

Equine Science

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8/1/2014

2014-2015

**Arkansas Department of Career Education
Model Framework**

Course Title: **Equine Science**

Career Cluster: **Agriculture, Food & Natural Resources**

Secondary – Agriculture Science and Technology	
Course Number	491420
CIP Number	01.0507
Grade Level	11-12
Course Type	Elective
Teacher Certification	010 Agriculture 218 Agricultural Sciences & Technology
CTSO	FFA
Facility Requirements	http://arkansasfacilities.arkansas.gov/SchoolFacManual.aspx
Prerequisite Courses	Animal Science I & Animal Science II
Industry Certifications	

2014-2015

Arkansas Department of Career Education Student Performance Standards

Course Title: EQUINE SCIENCE

Course Number: 491420

Course Credit: .5

Course Description: Equine Science will introduce students to a broad spectrum of topics in Equine Science and establish a solid foundation of general horse knowledge. The course will begin with discussions of the development, domestication, and use of the horse; as well as the economic impact and future trends of the horse industry.

Program Purpose/Structure

This course allows for an in-depth look at the Equine Science Industry while providing Hands on Laboratories, and opportunities to participate in FFA and Supervised Agriculture Experiences.

Course Description: At the completion of the course the student will be able to:

1.0 Assess Opportunities in the Equine Industry

- 1.1 Investigate the history and evolution of equine
- 1.2 Investigate trends in the equine industry
- 1.3 Assess career opportunities in the equine industry
- 1.4 Analyze factors associated with horse ownership

2.0 Compare Breeds, Types, and Classes of Horses

- 2.1 Differentiate between the classes of horses
- 2.2 Investigate breeds of horses, identifying the characteristics of each

3.0 Evaluate Equine for Selection

- 3.1 Analyze the anatomy and function of equine body systems
- 3.2 Critique equine conformation to assess desired traits and characteristics
- 3.3 Investigate equine faults and unsoundness

4.0 Assess the Health and Nutritional Needs of Horses

- 4.1 Investigate dental changes that occur as a horse ages
- 4.2 Investigate options in feed management
- 4.3 Examine parasites and diseases common in horses

5.0 Assess the Proper Care and Maintenance of Horses

- 5.1 Evaluate the Importance of Proper Grooming
- 5.2 Analyze the need for and importance of proper hoof care
- 5.3 Learn about horse Gaits and Maneuvers

6.0 Investigate the Safety, Facility and Equipment Needs of Horses

- 6.1 Practice safety in equine management
- 6.2 Assess facility management practices
- 6.3 Assess the use of equine equipment in riding and handling

7.0 Critique the Behavior and Training of Horses

- 7.1 Interpret the behavior of horses to facilitate correction and training
- 7.2 Assess the use of training aids and equipment with horses

Standard 1.0 Assess Opportunities in the Equine Industry			
Performance Indicator 1.1 Investigate the history and evolution of equine	Recommended Application/Activity	CCSS Standards	CCTC Standards
1.1.1 Compare and contrast evolutionary horse-like animals.	<ul style="list-style-type: none"> • Prepare and present a timeline with the evolutionary horse-like animals and research the contemporary flora and fauna of each time period, including: <ul style="list-style-type: none"> ○ Eohippus ○ Mesohippus ○ Merychippus ○ Pliohippus 	SL11-12.4 SL11-12.5 W11-12.7	AG-ANI1 CRP4
1.1.2 Evaluate the taxonomy of the horse and its relatives in the zoological scheme.	<ul style="list-style-type: none"> • Create a chart showing the anatomical differences and similarities in the horse and its relatives. 	SL11-12.4 SL11-12.5 R11-12.7	AG-ANI6 CRP11
1.1.3 Assess how humans have used the horse throughout history (food, military, sport, agriculture)	<ul style="list-style-type: none"> • Prepare a pictorial presentation showing the use of horses in warfare throughout the ages. • Prepare a pictorial presentation of horse-drawn agricultural equipment. 	SL11.12.5	AG-ANI1 CRP11
Performance Indicator 1.2 Investigate trends in the equine industry	Recommended Application/Activity	CCSS Standards	CCTC Standards
1.2.1 Investigate the countries and states with the highest equine population.	<ul style="list-style-type: none"> • Create an Excel chart and graph to express the populations, on a global, national, or state level, of: <ul style="list-style-type: none"> ○ Horses ○ Donkeys ○ Mules 	SL11-12.5	AG-ANI1 CRP11
1.2.2 Assess modern-day uses of horses in the United States.	<ul style="list-style-type: none"> • Research the use of horses in the US. Create a collage illustrating research results and present to peers. <ul style="list-style-type: none"> ○ Work ○ Recreation ○ Racing ○ Rodeo ○ Show ○ Gymkhana ○ Dressage 	SL11-12.1 SL11-12.5	AG-ANI1 CRP6

Performance Indicator 1.3 Assess career opportunities available in the equine industry	Recommended Application/Activity	CCSS Standards	CCTC Standards
1.3.1 Evaluate FFA opportunities involving the horse industry.	<ul style="list-style-type: none"> • Explore career development events related to equine science related to: <ul style="list-style-type: none"> ○ Horse evaluation CDE ○ SAE ○ Proficiency award • Plan an Equine SAE • Discuss Equine proficiency awards available. 	SL11-12.1 SL11-12.1a	AG-ANI1 CRP10
1.3.2 Research careers in the horse industry, and qualifications necessary for success in those careers.	<ul style="list-style-type: none"> • Create a list of questions to ask a guest speaker in the horse industry. • Develop classified advertisements for jobs related to equine science which include responsibilities, salary, and experience/education/skills needed. • Use the Career Explorer link at the (www.ffa.org) website to research careers such as: <ul style="list-style-type: none"> ○ Equine veterinarian ○ Farrier ○ Extension horse specialist ○ Riding instructor ○ Stable border • Job-shadow someone in the horse industry and summarize the duties of the job. 	W11-12.5 W11-12.6	AG-ANI2 CRP10
Performance Indicator 1.4 Analyze factors associated with horse ownership	Recommended Application/Activity	CCSS Standards	CCTC Standards
1.4.1 Assess the costs associated with owning a horse.	<ul style="list-style-type: none"> • Using research and contact with local dealers, research and prepare a list of expenses to consider in buying and keeping a horse, such as: <ul style="list-style-type: none"> ○ Feed ○ Facilities ○ Health care ○ Maintenance care ○ Equipment 	W11-12.2b R11-12.2	AG-ANI2 CRP8

<p>1.4.2 Analyze factors to consider when selecting a horse to purchase.</p>	<ul style="list-style-type: none"> • Using personal preferences for qualities and characteristics, select a horse and write a paragraph defending/justifying that selection. Include considerations such as: <ul style="list-style-type: none"> ○ Owner experience and size ○ Expected use ○ Soundness ○ Size/age/sex of horse ○ Breed ○ Grade or registration ○ Conformation ○ Disposition ○ Price ○ Available facilities 	<p>W11-12.2b R11-12.2</p>	<p>AG-ANI6 CRP8</p>
<p><i>Standard 2.0 Compare Breeds, Types, and Classes of Horses</i></p>			
<p>Performance Indicator 2.1 Differentiate between the Classification of Horses</p>	<p>Recommended Application/Activity</p>	<p>CCSS Standards</p>	<p>CCTC Standards</p>

<p>2.1.1 Investigate common markings of horses, identifying those prevalent in each breed.</p>	<ul style="list-style-type: none"> • Research a horse breed to identify common colors and markings of breeds. Create a presentation reflecting research results including: <ul style="list-style-type: none"> ○ Star ○ Snip ○ Strip ○ Blaze ○ Star & strip ○ Star/strip/snip ○ Bald ○ Coronet ○ Half pastern ○ Pastern ○ Sock ○ Stocking ○ Brown ○ Bay ○ Black 	<p>W11-12.2a</p>	<p>AG-ANI6 CRP2 CRP7</p>
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<p>2.1.2 Distinguish between the colors of horses when a color modifier is present.</p>	<ul style="list-style-type: none"> • Research a horse breed to identify common colors of the breed. Create a presentation of research results including: <ul style="list-style-type: none"> ○ Brown ○ Bay ○ Black ○ Chestnut ○ Sorrel ○ White ○ Dun ○ Gray ○ Grullo ○ Roan ○ Palomino ○ Buckskin ○ Creamello ○ Perlino ○ Overo ○ Tobiano ○ Tovero • Calculate the percentage of color outcomes using the horse color calculator at www.horsetesting.com. 	<p>W11-12.2a</p>	<p>AG-ANI6 CRP2 CRP7</p>
<p>2.1.3 Investigate methods of measuring height in horses.</p>	<ul style="list-style-type: none"> • Measure a horse using a scale that reads in hands • Develop a chart for average sizes of different breeds 		
<p>Performance Indicator 2.2 Investigate breeds of horses, identifying the characteristics of each.</p>	<p style="text-align: center;">Recommended Application/Activity</p>	<p style="text-align: center;">CCSS Standards</p>	<p style="text-align: center;">CCTC Standards</p>
<p>2.2.1 Research and categorize common breeds of horses and ponies.</p>	<ul style="list-style-type: none"> • Categorize breeds into classes, including: <ul style="list-style-type: none"> • Light horses <ul style="list-style-type: none"> ○ American Quarter Horse ○ American Saddlebred ○ American Standardbred ○ Appaloosa 	<p>SL11-12.2</p>	<p>AG-ANI6 CRP8</p>

<p>2.2.2 Classify horses according to breed.</p>	<ul style="list-style-type: none"> ○ Missouri Fox Trotter ○ Morgan ○ Mustang ○ Paint ○ Tennessee Walking Horse ○ Thoroughbred ● Draft horses <ul style="list-style-type: none"> ○ Belgian ○ Clydesdale ● Ponies <ul style="list-style-type: none"> ○ Welsh ○ Shetland ● Color breeds <ul style="list-style-type: none"> ○ Buckskin ○ Palomino ○ Paint ● Research characteristics and origins of horse breeds. Compare each breed by identifying the advantages and disadvantages of each breed. ● Identify alleles for coat-color and predict the phenotype of offspring. 		
<p>Standard 3.0 Evaluate Equine for Selection</p>			
<p>Performance Indicator 3.1 Analyze the anatomy and function of equine body systems</p>	<p>Recommended Application/Activity</p>	<p>CCSS Standards</p>	<p>CCTC Standards</p>
<p>3.1.1 Investigate the body of a horse.</p>	<ul style="list-style-type: none"> ● Diagram and label the parts of a horse. 	<p>SL11-12.4</p>	<p>AG-ANI6 CRP2</p>

<p>3.1.2 Analyze the systems and functions of horses, identifying major organs that make up each.</p>	<ul style="list-style-type: none"> • Construct a model of the lungs using a bottle, tubing, and balloons. Demonstrate how the movement of the diaphragm fills the lungs. • Prepare a presentation indicating the sensory receptors. • Design a visual for the major organs that make up each of these systems: <ul style="list-style-type: none"> ○ Skeletal ○ Muscular ○ Urinary ○ Respiratory ○ Circulatory ○ Nervous ○ Endocrine 	<p>SL11-12.4 SL11-12.5</p>	<p>AG-ANI6 CRP8</p>
<p>3.1.3 Compare and contrast the skeletal system of a horse to that of another animal.</p>	<ul style="list-style-type: none"> • Compare the skeletal system of a horse to the skeletal system of cattle. 	<p>SL11-12.4 SL11-12.5</p>	<p>AG-ANI6 CRP8</p>
<p>Performance Indicator 3.2 Critique equine conformation to assess desired traits and characteristics</p>	<p style="text-align: center;">Recommended Application/Activity</p>	<p style="text-align: center;">CCSS Standards</p>	<p style="text-align: center;">CCTC Standards</p>
<p>3.2.1 Investigate traits important for evaluating the conformation of a horse.</p>	<ul style="list-style-type: none"> • Research the criteria for good conformation of horses. 		

<p>3.2.2 Assess proper conformation.</p>	<ul style="list-style-type: none"> • Using the FFA CDE format, judge 4 horses in each of the following areas, assigning a ranking of 1-4 for each animal: <ul style="list-style-type: none"> ○ Balance <ul style="list-style-type: none"> ○ Symmetry of neck ○ Symmetry of shoulders ○ Symmetry of topline ○ Structural correctness ○ Muscling <ul style="list-style-type: none"> Arm Forearm Gaskin ○ Breed type ○ Sex characteristics <ul style="list-style-type: none"> ○ Femininity/masculinity of the head ○ Chest capacity ○ Set of front legs ○ Set of hind legs ○ Width of croup ○ Width through rear quarters ○ Style and beauty ○ Coupling • Using the above rankings, prepare an argument defending your ranking. 	<p>R11-12.5 W11-12.1c</p>	<p>AG-ANI6 CRP8</p>
<p>Performance Indicator 3.3 Investigate equine faults and unsoundness</p>	<p>Recommended Application/Activity</p>	<p>CCSS Standards</p>	<p>CCTC Standards</p>
<p>3.3.1 Distinguish between a blemish and unsoundness.</p>	<ul style="list-style-type: none"> • Develop a question and answer game using blemishes and unsoundness of the legs. 	<p>L11-12.4</p>	<p>AG-ANI6 CRP6</p>

<p>3.3.2 Analyze common structural faults of a horse's legs and how they may be slowed and/or prevented.</p>	<ul style="list-style-type: none"> • Create an visual (such as a chart, poster, etc.) illustrating common structural faults in horses: <ul style="list-style-type: none"> ○ Toes out ○ Bow-legged ○ Narrow-chested toes out ○ Base narrow stands close ○ Knock-kneed ○ Pigeon-toed ○ Camped out ○ Stands under ○ Legs too straight ○ Camped under ○ Knee-sprung ○ Calf-kneed ○ Stands wide ○ Stands close ○ Cow-hocked • Demonstrate how to put on a protection boot, identifying its purpose. • Draw the bones of the front or hind leg of a horse and diagram where unsoundness can develop. 	<p>SL11-12.4</p>	<p>AG-ANI6 CRP2</p>
<p>Performance Indicator 3.4 Evaluate the appropriateness of gaits and maneuvers</p>	<p>Recommended Application/Activity</p>	<p>CCSS Standards</p>	<p>CCTC Standards</p>
<p>3.4.1 Differentiate between the various gaits of the horse.</p>	<ul style="list-style-type: none"> • Demonstrate gaits of the horse by having students: <ul style="list-style-type: none"> ○ Walk ○ Trot ○ Gallop ○ Pace ○ Slow gate ○ Rack ○ Walk ○ Back 	<p>SL11-12.5</p>	<p>AG-ANI6 CRP8</p>

3.4.2 Critique gaits and maneuvers for correctness and competitiveness.	<ul style="list-style-type: none"> • Watch a video of a competitive event, and document positive and negative aspects of each horse's performance. 	SL11-12.5	AG-ANI6 CRP8
Standard 4.0 Assess the Health and Nutritional Needs of Horses			
Performance Indicator 4.1 Investigate dental changes that occur as a horse ages	Recommended Application/Activity	CCSS Standards	CCTC Standards
4.1.1. Assess the advantage of knowing the age of a horse.	<ul style="list-style-type: none"> • Estimate the age of a horse by looking at its teeth. • Critique several horses based on age. 		
4.1.2 Analyze the four changes in teeth that are indicators of different ages.	<ul style="list-style-type: none"> • Diagram a tooth to show the parts that change during the aging process, including: <ul style="list-style-type: none"> ○ Occurrence of permanent teeth ○ Disappearance of cups ○ Angle of incidence ○ Shape of surface 	SL11-12.2	AG-ANI6 CRP11

<p>4.1.3 Investigate the eruption and appearance of baby and permanent teeth.</p>	<ul style="list-style-type: none"> • Visit a horse dentist and observe procedures used to maintain oral health. • Draw a progression of teeth throughout a horse's lifecycle to include: <ul style="list-style-type: none"> • Baby or milk teeth <ul style="list-style-type: none"> ○ Centrals ○ Intermediates ○ Corners ○ Canine ○ 1st Premolar ○ 1st Molar ○ 2nd Molar ○ 3rd Molar • Permanent teeth <ul style="list-style-type: none"> ○ Incisors ○ Canine ○ Molars ○ Wolf teeth 	<p>SL11-12.2 SL11-12.4</p>	<p>AG-ANI6 CRP1</p>
<p>4.1.4 Analyze the effects of parrot mouth and monkey mouth.</p>	<ul style="list-style-type: none"> • Distinguish between parrot mouth and monkey mouth by illustration, explaining how each affects the animal. 	<p>SL11-12.1</p>	<p>AG-ANI6 CRP11</p>
<p>Performance Indicator 4.2 Assess options in feed management</p>	<p>Recommended Application/Activity</p>	<p>CCSS Standards</p>	<p>CCTC Standards</p>

<p>4.2.1 Evaluate the nutrient content of a variety of hay sources.</p>	<ul style="list-style-type: none"> • Have samples of hay analyzed for nutritional value (TDN, protein, etc...), including: <ul style="list-style-type: none"> • Legume hays <ul style="list-style-type: none"> ○ Alfalfa ○ Clover ○ Lespedeza • Grass hays <ul style="list-style-type: none"> ○ Bermuda ○ Timothy ○ Broom grass ○ Orchard grass ○ Fescue • Obtain several types of grain and hay used in horse feed. Identify and send to U of A Extension Service to evaluate quality. 	<p>SL11-12.2 R11-12.3</p>	<p>AG-ANI3 CRP7</p>
<p>4.2.2 Evaluate the nutritional value of pasture grasses.</p>	<ul style="list-style-type: none"> • Collect fresh samples of pasture grasses. Weigh at collection, dry samples and re-weigh. Calculate the dry matter in the grasses. Samples should include: <ul style="list-style-type: none"> • Legume grasses <ul style="list-style-type: none"> ○ Alfalfa ○ Clover ○ Lespedeza • Grasses <ul style="list-style-type: none"> ○ Bermuda ○ Timothy ○ Broom grass ○ Orchard grass ○ Fescue 		

4.2.3. Use calculations to create an appropriate feed mix that meets feed management recommendations.	<ul style="list-style-type: none"> • Use a Pearson Square to calculate the amount of feed and measure each ingredient to feed. • Create a “feeding manual” for a first-time horse owner, correctly explaining the following concepts: <ul style="list-style-type: none"> ○ Palatability ○ Easily-obtained feeds ○ Balanced ration ○ Quality ○ Good water ○ Start on feed slowly ○ Feed by weight • Calculate the cost of feeding one horse for a month. 	R11-12.3	AG-ANI3 CRP2
4.2.4 Analyze how activity levels influence nutritional needs.	<ul style="list-style-type: none"> • Develop a chart for a balanced ration for different stages of a horse’s activity level. • Balance the diet of a racehorse or a pregnant mare and calculate the cost of the diet. • Discuss recommendations needed for feeding horses under different management situations 	SL11-12.5 R11-12.3	AG-ANI3 CRP7
Performance Indicator 4.3 Investigate parasites and diseases common in horses	Recommended Application/Activity	CCSS Standards	CCTC Standards
4.3.1 Analyze the causes and effects of common infectious diseases in horses.	<ul style="list-style-type: none"> • Research a common disease of horses, presenting research results to peers. • Students will match a checklist of symptoms with the corresponding disease from the following: <ul style="list-style-type: none"> ○ Tetanus ○ West Nile ○ Influenza ○ Rabies ○ Eastern Encephalomyelitis ○ Western Encephalomyelitis ○ Venezuelan Encephalomyelitis ○ Rhinopneumonitis ○ Strangles ○ Potomac horse fever 	SL11-12.1a SL11-12.4	AG-ANI5 CRP2

	<ul style="list-style-type: none"> • Invite a veterinarian to discuss disease, prevention, and a vaccination schedules. 		
4.3.2 Investigate the effects of common internal and external parasites .	<ul style="list-style-type: none"> • Perform a fecal analysis to evaluate the presence of internal parasites such as: <ul style="list-style-type: none"> ○ Strongyles ○ Tapeworm ○ Ascarids ○ Bots • Perform an examination of a horse to determine the presence of external parasites such as: <ul style="list-style-type: none"> ○ Ticks ○ Mites ○ Flying Insects ○ Bots • Graph parasitic occurrences in your area for the last 5 years. • Develop a checklist for things to observe when examining horses for parasites. • Design a chart for yearly deworming/vaccination schedule. • Demonstrate correct preventative measures for internal parasites 	R11-12.5	AG-ANI5 CRP7
4.3.3 Assess the overall health of a horse, determining the need for a first aid kit and manual.	<ul style="list-style-type: none"> • Take the vital signs of a horse to evaluate its health. • Assemble a first aid kit for a horse, developing a comprehensive first aid manual to include in kit. 	SL11-12.1a SL11-12.4	AG-ANI5 CRP2
Standard 5.0 Assess Proper Care and Maintenance of Horses			
Performance Indicator 5.1 Evaluate the importance of proper grooming.	Recommended Application/Activity	CCSS Standards	CCTC Standards
5.1.1 Evaluate the use of common equipment and supplies used in grooming.	<ul style="list-style-type: none"> • Create a chart with the name and use of the equipment and supplies used to groom a horse, including: <ul style="list-style-type: none"> Horse blanket <ul style="list-style-type: none"> ○ Horse sheet ○ Curry comb ○ Bot egg knife 	SL11-12.1 SL11-12.1a	AG-ANI7 CRPCR1

	<ul style="list-style-type: none"> ○ Body brush ● Determine the cost of grooming supplies for your horse. 		
5.1.2 Demonstrate proper grooming techniques.	<ul style="list-style-type: none"> ● Groom a horse's body, mane, and tail. 		
Performance Indicator 5.2 Analyze the need for and importance of proper hoof care	Recommended Application/Activity	CCSS Standards	CCTC Standards
5.2.1 Analyze the functions of internal and external parts of the hoof.	<ul style="list-style-type: none"> ● Using a horse as a model, diagram and label the internal and external part of the hoof, noting the function of each: <ul style="list-style-type: none"> ○ Coffin bone ○ Navicular bone ○ Flexor tendon ○ Laminae ○ Hoofwall ○ Coronet ○ Sole ○ Frog ● Observe a farrier shoeing a horse while utilizing both Cold-fitting and Hot-fitting. ● Build a display of differing types of horseshoes. 	SL11-12.4	AG-ANI6 CRP5
5.2.2 Assess health issues commonly related to the hoof.	<ul style="list-style-type: none"> ● Use online resources to research common problems of the hoof, illustrating and describing each: <ul style="list-style-type: none"> ○ Thrush ○ Quarter crack ○ Abscess ○ Founder ● Demonstrate the safe procedure for lifting and cleaning a horse's hooves. 	SL11-12.1 SL11-12.1a	AG-ANI6 CRP7
5.2.3 Demonstrate the ability to recognize and properly care for horseshoeing equipment and supplies.	<ul style="list-style-type: none"> ● Assemble a farrier's toolbox. ● Demonstrate how to properly clean and store shoeing tools: <ul style="list-style-type: none"> ○ Anvil ○ Hammer ○ Hoof leveler 	SL11-12.1 R11-12.3	AG-ANI2

	<ul style="list-style-type: none"> ○ Hoof pick ○ Nippers ○ Pincher ○ Puller ○ Rasp ○ Shoeing ○ Apron 		
Standard 6.0 Investigate the Safety, Facility, and Equipment Needs of Horses			
Performance Indicator 6.1 Practice safety in equine management	Recommended Application/Activity	CCSS Standards	CCTC Standards
6.1.1 Demonstrate safety in handling and riding a horse.	<ul style="list-style-type: none"> • Demonstrate a safe procedure for saddling, bridling, mounting, and dismounting. 	SL11-12.1	AG-ANI2 CRP2
6.1.2 Demonstrate how to safely load and haul a horse, and how to check the safety of a trailer	<ul style="list-style-type: none"> • Develop a presentation covering safety guidelines when riding, loading, hauling, and tying horses. • Create a check-sheet for trailer safety. 	SL11-12.1 SL11-12.4	AG-ANI2 CRP4
6.1.3 Demonstrate the process of haltering, saddling, and bridling a horse.	<ul style="list-style-type: none"> • Demonstrate a safe procedure for haltering, leading, tying, and releasing a horse. 		
Performance Indicator 6.2 Assess facility management practices	Recommended Application/Activity	CCSS Standards	CCTC Standards
6.2.1 Evaluate factors to consider when planning an equine facility.	<ul style="list-style-type: none"> • Compare materials used in horse facilities. • Draw a diagram of an equine facility and prepare a bill of materials. Include: <ul style="list-style-type: none"> ○ Purpose of facility ○ Number and breed of animals ○ Room for expansion ○ Regulatory requirements ○ Budget ○ Activities 	SL11-12.1 SL11-12.2	AG-ANI2 CRP3
6.2.2 Analyze the need for fencing, identifying factors to	<ul style="list-style-type: none"> • Create a display of fencing used for horses. Include the cost, advantages, and disadvantages of each type of 	SL11-12.1 SL11-12.2	AG-ANI2 CRP8

consider in fence selection.	fencing based on: <ul style="list-style-type: none"> ○ Type of horse ○ Intended use ○ Density of horses ○ Availability of shelter ○ Neighbors ○ Aesthetics ○ Budget 		
Performance Indicator 6.3 Assess the use of equine equipment in riding and handling.	Recommended Application/Activity	CCSS Standards	CCTC Standards
6.3.1 Compare and contrast English and Western saddles.	<ul style="list-style-type: none"> • Compare and contrast appropriate uses of English and Western saddles 	SL11-12.1 SL11-12.1a	AG-ANI2 CRP2
6.3.2 Differentiate between the types of bits and their usage.	<ul style="list-style-type: none"> • Attend an equine event to observe people riding with different types of bits. Distinguish the effects of different types and uses of bits: <ul style="list-style-type: none"> ○ Gag ○ Curb ○ Hackamore ○ Snaffle 	SL11-12.1a	AG-ANI2 CRP8
Standard 7.0 Critique the Behavior and Training of Horses			
Performance Indicator 7.1 Interpret the behavior of horses to facilitate correction and training	Recommended Application/Activity	CCSS Standards	CCTC Standards
7.1.1 Evaluate the horse's senses to determine how senses are used in training and behavior modification.	<ul style="list-style-type: none"> • Identify a horse's senses, assessing the importance of each in handling and training: <ul style="list-style-type: none"> • Vision <ul style="list-style-type: none"> ○ Monocular ○ Binocular • Touch • Smell • Hearing 	SL11-12.1 SL11-12.4	AN-ANI6 CRP3

	<ul style="list-style-type: none"> • Use a live horse to demonstrate behaviors that indicate a horse's blind spots. • Demonstrate the safe way to walk behind a horse • Research how a horses senses are utilized in the following training techniques: <ul style="list-style-type: none"> • Imprinting • Desensitization • Conditioned response • Unconditioned response • Reinforcement 		
7.1.2 Identify & interpret how to read the emotions of a horse.	<ul style="list-style-type: none"> • Create a presentation illustrating horses with different expressions, using those expressions to read emotions and predict behaviors: <ul style="list-style-type: none"> • Hears • Eyes • Mouth • Nostrils 	SL11-12.4	AN-ANI6 CRP11
7.1.3 Analyze the behaviors of a horse to identify and correct a vice.	<ul style="list-style-type: none"> • Choose one of the vices horses develop from the list below. Describe the vice and possible solutions/corrections: <ul style="list-style-type: none"> • Reactive • Caregiving and care-seeking • Sexual • Heirarchy (pecking order) • Abnormal behaviors <ul style="list-style-type: none"> ○ Weaving ○ Head nodding/shaking ○ Pacing/pawing ○ Cribbing • Listen to a recording of sounds horses make and interpret the communication. • Have an experienced trainer explain the behaviors of horses. 	SL11-12.5	AN-ANI6 CRP2

Performance Indicator 7.2 Assess the use of training aids and equipment with horses.	Recommended Application/Activity	CCSS Standards	CCTC Standards
7.2.1 Identify training equipment and aids used to modify behavior in horses.	<ul style="list-style-type: none"> • Research proper equipment necessary for training horses: <ul style="list-style-type: none"> ○ Longeing ○ Round-penning ○ Imprinting ○ Desensitization ○ Halter ○ Lead rope ○ Round pen 	SL11-12.2	AN-ANI2 CRP5
7.2.2 Demonstrate common training techniques.	<ul style="list-style-type: none"> • Observe a trainer using a lunging line to exercise a horse • Observe a trainer use the round pen as a training aid • Demonstrate how to displace a horse's front and rear quarters from the ground. • Research and create a report on imprinting. Compare to imprinting in other agricultural animals. • Work a horse in a round pen. Demonstrate acceleration and deceleration of speed, change of directions, and stopping 	SL11-12.2	AN-ANI2 CRP5

Glossary

Standard 1 - Assess Opportunities in the Equine Industry

1. Breed – a group of horses selected for their common ancestry and common characteristics.
2. Evolution – refers to a process of continuous change
3. Career Development Event – a competitive event sponsored by the FFA that includes academic and hands-on learning activities about specific career areas.
4. Conformation – the overall shape and form of the horse's body.
5. Disposition – the normal temperament or attitude of a horse.
6. Dressage – a riding event or domain involving the guiding of a horse through stylized maneuvers with hand, body, and leg cues.
7. Eohippus – the earliest known ancestor of the horse
8. Farrier – (horseshoer) a person who cares for a horse's feet, including attaching shoes.
9. Gymkhana – a competition involving various games and speed events..
10. Horse Show – a sporting event involving horses competing in many different activities.
11. Equine – pertaining to the horse. Of the genus *Equus*.
12. Taxonomy – a system of classifying and naming living things.
13. Mule – a cross between a mare and a jack.
14. Proficiency Award – an FFA award given to students who excel in achievement with their SAE.
15. SAE Project – a home-, work-, or research- based project an agriculture student undertakes to gain knowledge, experience, or earn money in a specific agricultural area.
16. Sound – a condition of having no faults or injuries that interfere with the function and performance of the horse.
17. Racing – a competitive event involving horses competing head to head to determine the fastest at a particular gait or maneuver.
18. Rodeo – a competitive event involving cowboys competing at several events based on ranch work, many of which require the use of horses.

Standard 2 - Compare Breeds, Types, and Classes of Horses

1. Draft horse – large horses bred for work.
2. Hand – a measurement of height equaling 4 inches.
3. Light horse – a horse with characteristics that make it suitable for riding.

Standard 3 - Evaluate Equine for Selection

1. Blemish – a unattractive physical trait that does not affect the usefulness of a horse.
2. Breed Type – the appearance of those physical qualities desired in a specific breed.
3. Gait – the horse's way of moving its legs during progression.
4. Unsoundness – any condition that interferes or is apt to interfere with the function and performance of the horse.

Standard 4 – Assess the Health and Nutrition of Horses

1. Cups – the deep indentures in the center of the surfaces in young permanent teeth.
2. Monkey-Mouth – a condition in which the lower teeth project past the upper.
3. Parrot-Mouth – a condition in which the upper teeth overhang the lower.
4. Wolf Teeth – the first permanent premolars.
5. Milk Teeth – the first set of teeth that an animal develops.
6. Smooth Mouth – a set of teeth with no visible cups.
7. Deciduous – refers to teeth that are shed and replaced.
8. Floating – a dental procedure to smooth the teeth using files or drills.
9. Equine Dentistry – a career involving care of the horse's teeth.
10. Galvayne's Groove – a mark on the tooth used to determine the age of the horse.
11. Balanced Ration - the feed and nutrients an animal takes in during a 24 hour period, with the nutrients necessary for optimum performance.
12. Parasite – organisms that live in or on an organism of another species for the purpose of obtaining food.
13. Disease – any departure from the normal state of health.
14. Infectious Disease – a disease caused by a pathogenic organism.

Standard 5 - Assess the Care and Maintenance of Horses

1. Founder – (laminitis) an inflammation of the sensitive laminae of the hoof.
2. Cold-fitting – fitting shoes to a horse's hoof without heating them.
3. Hot-fitting – fitting shoes to a horse's hoof by heating them for easier shaping.

Standard 6 – Investigate the Safety, Facility, and Equipment Needs of Horses

Standard 7 – Critique the Behavior and Training of Horses

1. Conditioned Response – a learned response to a stimulus.
2. Desensitization – gradually increasing exposure to a frightening or anxiety-producing stimulus until the animal's tolerance level is raised.
3. Imprinting – the imposition of a behavior in a young animal by exposure to stimuli.
4. Reinforcement – repetition of response to a behavior.
5. Unconditioned Response – a natural, instinctive response to a stimulus.

Common Core State Standards Grades 9-12

ELA Speaking and Listening Standards Grades 9-10

1. Initiate and participate effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grades 9–10 topics, texts, and issues, building on others’ ideas and expressing their own clearly and persuasively. **SL9-10.1**
 - a. 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. **SL9-10.1a**
 - b. Work with peers to set rules for collegial discussions and decision-making (e.g., informal consensus, taking votes on key issues, presentation of alternate views), clear goals and deadlines, and individual roles as needed. **SL9-10.1b**
 - c. Propel conversations by posing and responding to questions that relate the current discussion to broader themes or larger ideas; actively incorporate others into the discussion; and clarify, verify, or challenge ideas and conclusions. **SL9-10.1c**
 - d. Respond thoughtfully to diverse perspectives, summarize points of agreement and disagreement, and, when warranted, qualify or justify their own views and understanding and make new connections in light of the evidence and reasoning presented. **SL9-10.1d**
2. Integrate multiple sources of information presented in diverse media or format(e.g., visually, quantitatively, orally) evaluating the credibility and accuracy of each source. **SL9-10.2**
3. Evaluate a speaker’s point of view, reasoning, and use of evidence and rhetoric, identifying any fallacious reasoning or exaggerated or distorted evidence. **SL9-10.3**
4. Present information, findings, and supporting evidence clearly, concisely, and logically such that listeners can follow the line of reasoning and the organization, development, substance, and style are appropriate to purpose, audience, and task. **SL9-10.4**
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. **SL9-10.5**

ELA Speaking and Listening Standards Grades 11-12

1. Initiate and participate effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grades 11–12 topics, texts, and issues, building on others’ ideas and expressing their own clearly and persuasively. **SL11-12.1**
 - a. 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. **SL11-12.1a**
 - b. Work with peers to promote civil, democratic discussions and decision-making, set clear goals and deadlines, and establish individual roles as needed. **SL11-12.1b**

- c. 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. **SL11-12.1c**
 - d. 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. **SL11-12.1d**
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. **SL11-12.2**
 3. Evaluate a speaker's point of view, reasoning, and use of evidence and rhetoric, assessing the stance, premises, links among ideas, word choice, points of emphasis, and tone used. **SL11-12.3**
 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. **SL11-12.4**
 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. **SL11-12.5**

ELA Language Grades 9-10

4. Determine or clarify the meaning of unknown and multiple-meaning words and phrases based on grades 9–10 reading and content, choosing flexibly from a range of strategies. **L9-10.4**
 - a. Use context (e.g., the overall meaning of a sentence, paragraph, or text; a word's position or function in a sentence) as a clue to the meaning of a word or phrase. **L9-10.4a**
 - b. Identify and correctly use patterns of word changes that indicate different meanings or parts of speech (e.g., analyze, analysis, analytical; advocate, advocacy). **L9-10.4b**
 - c. 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, or its etymology. **L9-10.4c**
 - d. Verify the preliminary determination of the meaning of a word or phrase (e.g., by checking the inferred meaning in context or in a dictionary). **L9-10.4d**
6. Acquire and use accurately general academic and domain-specific words and phrases, sufficient for reading, writing, speaking, and listening at the college and career readiness level; demonstrate independence in gathering vocabulary knowledge when considering a word or phrase important to comprehension or expression. **L9-10.6**

ELA Language Grades 11-12

4. Determine or clarify the meaning of unknown and multiple-meaning words and phrases based on grades 11–12 reading and content, choosing flexibly from a range of strategies. **L11-12.4**

- a. Use context (e.g., the overall meaning of a sentence, paragraph, or text; a word's position or function in a sentence) as a clue to the meaning of a word or phrase. **L11-12.4a**
 - b. Identify and correctly use patterns of word changes that indicate different meanings or parts of speech (e.g., conceive, conception, conceivable). **L11-12.4b**
 - c. 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. **L11-12.4c**
 - d. Verify the preliminary determination of the meaning of a word or phrase (e.g., by checking the inferred meaning in context or in a dictionary) **L11-12.4d**
6. Acquire and use accurately general academic and domain-specific words and phrases, sufficient for reading, writing, speaking, and listening at the college and career readiness level; demonstrate independence in gathering vocabulary knowledge when considering a word or phrase important to comprehension or expression. **L11-12.6**

Reading Standards for Literacy in Science and Technical Subjects Grades 9-10

1. Cite specific textual evidence to support analysis of science and technical texts, attending to the precise details of explanations or descriptions. **R9-10.1**
2. Determine the central ideas or conclusions of a text; trace the text's explanation or depiction of a complex process, phenomenon, or concept; provide an accurate summary of the text. **R9-10.2**
3. Follow precisely a complex multistep procedure when carrying out experiments, taking measurements, or performing technical tasks, attending to special cases or exceptions defined in the text. **R9-10.3**
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 9–10 texts and topics. **R9-10.4**
5. Analyze the structure of the relationships among concepts in a text, including relationships among key terms (e.g., force, friction, reaction force, energy). **R9-10.5**
6. Analyze the author's purpose in providing an explanation, describing a procedure, or discussing an experiment in a text, defining the question the author seeks to address. **R9-10.6**
7. Translate quantitative or technical information expressed in words in a text into visual form (e.g., a table or chart) and translate information expressed visually or mathematically (e.g., in an equation) into words. **R9-10.7**
8. Assess the extent to which the reasoning and evidence in a text support the author's claim or a recommendation for solving a scientific or technical problem. **R9-10.8**
9. Compare and contrast findings presented in a text to those from other sources (including their own experiments), noting when the findings support or contradict previous explanations or accounts. **R9-10.9**
10. By the end of grade 10, read and comprehend science/technical texts in the grades 9–10 text complexity band independently and proficiently. **R9-10.10**

Reading Standards for Literacy in Science and Technical Subjects Grades 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. **R11-12.1**
2. Determine the central ideas or conclusions of a text; summarize complex concepts, processes, or information presented in a text by paraphrasing them in simpler but still accurate terms. **R11-12.2**
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. **R11-12.3**
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. **R11-12.4**
5. Analyze how the text structures information or ideas into categories or hierarchies, demonstrating understanding of the information or ideas. **R11-12.5**
6. Analyze the author’s purpose in providing an explanation, describing a procedure, or discussing an experiment in a text, identifying important issues that remain unresolved. **R11-12.6**
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. **R11-12.7**
8. Evaluate the hypotheses, data, analysis, and conclusions in a science or technical text, verifying the data when possible and corroborating or challenging conclusions with other sources of information. **R11-12.8**
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. **R11-12.9**
10. By the end of grade 12, read and comprehend science/technical texts in the grades 11–CCR text complexity band independently and proficiently. **R11-12.10**

Writing Standards for Literacy in History/Social Studies, Science, and Technical Subjects Grades 9-10

1. Write arguments focused on discipline-specific content. **W9-10.1**
 - a. Introduce precise claim(s), distinguish the claim(s) from alternate or opposing claims, and create an organization that establishes clear relationships among the claim(s), counterclaims, reasons, and evidence. **W9-10.1a**
 - b. Develop claim(s) and counterclaims fairly, supplying data and evidence for each while pointing out the strengths and limitations of both claim(s) and counterclaims in a discipline-appropriate form and in a manner that anticipates the audience's knowledge level and concerns. **W9-10.1b**
 - c. Use words, phrases, and clauses to link the major sections of the text, create cohesion, and clarify the relationships between claim(s) and reasons, between reasons and evidence, and between claim(s) and counterclaims. **W9-10.1c**
 - d. Establish and maintain a formal style and objective tone while attending to the norms and conventions of the discipline in which they are writing. **W9-10.1d**
 - e. Provide a concluding statement or section that follows from or supports the argument presented. **W9-10.1e**
2. Write informative/explanatory texts, including the narration of historical events, scientific procedures/ experiments, or technical processes. **W9-10.2**
 - a. Introduce a topic and organize ideas, concepts, and information to make important connections and distinctions; include formatting (e.g., headings), graphics (e.g., figures, tables), and multimedia when useful to aiding comprehension. **W9-10.2a**
 - b. Develop the topic with well-chosen, relevant, and sufficient facts, extended definitions, concrete details, quotations, or other information and examples appropriate to the audience's knowledge of the topic. **W9-10.2b**
 - c. Use varied transitions and sentence structures to link the major sections of the text, create cohesion, and clarify the relationships among ideas and concepts. **W9-10.2c**
 - d. Use precise language and domain-specific vocabulary to manage the complexity of the topic and convey a style appropriate to the discipline and context as well as to the expertise of likely readers. **W9-10.2d**
 - e. Establish and maintain a formal style and objective tone while attending to the norms and conventions of the discipline in which they are writing. **W9-10.2e**
 - f. Provide a concluding statement or section that follows from and supports the information or explanation presented (e.g., articulating implications or the significance of the topic). **W9-10.2f**
3. Write precise enough descriptions of the step-by-step procedures they use in their investigations or technical work that others can replicate them and (possibly) reach the same results. **W9-10.3**
4. Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience. **W9-10.4**
5. Develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach, focusing on addressing what is most significant for a specific purpose and audience. **W9-10.5**
6. Use technology, including the Internet, to produce, publish, and update individual or shared writing products, taking advantage of technology's capacity to link to other information and to display information flexibly and dynamically. **W9-10.6**

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. **W9-10.7**
8. Gather relevant information from multiple authoritative print and digital sources, using advanced searches effectively; assess the usefulness of each source in answering the research question; integrate information into the text selectively to maintain the flow of ideas, avoiding plagiarism and following a standard format for citation. **W9-10.8**
9. Draw evidence from informational texts to support analysis, reflection, and research. **W9-10.9**
10. Write routinely over extended time frames (time for reflection and revision) and shorter time frames (a single sitting or a day or two) for a range of discipline-specific tasks, purposes, and audiences. **W9-10.10**

Writing Standards for Literacy in History/Social Studies, Science, and Technical Subjects Grades 11-12

1. Write arguments focused on discipline-specific content. **W11-12.1**
 - a. Introduce precise, knowledgeable claim(s), establish the significance of the claim(s), distinguish the claim(s) from alternate or opposing claims, and create an organization that logically sequences the claim(s), counterclaims, reasons, and evidence. **W11-12.1a**
 - b. Develop claim(s) and counterclaims fairly and thoroughly, supplying the most relevant data and evidence for each while pointing out the strengths and limitations of both claim(s) and counterclaims in a discipline-appropriate form that anticipates the audience's knowledge level, concerns, values, and possible biases. **W11-12.1b**
 - c. Use words, phrases, and clauses as well as varied syntax to link the major sections of the text, create cohesion, and clarify the relationships between claim(s) and reasons, between reasons and evidence, and between claim(s) and counterclaims. **W11-12.1c**
 - d. Establish and maintain a formal style and objective tone while attending to the norms and conventions of the discipline in which they are writing. **W11-12.1d**
 - e. Provide a concluding statement or section that follows from or supports the argument presented. **W11-12.1e**
2. Write informative/explanatory texts, including the narration of historical events, scientific procedures/ experiments, or technical processes. **W11-12.2**
 - a. Introduce a topic and organize complex ideas, concepts, and information so that each new element builds on that which precedes it to create a unified whole; include formatting (e.g., headings), graphics (e.g., figures, tables), and multimedia when useful to aiding comprehension. **W11-12.2a**
 - b. Develop the topic thoroughly by selecting the most significant and relevant facts, extended definitions, concrete details, quotations, or other information and examples appropriate to the audience's knowledge of the topic. **W11-12.2b**
 - c. Use varied transitions and sentence structures to link the major sections of the text, create cohesion, and clarify the relationships among complex ideas and concepts. **W11-12.2c**

- d. Use precise language, domain-specific vocabulary and techniques such as metaphor, simile, and analogy to manage the complexity of the topic; convey a knowledgeable stance in a style that responds to the discipline and context as well as to the expertise of likely readers. **W11-12.2d**
- e. Provide a concluding statement or section that follows from and supports the information or explanation provided (e.g., articulating implications or the significance of the topic). **W11-12.2e**
- 3. Write precise enough descriptions of the step-by-step procedures they use in their investigations or technical work that others can replicate them and (possibly) reach the same results. **W11-12.3**
- 4. Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience. **W11-12.4**
- 5. Develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach, focusing on addressing what is most significant for a specific purpose and audience. **W11-12.5**
- 6. Use technology, including the Internet, to produce, publish, and update individual or shared writing products in response to ongoing feedback, including new arguments or information. **W11-12.6**
- 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. **W11-12.7**
- 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. **W11-12.8**
- 9. Draw evidence from informational texts to support analysis, reflection, and research. **W11-12.9**
- 10. Write routinely over extended time frames (time for reflection and revision) and shorter time frames (a single sitting or a day or two) for a range of discipline-specific tasks, purposes, and audiences. **W11-12.10**

Common Career and Technical Core Standards

Agriculture, Food, and Natural Resources Cluster

Animal Systems Career Pathway (AG-ANI)

1. Analyze historic and current trends impacting the animal systems industry. **AG-ANI1**
2. Utilize best practice protocols for husbandry and welfare based upon animal behaviors. **AG-ANI2**
3. Design and provide proper animal nutrition given desired outcomes for performance, development, reproduction, and/or economic production. **AG-ANI3**
4. Apply principles of animal reproduction given desired outcomes for performance, development, and/or economic production. **AG-ANI4**
5. Evaluate environmental factors affecting animal performance and implement procedures for enhancing performance and animal health. **AG-ANI5**
6. Classify, evaluate and select animals based on anatomical and physiological characteristics. **AG-ANI6**
7. Apply principles of effective animal health care. **AG-ANI7**

Common Career and Technical Core Career Ready Practices (CCTC CRP)

1. Act as a responsible and contributing citizen and employee. **CRP1**
2. Apply appropriate academic and technical skills. **CRP2**
3. Attend to personal health and financial well-being. **CRP3**
4. Communicate clearly, effectively, and with reason. **CRP4**
5. Consider the environmental, social and economic impacts of decisions. **CRP5**
6. Demonstrate creativity and innovation. **CRP6**
7. Employ valid and reliable research strategies. **CRP7**
8. Utilize critical thinking to make sense of problems and persevere in solving them. **CRP8**
9. Model integrity, ethical leadership, and effective management. **CRP9**
10. Plan education and career path aligned to personal goals. **CRP10**
11. Use technology to enhance productivity. **CRP11**
12. Work productively in teams while using cultural/global competence. **CRP12**