientific investigation using the appropriate tools and technology.
1.1.3	**Science: Nature of Science** N.12.A.4 Students know how to safely conduct an original scientific investigation using the appropriate tools and technology.
1.2.2	**Science: Nature of Science** N.12.A.4 Students know how to safely conduct an original scientific investigation using the appropriate tools and technology.
1.3.1	**English Language Arts: Language Standards** L.11-12.4C Consult general and specialized reference materials (e.g., dictionaries, glossaries, thesauruses), both print and digital, to find the pronunciation of a word or determine or clarify its precise meaning, its part of speech, its etymology, or its standard usage
1.3.2	**English Language Arts: Reading Standards for Literacy in Science and Technical Subjects** RST.11-12.1 Cite specific textual evidence to support analysis of science and technical texts, attending to important distinctions the author makes and to any gaps or inconsistencies in the account. RST.11-12.9 Synthesize information from a range of sources (e.g., texts, experiments, simulations) into a coherent understanding of a process, phenomenon, or concept, resolving conflicting information when possible.
1.3.3	**English Language Arts: Speaking and Listening Standards** SL.11-12.1a Come to discussions prepared, having read and researched material under study; explicitly draw on that preparation by referring to evidence from texts and other research on the topic or issue to stimulate a thoughtful, well-reasoned exchange of ideas. **English Language Arts: Reading Standards for Literacy in Science and Technical Subjects** RST.11-12.1 Cite specific textual evidence to support analysis of science and technical texts, attending to important distinctions the author makes and to any gaps or inconsistencies in the account. RST.11-12.9 Synthesize information from a range of sources (e.g., texts, experiments, simulations) into a coherent understanding of a process, phenomenon, or concept, resolving conflicting information when possible.
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CONTENT STANDARD 2.0: USE STANDARD MEDICAL TERMINOLOGY AS IT IS RELATED TO THE VETERINARY FIELD

Performance Indicators	Common Core State Standards and Nevada Science Standards
2.1.1	**English Language Arts: Reading Standards for Literacy in Science and Technical Subjects** RST.11-12.4 Determine the meaning of symbols, key terms, and other domain-specific words and phrases as they are used in a specific scientific or technical context relevant to grades 11–12 texts and topics.
2.1.2	**English Language Arts: Reading Standards for Literacy in Science and Technical Subjects** RST.11-12.4 Determine the meaning of symbols, key terms, and other domain-specific words and phrases as they are used in a specific scientific or technical context relevant to grades 11–12 texts and topics.

CONTENT STANDARD 3.0: UNDERSTAND THE PRINCIPLES OF ANIMAL ANATOMY AND PHYSIOLOGY

Performance Indicators	Common Core State Standards and Nevada Science Standards
3.2.1	**Science: Life Science** L.12.B.2 Students know the human body has a specialized anatomy and physiology composed of an hierarchical arrangement of differentiated cells.
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3.2.5	**English Language Arts: Reading Standards for Literacy in Science and Technical Subjects** RST.11-12.9 Synthesize information from a range of sources (e.g., texts, experiments, simulations) into a coherent understanding of a process, phenomenon, or concept, resolving conflicting information when possible. WHST.11-12.8 Gather relevant information from multiple authoritative print and digital sources, using advanced searches effectively; assess the strengths and limitations of each source in terms of the specific task, purpose, and audience; integrate information into the text selectively to maintain the flow of ideas, avoiding plagiarism and overreliance on any one source and following a standard format for citation. **Science: Life Science** L.12.B.2 Students know the human body has a specialized anatomy and physiology composed of an hierarchical arrangement of differentiated cells.
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3.4.3	**English Language Arts: Reading Standards for Literacy in Science and Technical Subjects** RST.11-12.9 Synthesize information from a range of sources (e.g., texts, experiments, simulations) into a coherent understanding of a process, phenomenon, or concept, resolving conflicting information when possible. **English Language Arts: Writing Standards for Literacy in Science and Technical Subjects** WHST.11-12.8 Gather relevant information from multiple authoritative print and digital sources, using advanced searches effectively; assess the strengths and limitations of each source in terms of the specific task, purpose, and audience; integrate information into the text selectively to maintain the flow of ideas, avoiding plagiarism and overreliance on any one source and following a standard format for citation. **Science: Life Science** L.12.B.2 Students know the human body has a specialized anatomy and physiology composed of an hierarchical arrangement of differentiated cells.
3.5.1	**Science: Life Science** L.12.B.2 Students know the human body has a specialized anatomy and physiology composed of an hierarchical arrangement of differentiated cells.
3.5.2	**Science: Life Science** L.12.B.2 Students know the human body has a specialized anatomy and physiology composed of an hierarchical arrangement of differentiated cells.
3.5.3	**Science: Life Science** L.12.B.2 Students know the human body has a specialized anatomy and physiology composed of an hierarchical arrangement of differentiated cells.
3.5.4	**English Language Arts: Reading Standards for Literacy in Science and Technical Subjects** RST.11-12.9 Synthesize information from a range of sources (e.g., texts, experiments, simulations) into a coherent understanding of a process, phenomenon, or concept, resolving conflicting information when possible. **English Language Arts: Writing Standards for Literacy in Science and Technical Subjects** WHST.11-12.8 Gather relevant information from multiple authoritative print and digital sources, using advanced searches effectively; assess the strengths and limitations of each source in terms of the specific task, purpose, and audience; integrate information into the text selectively to maintain the flow of ideas, avoiding plagiarism and overreliance on any one source and following a standard format for citation.

CONTENT STANDARD 5.0: DEMONSTRATE PROPER PROCEDURES USED IN CLINICAL EXAMINATIONS

Performance Indicators	Common Core State Standards and Nevada Science Standards
5.1.1	**Science: Nature of Science** N.12.A.1 Students know tables, charts, illustrations and graphs can be used in making arguments and claims in oral and written presentations. N.12.A.2 Students know scientists maintain a permanent record of procedures, data, analyses, decisions, and understandings of scientific investigations.
5.2.1	**English Language Arts: Reading Standards for Literacy in Science and Technical Subjects** RST.11-12.9 Synthesize information from a range of sources (e.g., texts, experiments, simulations) into a coherent understanding of a process, phenomenon, or concept, resolving conflicting information when possible.
5.2.2	**English Language Arts: Reading Standards for Literacy in Science and Technical Subjects** RST.11-12.7 Integrate and evaluate multiple sources of information presented in diverse formats and media (e.g., quantitative data, video, multimedia) in order to address a question or solve a problem. RST.11-12.9 Synthesize information from a range of sources (e.g., texts, experiments, simulations) into a coherent understanding of a process, phenomenon, or concept, resolving conflicting information when possible. **Science: Nature of Science** N.12.A.1 Students know tables, charts, illustrations and graphs can be used in making arguments and claims in oral and written presentations.

CONTENT STANDARD 6.0: DEMONSTRATE PROPER LABORATORY TECHNIQUES USED IN THE VETERINARY CLINIC

Performance Indicators	Common Core State Standards and Nevada Science Standards
6.1.2	**English Language Arts: Writing Standards for Literacy in Science and Technical Subjects** WHST.11-12.8 Gather relevant information from multiple authoritative print and digital sources, using advanced searches effectively; assess the strengths and limitations of each source in terms of the specific task, purpose, and audience; integrate information into the text selectively to maintain the flow of ideas, avoiding plagiarism and overreliance on any one source and following a standard format for citation.
6.1.3	**English Language Arts: Reading Standards for Literacy in Science and Technical Subjects** RST.11-12.3 Follow precisely a complex multistep procedure when carrying out experiments, taking measurements, or performing technical tasks; analyze the specific results based on explanations in the text. **Science: Nature of Science** N.12.A.4 Students know how to safely conduct an original scientific investigation using the appropriate tools and technology.
6.2.1	**Science: Life Science** L.12.B.1 Students know cell structures and their functions.
6.2.2	**English Language Arts: Reading Standards for Literacy in Science and Technical Subjects** RST.11-12.3 Follow precisely a complex multistep procedure when carrying out experiments, taking measurements, or performing technical tasks; analyze the specific results based on explanations in the text. **Science: Nature of Science** N.12.A.4 Students know how to safely conduct an original scientific investigation using the appropriate tools and technology.
6.2.3	**English Language Arts: Reading Standards for Literacy in Science and Technical Subjects** RST.11-12.3 Follow precisely a complex multistep procedure when carrying out experiments, taking measurements, or performing technical tasks; analyze the specific results based on explanations in the text. **Science: Physical Science** P.12.A.3 Students know identifiable properties can be used to separate mixtures. **Science: Nature of Science** N.12.A.4 Students know how to safely conduct an original scientific investigation using the appropriate tools and technology.
6.2.4	**English Language Arts: Reading Standards for Literacy in Science and Technical Subjects** RST.11-12.3 Follow precisely a complex multistep procedure when carrying out experiments, taking measurements, or performing technical tasks; analyze the specific results based on explanations in the text. **Science: Nature of Science** N.12.A.4 Students know how to safely conduct an original scientific investigation using the appropriate tools and technology.
6.3.1	**English Language Arts: Reading Standards for Literacy in Science and Technical Subjects** RST.11-12.3 Follow precisely a complex multistep procedure when carrying out experiments, taking measurements, or performing technical tasks; analyze the specific results based on explanations in the text.
6.3.2	**English Language Arts: Reading Standards for Literacy in Science and Technical Subjects** RST.11-12.3 Follow precisely a complex multistep procedure when carrying out experiments, taking measurements, or performing technical tasks; analyze the specific results based on explanations in the text. **Science: Nature of Science** N.12.A.4 Students know how to safely conduct an original scientific investigation using the appropriate tools and technology.

6.3.3	**English Language Arts: Reading Standards for Literacy in Science and Technical Subjects** RST.11-12.3 Follow precisely a complex multistep procedure when carrying out experiments, taking measurements, or performing technical tasks; analyze the specific results based on explanations in the text. **Science: Physical Science** P.12.A.3 Students know identifiable properties can be used to separate mixtures. **Science: Nature of Science** N.12.A.4 Students know how to safely conduct an original scientific investigation using the appropriate tools and technology.
6.3.4	**Science: Life Science** L.12.B.1 Students know cell structures and their functions.
6.4.1	**English Language Arts: Reading Standards for Literacy in Science and Technical Subjects** RST.11-12.3 Follow precisely a complex multistep procedure when carrying out experiments, taking measurements, or performing technical tasks; analyze the specific results based on explanations in the text.
6.4.2	**English Language Arts: Reading Standards for Literacy in Science and Technical Subjects** RST.11-12.3 Follow precisely a complex multistep procedure when carrying out experiments, taking measurements, or performing technical tasks; analyze the specific results based on explanations in the text. **Science: Nature of Science** N.12.A.4 Students know how to safely conduct an original scientific investigation using the appropriate tools and technology.

CONTENT STANDARD 7.0: UNDERSTAND THE PRINCIPLES OF ANIMAL DISEASES AND DISORDERS

Performance Indicators	Common Core State Standards and Nevada Science Standards
7.1.1	**Science: Life Science** L.12.B.3 Students know disease disrupts the equilibrium that exists in a healthy organism.
7.1.2	**Science: Life Science** L.12.B.3 Students know disease disrupts the equilibrium that exists in a healthy organism.
7.1.3	**Science: Life Science** L.12.B.3 Students know disease disrupts the equilibrium that exists in a healthy organism. L.12.C.1 Students know relationships of organisms and their physical environment.
7.1.4	**Science: Life Science** L.12.B.3 Students know disease disrupts the equilibrium that exists in a healthy organism.
7.1.5	**Science: Life Science** L.12.B.3 Students know disease disrupts the equilibrium that exists in a healthy organism.
7.2.1	**Science: Life Science** L.12.B.3 Students know disease disrupts the equilibrium that exists in a healthy organism.
7.2.2	**Science: Life Science** L.12.A.1 Students know genetic information passed from parents to offspring is coded in the DNA molecule. L.12.A.4 Students know several causes and effects of somatic versus sex cell mutations. L.12.B.3 Students know disease disrupts the equilibrium that exists in a healthy organism.
7.2.3	**Science: Life Science** L.12.A.1 Students know genetic information passed from parents to offspring is coded in the DNA molecule. L.12.A.5 Students know how to predict patterns of inheritance. L.12.B.3 Students know disease disrupts the equilibrium that exists in a healthy organism.
7.2.4	**Science: Life Science** L.12.B.3 Students know disease disrupts the equilibrium that exists in a healthy organism. L.12.C.1 Students know relationships of organisms and their physical environment. L.12.C.2 Students know how changes in an ecosystem can affect biodiversity and biodiversity's contribution to an ecosystem's stability.
7.2.5	**Science: Life Science** L.12.B.3 Students know disease disrupts the equilibrium that exists in a healthy organism.
7.2.6	**Science: Life Science** L.12.B.3 Students know disease disrupts the equilibrium that exists in a healthy organism.
7.2.7	**Science: Life Science** L.12.B.3 Students know disease disrupts the equilibrium that exists in a healthy organism. **Science: Nature of Science** N.12.B.4 Students know scientific knowledge builds on previous information.

CONTENT STANDARD 8.0: UNDERSTAND THE PRINCIPLES OF ANIMAL NUTRITION

Performance Indicators	Common Core State Standards and Nevada Science Standards
8.1.1	**Science: Physical Science** P.12.C.2 Students know energy forms can be converted.
8.1.2	**Science: Life Science** L.12.C.3 Students know the amount of living matter an environment can support is limited by the availability of matter, energy, and the ability of the ecosystem to recycle materials

CONTENT STANDARD 9.0: DEMONSTRATE CLINICAL PRACTICE PROCEDURES

Performance Indicators	Common Core State Standards and Nevada Science Standards
9.1.2	**English Language Arts: Reading Standards for Literacy in Science and Technical Subjects** RST.11-12.3 Follow precisely a complex multistep procedure when carrying out experiments, taking measurements, or performing technical tasks; analyze the specific results based on explanations in the text.
9.1.3	**English Language Arts: Reading Standards for Literacy in Science and Technical Subjects** RST.11-12.3 Follow precisely a complex multistep procedure when carrying out experiments, taking measurements, or performing technical tasks; analyze the specific results based on explanations in the text.
9.1.4	**English Language Arts: Reading Standards for Literacy in Science and Technical Subjects** RST.11-12.3 Follow precisely a complex multistep procedure when carrying out experiments, taking measurements, or performing technical tasks; analyze the specific results based on explanations in the text.
9.2.1	**English Language Arts: Reading Standards for Literacy in Science and Technical Subjects** RST.11-12.3 Follow precisely a complex multistep procedure when carrying out experiments, taking measurements, or performing technical tasks; analyze the specific results based on explanations in the text.
9.2.2	**English Language Arts: Language Standards** L.11-12.2b Spell correctly. **English Language Arts: Writing Standards for Literacy in Science and Technical Subjects** WHST.11-12.4 Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.
9.3.1	**English Language Arts: Speaking and Listening Standards** SL.11-12.6 Adapt speech to a variety of contexts and tasks, demonstrating a command of formal English when indicated or appropriate. (See grades 11–12 Language standards 1 and 3 on page 54 for specific expectations.)
9.3.3	**English Language Arts: Reading Standards for Literacy in Science and Technical Subjects** RST.11-12.3 Follow precisely a complex multistep procedure when carrying out experiments, taking measurements, or performing technical tasks; analyze the specific results based on explanations in the text.
9.3.4	**English Language Arts: Reading Standards for Literacy in Science and Technical Subjects** RST.11-12.3 Follow precisely a complex multistep procedure when carrying out experiments, taking measurements, or performing technical tasks; analyze the specific results based on explanations in the text.

CONTENT STANDARD 10.0: DEMONSTRATE OFFICE PROCEDURES PRACTICED IN THE VETERINARY CLINIC

Performance Indicators	Common Core State Standards and Nevada Science Standards
10.1.1	**English Language Arts: Language Standards** L.11-12.2b Spell correctly. **English Language Arts: Writing Standards for Literacy in Science and Technical Subjects** WHST.11-12.4 Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience. **Science: Nature of Science** N.12.A.2 Students know scientists maintain a permanent record of procedures, data, analyses, decisions, and understandings of scientific investigations.
10.1.2	**Science: Nature of Science** N.12.A.2 Students know scientists maintain a permanent record of procedures, data, analyses, decisions, and understandings of scientific investigations.
10.1.3	**English Language Arts: Writing Standards for Literacy in Science and Technical Subjects** WHST.11-12.4 Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience. **Science: Nature of Science** N.12.A.2 Students know scientists maintain a permanent record of procedures, data, analyses, decisions, and understandings of scientific investigations.
10.1.4	**English Language Arts: Writing Standards for Literacy in Science and Technical Subjects** WHST.11-12.4 Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.
10.1.5	**English Language Arts: Writing Standards for Literacy in Science and Technical Subjects** WHST.11-12.4 Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.
10.2.1	**English Language Arts: Writing Standards for Literacy in Science and Technical Subjects** WHST.11-12.4 Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.
10.2.3	**English Language Arts: Speaking and Listening Standards** SL.11-12.1d Respond thoughtfully to diverse perspectives; synthesize comments, claims, and evidence made on all sides of an issue; resolve contradictions when possible; and determine what additional information or research is required to deepen the investigation or complete the task.

CONTENT STANDARD 11.0: DESCRIBE PROPER ETHICAL AND ANIMAL WELFARE ISSUES RELATING TO THE VETERINARY PRACTICE

Performance Indicators	Common Core State Standards and Nevada Science Standards
11.1.1	**English Language Arts: Speaking and Listening Standards** SL.11-12.1c Propel conversations by posing and responding to questions that probe reasoning and evidence; ensure a hearing for a full range of positions on a topic or issue; clarify, verify, or challenge ideas and conclusions; and promote divergent and creative perspectives. SL.11-12.1d Respond thoughtfully to diverse perspectives; synthesize comments, claims, and evidence made on all sides of an issue; resolve contradictions when possible; and determine what additional information or research is required to deepen the investigation or complete the task. SL.11-12.2 Integrate multiple sources of information presented in diverse formats and media (e.g., visually, quantitatively, orally) in order to make informed decisions and solve problems, evaluating the credibility and accuracy of each source and noting any discrepancies among the data. SL.11-12.4 Present information, findings, and supporting evidence, conveying a clear and distinct perspective, such that listeners can follow the line of reasoning, alternative or opposing perspectives are addressed, and the organization, development, substance, and style are appropriate to purpose, audience, and a range of formal and informal tasks. **English Language Arts: Writing Standards for Literacy in Science and Technical Subjects** WHST.11-12.1b Develop claim(s) and counterclaims fairly and thoroughly, supplying the most relevant evidence for each while pointing out the strengths and limitations of both in a manner that anticipates the audience's knowledge level, concerns, values, and possible biases. WHST.11-12.9 Draw evidence from literary or informational texts to support analysis, reflection, and research. **Science: Nature of Science** N.12.B.1 Students know science, technology, and society influenced one another in both positive and negative ways. N.12.B.3 Students know the influence of ethics on scientific enterprise.
11.1.2	**English Language Arts: Writing Standards for Literacy in Science and Technical Subjects** WHST.11-12.7 Conduct short as well as more sustained research projects to answer a question (including a self-generated question) or solve a problem; narrow or broaden the inquiry when appropriate; synthesize multiple sources on the subject, demonstrating understanding of the subject under investigation. WHST.11-12.8 Gather relevant information from multiple authoritative print and digital sources, using advanced searches effectively; assess the strengths and limitations of each source in terms of the task, purpose, and audience; integrate information into the text selectively to maintain the flow of ideas, avoiding plagiarism and overreliance on any one source and following a standard format for citation. **Science: Nature of Science** N.12.B.2 Students know consumption patterns, conservation efforts, and cultural or social practices in countries have varying environmental impacts. N.12.B.3 Students know the influence of ethics on scientific enterprise. N.12.B.4 Students know scientific knowledge builds on previous information.

11.3.1	**English Language Arts: Writing Standards for Literacy in Science and Technical Subjects** WHST.11-12.1b Develop claim(s) and counterclaims fairly and thoroughly, supplying the most relevant evidence for each while pointing out the strengths and limitations of both in a manner that anticipates the audience's knowledge level, concerns, values, and possible biases. **Science: Nature of Science** N.12.B.1 Students know science, technology, and society influenced one another in both positive and negative ways. N.12.B.3 Students know the influence of ethics on scientific enterprise.
11.3.2	**English Language Arts: Writing Standards for Literacy in Science and Technical Subjects** WHST.11-12.1b Develop claim(s) and counterclaims fairly and thoroughly, supplying the most relevant evidence for each while pointing out the strengths and limitations of both in a manner that anticipates the audience's knowledge level, concerns, values, and possible biases. **English Language Arts: Speaking and Listening Standards** SL.11-12.5 Make strategic use of digital media (e.g., textual, graphical, audio, visual, and interactive elements) in presentations to enhance understanding of findings, reasoning, and evidence and to add interest. **Science: Nature of Science** N.12.B.2 Students know consumption patterns, conservation efforts, and cultural or social practices in countries have varying environmental impacts.
11.3.3	**English Language Arts: Speaking and Listening Standards** SL.11-12.1c Propel conversations by posing and responding to questions that probe reasoning and evidence; ensure a hearing for a full range of positions on a topic or issue; clarify, verify, or challenge ideas and conclusions; and promote divergent and creative perspectives. SL.11-12.1d Respond thoughtfully to diverse perspectives; synthesize comments, claims, and evidence made on all sides of an issue; resolve contradictions when possible; and determine what additional information or research is required to deepen the investigation or complete the task. SL.11-12.2 Integrate multiple sources of information presented in diverse formats and media (e.g., visually, quantitatively, orally) in order to make informed decisions and solve problems, evaluating the credibility and accuracy of each source and noting any discrepancies among the data. SL.11-12.4 Present information, findings, and supporting evidence, conveying a clear and distinct perspective, such that listeners can follow the line of reasoning, alternative or opposing perspectives are addressed, and the organization, development, substance, and style are appropriate to purpose, audience, and a range of formal and informal tasks. **English Language Arts: Writing Standards for Literacy in Science and Technical Subjects** WHST.11-12.1b Develop claim(s) and counterclaims fairly and thoroughly, supplying the most relevant evidence for each while pointing out the strengths and limitations of both in a manner that anticipates the audience's knowledge level, concerns, values, and possible biases. **Science: Nature of Science** N.12.B.1 Students know science, technology, and society influenced one another in both positive and negative ways. N.12.B.2 Students know consumption patterns, conservation efforts, and cultural or social practices in countries have varying environmental impacts. N.12.B.3 Students know the influence of ethics on scientific enterprise.

CONTENT STANDARD 12.0: EXPLORE CAREER OPPORTUNITIES IN THE VETERINARY FIELDS

Performance Indicators	Common Core State Standards and Nevada Science Standards
12.1.2	**English Language Arts: Writing Standards for Literacy in Science and Technical Subjects** WHST.11-12.7 Conduct short as well as more sustained research projects to answer a question (including a self-generated question) or solve a problem; narrow or broaden the inquiry when appropriate; synthesize multiple sources on the subject, demonstrating understanding of the subject under investigation.

CONTENT STANDARD 13.0: PARTICIPATE IN LEADERSHIP TRAINING THROUGH MEMBERSHIP IN FFA

Performance Indicators	Common Core State Standards and Nevada Science Standards
13.1.1	**English Language Arts: Speaking and Listening Standards** SL.11-12.1b Work with peers to promote civil, democratic discussions and decision-making, set clear goals and deadlines, and establish individual roles as needed.
13.1.2	**English Language Arts: Speaking and Listening Standards** SL.11-12.1b Work with peers to promote civil, democratic discussions and decision-making, set clear goals and deadlines, and establish individual roles as needed.
13.2.1	**English Language Arts: Speaking and Listening Standards** SL.11-12.1b Work with peers to promote civil, democratic discussions and decision-making, set clear goals and deadlines, and establish individual roles as needed.

CONTENT STANDARD 14.0: DESCRIBE THE RELATIONSHIP BETWEEN A SUPERVISED AGRICULTURAL EXPERIENCE (SAE) AND PREPARATION OF STUDENTS FOR A CAREER IN AGRICULTURE

Performance Indicators	Common Core State Standards and Nevada Science Standards
14.1.1	**English Language Arts: Language Standards** L.11-12.2b Spell correctly.
14.1.2	**English Language Arts: Writing Standards for Literacy in Science and Technical Subjects** WHST.11-12.4 Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.

ALIGNMENT OF VETERINARY SCIENCE STANDARDS AND THE COMMON CORE MATHEMATICAL PRACTICES

Common Core Mathematical Practices	Veterinary Science Performance Indicators
1. Make sense of problems and persevere in solving them.	4.1.1, 4.1.2; 4.2.1, 4.2.2
2. Reason abstractly and quantitatively.	4.1.1, 4.1.2; 4.2.1, 4.2.2 5.2.2 8.3.1
3. Construct viable arguments and critique the reasoning of others.	5.2.2
4. Model with mathematics.	4.1.1, 4.1.2; 4.2.1, 4.2.2 8.3.1 14.1.1
5. Use appropriate tools strategically.	5.1.1; 5.2.2 8.3.1 9.2.1 14.1.1
6. Attend to precision.	4.1.1, 4.1.2; 4.2.1, 4.2.2 5.1.1, 5.1.2 8.3.1 9.2.1 14.1.1
7. Look for and make use of structure.	
8. Look for and express regularity in repeated reasoning.	4.1.1, 4.1.2; 4.2.1, 4.2.2 5.2.2

CROSSWALKS OF ANIMAL SCIENCE STANDARDS AND THE COMMON CAREER TECHNICAL CORE

Agriculture, Food & Natural Resources Career Cluster™ (AG)	Performance Indicators
1. Analyze how issues, trends, technologies and public policies impact systems in the Agriculture, Food & Natural Resources Career Cluster™.	11.3.1-11.3.3
2. Evaluate the nature and scope of the Agriculture, Food & Natural Resources Career Cluster™ and the role of agriculture, food and natural resources (AFNR) in society and the economy.	11.1.1, 11.1.2 11.3.1-11.3.3
3. Examine and summarize the importance of health, safety and environmental management systems in AFNR businesses.	1.1.1-1.1.3; 1.2.1-1.2.2 1.3.1-1.3.4
4. Demonstrate stewardship of natural resources in AFNR activities.	11.1.1, 11.1.2
5. Describe career opportunities and means to achieve those opportunities in each of the Agriculture, Food & Natural Resources Career Pathways.	12.1.1-12.1.3
6. Analyze the interaction among AFNR systems in the production, processing and management of food, fiber and fuel and the sustainable use of natural resources.	8.1.1-8.1.3; 8.2.1, 8.2.2 8.3.1-8.3.7; 14.1.1
Animal Systems Career Pathway (AG-ANI)	**Performance Indicators**
1. Analyze historic and current trends impacting the animal systems industry.	11.1.1, 11.1.2
2. Utilize best-practice protocols based upon animal behaviors for animal husbandry and welfare.	6.1.1-6.1.3; 6.2.1-6.2.4 6.3.1-6.3.4; 6.4.1, 6.4.2 9.1.1-9.1.4; 9.2.1, 9.2.2 9.3.1-9.3.4; 11.2.1, 11.2.2
3. Design and provide proper animal nutrition to achieve desired outcomes for performance, development, reproduction and/or economic production.	8.1.1-8.1.3; 8.2.1, 8.2.2 8.3.1-8.3.7
4. Apply principles of animal reproduction to achieve desired outcomes for performance, development and/or economic production.	
5. Evaluate environmental factors affecting animal performance and implement procedures for enhancing performance and animal health.	5.1.1-5.1.2; 5.2.1, 5.2.2 7.1.1-7.1.5; 7.2.1-7.2.7 9.1.1-9.1.4; 9.2.1, 9.2.2 9.3.1-9.3.4
6. Classify, evaluate and select animals based on anatomical and physiological characteristics.	3.1.1-3.1.2; 3.2.1-3.2.5 3.3.1-3.3.4; 3.4.1-3.4.3 3.5.1-3.5.4
7. Apply principles of effective animal health care.	4.2.1-4.2.2; 6.1.1-6.1.3 6.2.1-6.2.4; 6.3.1-6.3.4 6.4.1, 6.4.2; 7.1.1-7.1.5 7.2.1-7.2.7; 9.1.1-9.1.4 9.2.1, 9.2.2; 9.3.1-9.3.4