

Course Title: Equine Science

Unit 1:	Career Opportunities
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Content Standard(s) and Depth of Knowledge Level(s):	Students will: 1. Describe career opportunities in the equine industry.
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Learning Objective(s) and Depth of Knowledge Level(s):	Students will: 1. Describe nature of work 2. Explain salary potential 3. Discuss employment benefits 4. Analyze job qualifications
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Essential Question(s):	Why is it important to know what opportunities are available in the Equine Industry?
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Content Knowledge	Suggested Instructional Activities Rigor & Relevance Framework (Quadrant)	Suggested Materials, Equipment and Technology Resources
I. Identify career opportunities II. Importance of employment III. Need for equine occupations	PowerPoint presentations and lecture Career exploration and research Develop a plan of action for chosen field. Explore high education degrees for chosen field.	Projector with laptop computer Video imaging Computer lab use Guest speaker

Unit Assessment:	Students will form a PowerPoint presentation on interested equine career field and present to class.
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**Unit/Course
CTSO Activity:**

Begin compilation of student career portfolio.

**Unit/Course
Culminating
Product:**

Students will orally present their equine career portfolios using visual aids.

Course/Program Credential(s): Credential Certificate Postsecondary Degree University Degree
 Other:

Course Title: Equine Science

Unit 2:	Safety
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Content Standard(s) and Depth of Knowledge Level(s):	<p>Students will:</p> <ol style="list-style-type: none"> 2. Identify safety techniques to be considered when handling horses. Examples: approaching a horse from the front and side, avoiding sudden movement, speaking quietly • Describing horse behavior that can cause injuries to the horse and to the handler Examples: submission to some members of the herd, dominance over some members of the herd, fights or flight behaviors
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Learning Objective(s) and Depth of Knowledge Level(s):	<p>Students will:</p> <ol style="list-style-type: none"> 1. Identify signs of different emotions of a horse. 2. Describe the sense of the vision, touch, smell, and hearing of the horse. 3. Describe four bad behaviors common in some horses. 4. Identify ways of transporting horses. 5. Safely load a horse in a trailer. 6. Recall the safety guidelines to know when hauling horses. 7. Identify an assortment of tack used in riding and driving. 8. Identify different types of saddles used in riding. 9. Identify supplement tack used in training.
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Essential Question(s):	<p>Why should you know the different types of tack used in the horse industry? Why is it important to be familiar with horse behavior? Why follow safety guidelines for transporting horses?</p>
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Content Knowledge	Suggested Instructional Activities Rigor & Relevance Framework (Quadrant)	Suggested Materials, Equipment and Technology Resources
<ol style="list-style-type: none"> I. Horse nature and behavior II. Safe horse transportation III. Tack identification and care 	<p>PowerPoint presentations and lecture Hands on site demonstration Hands on tack identification Live horse trailer loading demonstration</p>	<p>Projector with laptop computer Instructional videos Various horse tack Horse trailer Live horses Horse transporting guideline references</p>

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Unit Assessment:	Students will complete an oral exam on the identification of tack and written exams on horse behavior and transportation.
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Unit/Course CTSO Activity:	Student projects will be to complete a poster with pictures of horse tack identified correctly.
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Unit/Course Culminating Product:	Students will orally present their equine career portfolios using visual aid.
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Course/Program Credential(s): <input type="checkbox"/> Credential <input checked="" type="checkbox"/> Certificate <input type="checkbox"/> Postsecondary Degree <input type="checkbox"/> University Degree <input type="checkbox"/> Other:
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Course Title: Equine Science

Unit 3:	History and Development
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Content Standard(s) and Depth of Knowledge Level(s):	<p>Students will:</p> <ol style="list-style-type: none"> 3. Differentiate characteristics of light horses, draft horses, and ponies, including structure, muscling, color, and shape of head and neck. <ul style="list-style-type: none"> • Light horses Examples: Quarter Horse, Appaloosa, Thoroughbred, Arabian, Morgan, American Saddlebred, Tennessee Walking Horse Paint • Draft horses Examples: Clydesdale, Shire, Percheron, Belgian • Ponies Examples: Welsh, Shetland, Pony of the Americas, American Walking Pony • Describing historical roles of horses in transportation and recreation
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Learning Objective(s) and Depth of Knowledge Level(s):	<p>Students will:</p> <ol style="list-style-type: none"> 1. Identify and define types of light horses 2. Identify and define types of draft horses 3. Identify and define types of ponies 4. Describe uses of horses as beasts of burden, transportation, and recreation 5. Explain origins of specific breeds
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Essential Question(s):	Why is it important to know the breeds of horses and their uses?
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Content Knowledge	Suggested Instructional Activities Rigor & Relevance Framework (Quadrant)	Suggested Materials, Equipment and Technology Resources
<ol style="list-style-type: none"> I. Identify important uses of horses II. Importance of employment III. Need for equine occupations 	PowerPoint presentations and lecture Career exploration and research Develop a plan of action for chosen field Explore high education degrees for chosen field	Projector with laptop computer Video imaging Computer lab use for research Guest speaker

Unit Assessment:	Student will prepare a PowerPoint presentation on interested equine career field and present to class.
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Unit/Course CTSO Activity:	Begin compilation of student career portfolio.
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Unit/Course Culminating Product:	Students will orally present their equine career portfolios using visual aids.
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Course/Program Credential(s): <input type="checkbox"/> Credential <input type="checkbox"/> Certificate <input type="checkbox"/> Postsecondary Degree <input type="checkbox"/> University Degree <input type="checkbox"/> Other:

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Unit 4:	Anatomy and Physiology
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Content Standard(s) and Depth of Knowledge Level(s):	<p>Students will:</p> <ol style="list-style-type: none"> 4. Describe the external anatomy of a horse. Examples: withers, crest, poll, forehead, muzzle, point of shoulder, pastern, coronet, fetlock 5. Describe structures and functions of the equine digestive system. 6. Explain functions of the equine circulatory system. 7. Identify parts and functions of equine male and female reproductive systems. <ul style="list-style-type: none"> • Describing factors in an equine breeding program Examples: heat cycle, gestation, lactation, artificial insemination, fertility
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Learning Objective(s) and Depth of Knowledge Level(s):	<p>Students will:</p> <ol style="list-style-type: none"> 1. Identify the internal and external parts of the horse 2. Students will be able to discuss the digestive system of the horse and explain nutritional needs.
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Essential Question(s):	<p>What is it important to be educated on the anatomy of the horse? Why should horses' digestive systems be closely regulated?</p>
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Content Knowledge	Suggested Instructional Activities Rigor & Relevance Framework (Quadrant)	Suggested Materials, Equipment and Technology Resources
<ol style="list-style-type: none"> I. Anatomy of horse II. Digestive system 	<p>PowerPoint presentations and lecture Live identification of horse anatomy</p>	<p>Projector with laptop computer Instructional videos Live horses for demonstration Models of horse anatomy</p>

Unit Assessment:	Students will complete an oral exam on identifying horse anatomy.
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**Unit/Course
CTSO Activity:**

Students will make a poster of a horse with the internal and external anatomy labeled.

**Unit/Course
Culminating
Product:**

Students will orally present their equine career portfolios using visual aids.

Course/Program Credential(s): Credential Certificate Postsecondary Degree University Degree
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Unit 5:	Nutrition
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Content Standard(s) and Depth of Knowledge Level(s):	<p>Students will:</p> <p>8. Analyze equine feed ingredients to determine nutritional value. Examples: grains, roughage, vitamins, minerals, water</p> <ul style="list-style-type: none"> • Identifying possible problems associated with feeding equine <p>9. Explain the balance of rations used in feeding equine</p> <ul style="list-style-type: none"> • Explaining nutritional requirements at various stages of equine development
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Learning Objective(s) and Depth of Knowledge Level(s):	<p>Students will:</p> <ol style="list-style-type: none"> 1. List sources of energy and protein nutrients. 2. Describe the symptoms of nutrient deficiencies. 3. Construct a feed ration. 4. Develop a feeding program for horses.
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Essential Question(s):	Why should you be concerned with your horse's nutritional needs?
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Content Knowledge	Suggested Instructional Activities Rigor & Relevance Framework (Quadrant)	Suggested Materials, Equipment and Technology Resources
I. Feed nutritional value II. Problems in feeding horses III. Feed rationing	PowerPoint presentations and lecture Analyze feed nutrition labels. Develop a feeding program and schedule.	Projector with laptop computer Instructional videos Feed bags Charts and diagrams of nutrition needs of horses in different development stages

Unit Assessment:	Students must calculate different feed ratios depending of needs of horses.
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**Unit/Course
CTSO Activity:**

Students will develop a feeding program and schedule.

**Unit/Course
Culminating
Product:**

Students will orally present their equine career portfolios using visual aids.

Course/Program Credential(s): Credential Certificate Postsecondary Degree University Degree
 Other:

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Unit 6:	Health
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Content Standard(s) and Depth of Knowledge Level(s):	<p>Students will:</p> <ol style="list-style-type: none">10. Describe causes of major equine diseases and methods of prevention. Examples: diseases-equine encephalitis; methods of prevention-management practice11. Differentiate between internal and external parasites prevalent in equine. Examples: deerflies, lice mites, ringworm, ticks, botflies, strongyles, ascarids, pinworms12. Describe hoof problems in equine.<ul style="list-style-type: none">• Recognizing symptoms of lameness in equine13. Diagnose conditions that require the assistance of a farrier. Examples: farrier assistance – trimming, shoeing<ul style="list-style-type: none">• Identifying tools used by a farrier<ul style="list-style-type: none">• Examples: apron, hoof gauge, hoof knife, hoof pick, anvil, rasp, hoof nippers, nail clincher14. Categorize normal equine ranges for vital signs, critical and noncritical injuries, and treatment of wound. Examples: vital signs – heart rate, respiratory rate critical injuries – broken bones noncritical injuries – cuts treatment of wounds – cleaning, applying ointments, applying bandages, stitching
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Learning Objective(s) and Depth of Knowledge Level(s):	<p>Students will:</p> <ol style="list-style-type: none">1. Describe signs of disease in horses.2. List the causes of disease.3. Discuss how diseases are transmitted.4. Describe ways in which disease can be prevented.5. Describe how immunization occurs.6. Plan a vaccination program for horses.7. Describe the symptoms of a parasite-infected horse.8. Identify common internal and external parasites.
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Essential Question(s):	What are some major effects caused by diseased horses?
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Content Knowledge	Suggested Instructional Activities Rigor & Relevance Framework (Quadrant)	Suggested Materials, Equipment and Technology Resources
I. Disease cause and prevention II. Parasites	PowerPoint presentations and lecture Identify various parasites samples Identify various diseased horses	Projector with laptop computer Instructional videos Picture slides of disease Parasite samples Vet reference book

Unit Assessment:	Students must physically identify internal and external parasites and diseases when given samples to view.
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Unit/Course CTSO Activity:	Students will develop a vaccination plan for the horse.
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Unit/Course Culminating Product:	Students will orally present their equine career portfolios using visual aid.
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Course/Program Credential(s): <input type="checkbox"/> Credential <input checked="" type="checkbox"/> Certificate <input type="checkbox"/> Postsecondary Degree <input type="checkbox"/> University Degree <input type="checkbox"/> Other:
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Unit 7:	Selection and Conformation
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Content Standard(s) and Depth of Knowledge Level(s):	<p>Students will:</p> <p>15. Distinguish factors in selecting horses for a particular use.</p> <p style="padding-left: 40px;">Example: draft horses for pulling heavy loads</p> <ul style="list-style-type: none"> • Describing procedures for determining the age of a horse <p style="padding-left: 40px;">Example: checking size of teeth</p> <ul style="list-style-type: none"> • Describing factors to consider in judging halter and performance classes. • Evaluating various equine training techniques
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Learning Objective(s) and Depth of Knowledge Level(s):	<p>Students will:</p> <ol style="list-style-type: none"> 1. Select a horse for a particular use based on individuality, performance, and quality. 2. Discuss why conformation is more important than breed when selecting a horse. 3. Identify unsoundness and blemishes. 4. Distinguish the correctness of legs, feet, and pasterns. 5. Discuss the importance of being able to judge horses. 6. Determine the age of a particular horse based on its teeth. 7. Judge a halter class based on horse judging guidelines. 8. Judge performance classes based on judging guidelines set by official AQHA rules.
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Essential Question(s):	<p>Why is it important to know the basics of conformation when considering to purchase a horse?</p> <p>Why is it important to be able to judge horses (halter and performance)?</p>
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Content Knowledge	Suggested Instructional Activities Rigor & Relevance Framework (Quadrant)	Suggested Materials, Equipment and Technology Resources
<p>I. Conformation</p> <p>II. Determine Age of Horse</p> <p>III. Judging Halter and Performance Classes</p>	<p>PowerPoint presentations and lecture</p> <p>Judge a live halter and performance class</p> <p>Determine age of a live horse</p>	<p>Projector with laptop computer</p> <p>Instructional and information videos</p> <p>Guest speaker, certified horse judge</p> <p>Live horses</p> <p>AQHA official judging manual</p> <p>National FFA horse judging rules</p>

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Unit Assessment:	Students will determine the age of a horse based on its teeth and judge a halter and performance class according to the National FFA horse judging rules and AQHA judging guidelines.
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Unit/Course CTSO Activity:	Students will go through an official horse judging competition (2 halter classes and 2 performance).
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Unit/Course Culminating Product:	Students will orally present their equine career portfolios using visual aids.
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Course/Program Credential(s): <input type="checkbox"/> Credential <input checked="" type="checkbox"/> Certificate <input type="checkbox"/> Postsecondary Degree <input type="checkbox"/> University Degree <input type="checkbox"/> Other:
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Course Title: Equine Science

Unit 8:	Facilities and Tacking
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Content Standard(s) and Depth of Knowledge Level(s):	<p>Students will:</p> <p>16. Discuss equine barn styles and facilities.</p> <p style="padding-left: 40px;">Examples: gambrel, gable</p> <ul style="list-style-type: none"> • Identifying various tack and equipment used in the horse industry • Analyzing environmental issues to maintain and care for horses <p style="padding-left: 40px;">Examples: waste management, overgrazing</p>
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Learning Objective(s) and Depth of Knowledge Level(s):	<p>Students will:</p> <ol style="list-style-type: none"> 1. Discuss and compare building shapes. 2. Discuss and compare framing systems. 3. Describe the safety requirements for a horse facility. 4. Explain the proper dimensions and requirements of a horse stall. 5. List the materials commonly used to build a horse's stall. 6. Discuss the importance of proper ventilation in horse facilities. 7. List important pasture management practices. 8. List important stable management practices. 9. Identify proper tack and supplement equipment used in riding.
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Essential Question(s):	<p>Why should you know the different types of facilities that are used to house and train horses?</p> <p>How can you ensure that you are properly following the care and maintenance guidelines for your horse?</p>
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Content Knowledge	Suggested Instructional Activities Rigor & Relevance Framework (Quadrant)	Suggested Materials, Equipment and Technology Resources
<p>I. Barn styles</p> <p>II. Horse training facilities</p> <p>III. Pasture and facility maintenance</p>	<p>PowerPoint presentations and lecture</p> <p>Sketch a barn design.</p> <p>Tour a horse training facility.</p>	<p>Projector with laptop computer</p> <p>Instructional and information videos</p> <p>Guest, horse trainer</p> <p>Barn plan drawings</p> <p>Ag structure construction book</p>

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Unit Assessment:	Students will be given a written exam evaluating barn designs, proper training facilities, and environmental issues when caring for horses.
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Unit/Course CTSO Activity:	Students will design their own barn or training facility.
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Unit/Course Culminating Product:	Students will orally present their equine career portfolios using visual aids.
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Course/Program Credential(s): <input type="checkbox"/> Credential <input checked="" type="checkbox"/> Certificate <input type="checkbox"/> Postsecondary Degree <input type="checkbox"/> University Degree <input type="checkbox"/> Other:
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Course Title: Equine Science

Unit 8:	Facilities and Tacking
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Content Standard(s) and Depth of Knowledge Level(s):	<p>Students will:</p> <p>16. Discuss equine barn styles and facilities.</p> <p style="padding-left: 20px;">Examples: gambrel, gable</p> <ul style="list-style-type: none"> • Identifying various tack and equipment used in the horse industry • Analyzing environmental issues to maintain and care for horses <p style="padding-left: 20px;">Examples: waste management, overgrazing</p>
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Learning Objective(s) and Depth of Knowledge Level(s):	<p>Students will:</p> <ol style="list-style-type: none"> 1. Discuss and compare building shapes. 2. Discuss and compare framing systems. 3. Describe the safety requirements for a horse facility. 4. Explain the proper dimensions and requirements of a horse stall. 5. List the materials commonly used to build a horse's stall. 6. Discuss the importance of proper ventilation in horse facilities. 7. List important pasture management practices. 8. List important stable management practices. 9. Identify proper tack and supplement equipment used in riding.
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Essential Question(s):	<p>Why should you know the different types of facilities that are used to house and train horses?</p> <p>How can you ensure that you are properly following the care and maintenance guidelines for your horse?</p>
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Content Knowledge	Suggested Instructional Activities Rigor & Relevance Framework (Quadrant)	Suggested Materials, Equipment and Technology Resources
<p>I. Barn styles</p> <p>II. Horse training facilities</p> <p>III. Pasture and facility maintenance</p>	<p>PowerPoint presentations and lecture</p> <p>Sketch a barn design.</p> <p>Tour a horse training facility.</p>	<p>Projector with laptop computer</p> <p>Instructional and information videos</p> <p>Guest, horse trainer</p> <p>Barn plan drawings</p> <p>Ag structure construction book</p>

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Unit Assessment:	Students will be given a written exam evaluating barn designs, proper training facilities, and environmental issues when caring for horses.
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Unit/Course CTSO Activity:	Students will design their own barn or training facility.
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Unit/Course Culminating Product:	Students will orally present their equine career portfolios using visual aids.
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Course/Program Credential(s): <input type="checkbox"/> Credential <input checked="" type="checkbox"/> Certificate <input type="checkbox"/> Postsecondary Degree <input type="checkbox"/> University Degree <input type="checkbox"/> Other:
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