Grade/Subject/Course: **Equine Science**	
Unit: **History, Status, and Future of the Equine Industry**	**__X___ Essential _____ Important _____ Compact**
Big Idea: Horses have evolved over many years, they play a valuable role in the Ag Industry, and the future of the equine industry is changing to meet demand.	
AFNR (Agriculture, Food, & Natural Resources) National Content Standards: AFNR (Ag, Food, & Natural Resource) National Standards developed by the COUNCIL for Ag Education - revised in 2015 **AFNR Standards:** AS.01.01.01.a - Identify & summarize the origin, significance, distribution, and domestication of animal species. AS.01.01.01.b - Evaluate and describe characteristics of animals that developed in response to the animal's environment and led to their domestication AS.01.01.02.c - Predict trends and implications of future developments within different animal industries on production practices and the environment	**Interdisciplinary Standards (if applicable):**
Essential Questions: How did horses evolve to fit their environment? How did/do humans use horses? What is the future of the equine industry?	**Understandings: Students will understand THAT . . .** Horses changed over time. People used horses for food, work, recreation, and a source of income. Horses are gaining in popularity for pleasure and sport.
Knowledge: Basic biology and evolution theories Basic equine structure Basic equine vocabulary Basic knowledge of the livestock industry	**Skills:** Identify ancestors, species, and breeds of common horses. Explain the domestication of horses over time. Identify past and present uses of horses in the U.S. Explain the current and predict the future trends in the horse industry.

Grade/Subject/Course: **Equine Science**	
Unit: Equine Anatomy and Physiology	**__X___ Essential _____ Important _____ Compact**
Big Idea: Horses have body parts, structures, processes, and functions that are both similar and different from other livestock animals.	
AFNR (Agriculture, Food, & Natural Resources) National Content Standards: AFNR (Ag, Food, & Natural Resource) National Standards developed by the COUNCIL for Ag Education - revised in 2015 **AFNR Standards:** AS.06.01.03.a - Identify and summarize common classification terms utilized in animal systems (e.g. external/internal body parts, etc.) AS.06.02.03.b - Compare and contrast animal cells, tissues, organs, systems, and functions among animal species. AS.06.02.03.c - Apply knowledge of anatomical and physiological characteristics of animals to make production and management decisions.	
Essential Questions: What are the external parts of a horse? What are the internal systems and organs of a horse? How does horse anatomy fit to its adaptations?	**Understandings: Students will understand THAT . . .** Horses have specific anatomic adaptations that affect their function. Horses have specific internal systems different from other livestock.
Knowledge: Basic equine vocabulary Basic equine anatomical names	**Skills:** Identify both external and internal equine anatomy/parts Explain how equine form affects function. Identify the expression of adaptations in the equine body.

Grade/Subject/Course: **Equine Science**	
Unit: Equine Nutrition and Feeding	**__X___ Essential _____ Important _____ Compact**
Big Idea: Because horses have a unique digestive system they have specific nutrient and feed requirements.	
AFNR (Agriculture, Food, & Natural Resources) National Content Standards: AFNR (Ag, Food, & Natural Resource) National Standards developed by the COUNCIL for Ag Education - Revised in 2015 **AFNR Standards;** AS.03.01.01.c - Assess the nutritional needs of an individual animal based on its growth stage and production system. AS.03.02.01.c - Select appropriate feedstuffs for animals based on a variety of factors - economics, digestive system, nutritional needs, etc. AS.03.03.02.b - Analyze and apply information from a feed label and feeding instructions to feed animals.	
Essential Questions: What are the parts and functions of the equine digestive system? What feeds best meet equine nutrient requirements?	**Understandings: Students will understand THAT . . .** Horses have a specialized digestive system. Horses have unique nutrient requirements compared to other livestock. Certain feeds are best suited to meet equine nutritional and digestive requirements.
Knowledge: Basic equine vocabulary Equine anatomy terms Basic feedstuffs classification (roughages, concentrates, etc.) Digestive process	**Skills:** Identify the organs and functions of the equine digestive system. Analyze the nutrient requirements for horses in various stages of life/growth. Develop appropriate rations for horses in various stages of life/growth. Recommend feed rations based on availability, cost, and protein/nutrient content.

Grade/Subject/Course: **Equine Science**	
Unit: Equine Reproduction and Breeding	**__X___ Essential _____ Important _____ Compact**
Big Idea: Horses reproduce similar to other livestock animals. They are seasonal breeders with unique estrus and gestation cycles and considerations.	
AFNR (Agriculture, Food, & Natural Resources) National Content Standards: AFNR (Ag, Food, & Natural Resource) National Standards developed by the COUNCIL for Ag Education - Revised in 2015 **AFNR Standards:** AS.04.01.01.b - Analyze the functions of major organs in the male and female reproductive systems. AS.04.02.01.a - Summarize genetic inheritance. AS.04.03.01.a - Identify and categorize natural and artificial breeding methods.	
Essential Questions: What are the parts and functions of the equine reproductive system? What are the industry standards and BMPs in equine breeding systems?	**Understandings: Students will understand THAT . . .** Horses have specialized reproductive systems. Horses are reproduced in a way that best matches the production structure of the equine operation. Horse reproduction is a highly managed process of the total equine operation
Knowledge: Basic equine vocabulary Equine anatomy terms Reproductive process (Live cover and AI) Fertilization and gestation Foaling and weaning	**Skills:** Identify the organs and functions of the equine reproductive system. Calculate the phases of the equine reproductive calendar. Estimate breeding, gestation, and foaling dates. Develop a foaling plan. Establish BMPs for mare and foal.

Grade/Subject/Course: **Equine Science**	
Unit: Equine Health Management	**__X___ Essential _____ Important _____ Compact**
Big Idea: Horses, like all livestock, are prone to certain disease, illness, and unsoundness and must be managed in a way that enables them to enjoy a healthy and productive life.	
AFNR (Agriculture, Food, & Natural Resources) National Content Standards: AFNR (Ag, Food, & Natural Resource) National Standards developed by the COUNCIL for Ag Education - Revised in 2015 **AFNR Standards:** AS.07.01.03.b - Identify common illnesses/disorders of animals based on symptoms. AS.07.01.02.b - Perform simple health check evaluations on animals. AS.07.01.02.c - Determine when an animal health concern needs to be referred to a health care professional. AS.07.01.04.c - Design/Implement a health management and prevention plan for animals in their natural and confined environments.	
Essential Questions: What diseases/illnesses are common to horses? What are the signs of a healthy/unhealthy horse? How do we treat the unhealthy horse? How does a horse's hoof indicate overall health?	**Understandings: Students will understand THAT . . .** Horses are prone to species specific disease and illness. Routine health checks can prevent certain horse health issues. Vaccinations can help keep horses healthy. Hoof condition is a good indicator of horse health.
Knowledge: Basic equine vocabulary Equine anatomy terms Equine specific disease susceptibility Routine horse health check-up checklist Preventative equine health care (vaccines, shoeing, etc.) Signs of a healthy/unhealthy horse When to call a veterinarian	**Skills:** Identify the signs of good health in horses. Recognize common illnesses and diseases in horses. Complete a basic horse health checklist. Demonstrate how to give medication. (oral and injection) Model proper shoeing techniques and practices to manage hoof health.

Grade/Grade/Course: **Equine Science**	
Unit: Equine Evaluation (Judging) and Equitation	
Big Idea: Conformation (physical) traits determine horses' ability to perform and therefore horses are evaluated on their physical conformation and movement within different riding disciplines.	
AFNR (Agriculture, Food, & Natural Resources) National Content Standards: AFNR (Ag, Food, & Natural Resource) National Standards developed by the COUNCIL for Ag Education - Revised in 2015 **AFNR Standards:** AS.06.03.01.b - Compare/Contrast desirable anatomical & physiological characteristics of animals. AS.06.01.02.b - Evaluate the economic value of animals for applications in agriculture.	
Essential Questions: What are the "ideal" conformational traits and faults in horses based on breed standards? What colors and markings are used to describe horses? How are horses evaluated based on conformation (halter classes)? How are horses evaluated based on performance (equation classes)? What is the common tack used when handling and riding horses? What are the common riding disciplines?	**Understandings: Students will understand THAT . . .** Horse anatomy affects/determines physical conformation. Different breeds have different conformation standards. Horses have specific colors and markings. Horses are evaluated based on conformation as well as movement. Specifically designed tack/equipment is used when handling/riding horses. There are different riding disciplines. (English, Western, Etc.) Horses are mainly used for recreation in the United States. Horse ownership is a valuable economic sector of agriculture.
Knowledge: Basic equine vocabulary Equine anatomy terms Equine color/marking terms	**Skills:** Identify ideal conformation traits in horses. Recognize horse colors and markings. Develop a horse evaluation plan and place horses in both halter and performance classes. Identify tack and equipment used in the horse industry.