
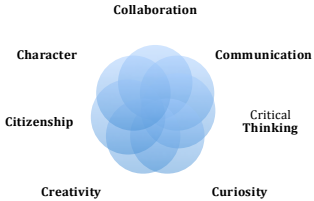


	Content Area: Agriscience DRAFT	Course: Freshman Agriscience	Grade Level: 9
	 <p>Woodbury FFA is a local chapter of the National FFA Organization and the Connecticut FFA Association</p>	R14 The Seven Cs of Learning 	
	Unit Titles	Length of Unit	
	<ul style="list-style-type: none"> ● Introduction to FFA 	4-5 weeks	
	<ul style="list-style-type: none"> ● Introduction to Tractor Driving 	4-5 weeks	
	<ul style="list-style-type: none"> ● Introduction to Agricultural Engineering 	9- 10 weeks	
	<ul style="list-style-type: none"> ● Introduction to Animal Science 	9-10 weeks	
	<ul style="list-style-type: none"> ● Introduction to Plant Science 	9-10 weeks	



Strands	Course Level Expectations
Identification and Use	Students will be able to identify and properly use or handle equipment, tools, animals and or plants safely.
Care and Management	Students will be able to properly care and manage agricultural entity.
Safety	Students will be able to work with and around all aspects of Agriscience in a safe and effective manner.
Leadership	Students will begin to develop premier leadership, personal growth and career success through agricultural education and the FFA.

Unit Title	Introduction to FFA	Length of Unit	4 - 5 weeks
Inquiry Questions (Engaging & Debatable)	<ul style="list-style-type: none"> • What is the FFA and why is it so important to our nation? • What are the components of an agricultural education program? 		
Standards	<p>Leadership Skills (LS): LS.01.01 Action: Exhibit the skills and competencies needed to achieve a desired result. LS.01.05. Awareness: Desire purposeful understanding related to professional and personal activities. LS.01.06 Continuous Improvement: Pursue learning and growth opportunities related to professional and personal aspirations. LS.02.02. Social Growth: Interact with others in a manner that respects the differences of a diverse and changing society. LS.02.03. Professional Growth: Develop awareness and apply skills necessary for achieving career success. LS.02.06. Spiritual Growth: Reflect inner strength to allow one to define personal beliefs, values, principles and sense of balance. LS.03.01. Communication: Demonstrate oral, written and verbal skills. LS.03.02.: Decision Making – Analyze situations and execute an appropriate course of action. LS.03.03. Career Exploration and Development: Understand the diversity of careers related to the agricultural industry and strategies to acquire and advance in an agricultural career.</p>		
Unit Strands & Concepts	Develop premier leadership, personal growth, and career success. Understanding the FFA Mission, Parliamentary Procedures		
Vocabulary	FFA, SAE, Classroom Instruction, Mission Statement, Motto, Creed, CDE, Degree, Membership, Emblem, Code of Ethics, Official Dress, Parliamentary Procedure.		

Unit Title	Introduction to FFA	Length of Unit	4 -5 weeks
-------------------	----------------------------	-----------------------	------------

Critical Content: My students will Know...	Key Skills: My students will be able to (Do)...
<ul style="list-style-type: none"> • what the FFA is. • the FFA Motto. • the FFA Creed. • the FFA Mission Statement. • the history of the FFA. • FFA Official Dress • Parliamentary Procedure. 	<ul style="list-style-type: none"> • describe the relationship between and importance of Supervised Agricultural Experience, FFA membership, and classroom/laboratory instruction. • present the FFA Creed. • demonstrate correct Parliamentary Procedure.

Assessments:	<ul style="list-style-type: none"> • Various formative and interim assessments. • Performance Activities: Presentation of FFA Creed
Teacher Resources:	<ul style="list-style-type: none"> ❖ The Official FFA Student Handbook ❖ Various Primary and Industry Sources including Advisory Committee Member Input.

Unit Title	Introduction to Tractor Driving and Safety	Length of Unit	4 - 5 weeks
-------------------	---	-----------------------	-------------

Inquiry Questions (Engaging & Debatable)	<ul style="list-style-type: none"> • Why is tractor safety essential? • Why are tractor adjustments important? • Why is preventative maintenance important?
Standards	<p>Power, Structural and Technical Systems (PST): PST.01.0. Apply physical science laws and principles to identify, classify and use lubricants. PST.01.02. Identify and use hand and power tools and equipment for service, construction and fabrication. PST.02. Design, operate and maintain mechanical equipment, structures, biological systems, land treatment, power and technology. PST.02.01. Perform service routines to maintain power units and equipment. PST.02.02. Operate, service and diagnose the condition of power units and equipment.</p>
Unit Strands & Concepts	Tractor types, pre-operational checks, effective communication, Tractor Controls and Instruments, Starting and Stopping Tractors, Driving Skills, Tractor Safety, Hitches, Hydraulics and PTO, Tractor Maintenance & Manual Use
Vocabulary	Garden tractor, utility tractor, compact tractor, throttle, clutch, brake, range, gear, oil pressure, hydrostatic, manual, Power take off, 3 point hitch, draw bar, cotter pin, zerk fitting

Unit Title	Introduction to Tractor Driving and Safety	Length of Unit	4 - 5 weeks
-------------------	---	-----------------------	-------------

Critical Content: My students will Know...	Key Skills: My students will be able to (Do)...
<ul style="list-style-type: none"> • lubricants by source, sustainability and equipment compatibility. • the appropriate use of tools used in agriculture mechanics. • safe tractor practices in order to prevent injury, protect equipment and environment, and increase productivity • preventative maintenance procedures 	<ul style="list-style-type: none"> • identify the safety procedures in order to operate agricultural equipment. • safely operate agricultural equipment. • operate and maintain agricultural machinery and power systems. • perform pre-operation inspection according to manufacturer's specifications and/or prevailing industry standards.

Assessments:	<ul style="list-style-type: none"> • Various formative and interim assessments. • Performance Activities: Tractor driving certificate of training: Safe Operation Check Sheet
Teacher Resources:	<ul style="list-style-type: none"> ❖ Primary and Industry Sources including Advisory Committee Member Input.

Unit Title	Introduction to Agriscience Engineering	Length of Unit	9 - 10 weeks
Inquiry Questions (Engaging & Debatable)	<ul style="list-style-type: none"> • Why is shop safety essential? • Why is preventative maintenance important? • How does precise measurement lead to a more productive engine? • How can mathematical principles be applied to construction? • How does understanding of individual welding processes increase welding technique? 		
Standards	<p>Power, Structural and Technical Systems (PST): PST.02.01. Perform service routines to maintain power units and equipment. PST.02.02. Operate, service and diagnose the condition of power units and equipment.PST.03.01. Troubleshoot and repair internal combustion engines. PST.04.02. Apply structural plans, specifications and building codes. PST.04.03. Examine structural requirements for materials and procedures and estimate construction cost. PST.04.04. Follow architectural and mechanical plans to construct and/or repair equipment, buildings and facilities.PST.05.01. Follow architectural and mechanical plans to construct and/or repair equipment, buildings and facilities.</p>		
Unit Strands & Concepts	Safety, Maintenance, and Measurement., Preventive Maintenance, Welding and Welding Techniques		
Vocabulary	Career, Associates degree, Bachelor's degree, Master's Degree, Doctorate, Power Tool , Hand Tool , Fastener, welding, lumber and wood products.		

Unit Title	Introduction to Agriscience Engineering	Length of Unit	9 - 10 weeks
-------------------	--	-----------------------	--------------

Critical Content: My students will Know...	Key Skills: My students will be able to (Do)...
<ul style="list-style-type: none"> ● organization and cleaning of shop equipment and facility ● identify fire suppression techniques. ● create a safe environment that prevents injuries, protects equipment and the environment, and increases productivity. ● measure equipment to ensures precision to the factor of one sixteenth of an inch. ● understand how welding works 	<ul style="list-style-type: none"> ● measuring distances and clearances to the one thousandths of an inch will in turn create an accurate diagnosis of repairs and parts needed. ● classify fire extinguishers. ● perform preventative maintenance, which ensures equipment longevity, decreased cost over time, and protection of equipment during seasonal changes. ● increase welding technique by decreasing porosity, creating optimal penetration, correctly balancing heat transfer and increasing overall weld quality.

Assessments:	<ul style="list-style-type: none"> • Various formative and interim assessments. • Performance Activities
Teacher Resources:	<ul style="list-style-type: none"> ❖ Primary and Industry Sources including Advisory Committee Member Input.

Unit Title	Introduction to Animal Science	Length of Unit	9 - 10 weeks
-------------------	---------------------------------------	-----------------------	--------------

Inquiry Questions (Engaging & Debatable)	<ul style="list-style-type: none"> • How can students be safe around various animal species? • What do students need to know to care for various animal species? • What do students need to manage various animal species? • Why are there different breeds of various animal species?
Standards	<p>Animal Systems (AS): AS.01.03.02.c. Select evaluate and defend the use of sustainable practices in animal agriculture. AS.02.01.02.a. Research and summarize the challenges involved in working with animals and resources available to overcome them (e.g., tools, technology, equipment, facilities, animal behavior signals, etc.) AS.02.01.01.b. Design programs that assure the welfare of animals and prevent abuse or mistreatment. AS.02.01.03.a. Distinguish between animal husbandry practices that promote animal welfare and those that do not.</p>
Unit Strands & Concepts	<p>Breed Identification, Care and Management, Safety and Handling Summarize the types, purposes, and characteristics of effective record keeping and documentation practices for animal systems enterprises (e.g., managing records for animal identification, feeding, breeding, treatment, income/expense, etc.).</p>
Vocabulary	<p>Parturition, Gestation, Castration, Bovine, Porcine, Ovine, Equine, Avian, Weaning, Crossbred, Purebred, Welfare, Humane, Fleece, Mothering, Ability, Docking, Incubation, Lactation, Pedigree</p>

Unit Title	Introduction to Animal Science	Length of Unit	9 - 10 weeks
-------------------	---------------------------------------	-----------------------	--------------

Critical Content: My students will Know...	Key Skills: My students will be able to (Do)...
<ul style="list-style-type: none"> • the similarities and differences between various breeds within species. • correct terminology associated with each species covered. • industry approved management practices to handle, care and manage horses, goats, sheep, swine, poultry, dairy cattle and beef cattle. 	<ul style="list-style-type: none"> • identify various breeds within animal species • utilize correct terminology in regards to various animal species • care for various animal species appropriately • handle various animal species appropriately and in a safe manner • manage production facilities of various animal species.

Assessments:	<ul style="list-style-type: none"> • Various formative and interim assessments. • Performance Activities
Teacher Resources:	<ul style="list-style-type: none"> ❖ Various Primary and Industry Sources including Advisory Committee Member Input.

Unit Title	Freshman Plant Science	Length of Unit	9 to 10 weeks
Inquiry Questions (Engaging & Debatable)	<ul style="list-style-type: none"> • Why do we need to know plant parts and their functions? • Why study soil? • What types of careers are available to me? 		
Standards	<p>Plant Systems (PS):</p> <p>PS.01.02: Apply knowledge of plant anatomy and the functions of plant structures to activities associated with plant systems.</p> <p>PS.01.03: Apply knowledge of plant physiology and energy conversion to plant systems.</p> <p>PS.02.02: Evaluate soil/media and prepare soil/growth media for use in plant systems.</p> <p>PS.02.03: Develop and Implement a fertilization plan for specific plants or crops.</p> <p>PS.03.01: Demonstrate plant propagation techniques.</p> <p>PS.04.01: Create designs using plants.</p> <p>PS.04.02: Determine supplies needed to create landscape designs and develop a marketing plan.</p>		
Unit Strands & Concepts	Botany, Principles of design, Landscape design, Soil fertility and drainage, floral design, horticultural tools, and greenhouse systems.		
Vocabulary	Photosynthesis, flower, stem, root, leaf, soil, media, greenhouse.		

Unit Title	Freshman Plant Science	Length of Unit	9 to 10 weeks
-------------------	-------------------------------	-----------------------	---------------

Critical Content: My students will Know...	Key Skills: My students will be able to (Do)...
<ul style="list-style-type: none"> • plant parts and their functions • principles of landscape design • soil properties and their effect on water movement. • how to identify common horticultural tools. 	<ul style="list-style-type: none"> • reproduce plants asexually (tip cuttings) • transplant seedlings. • repot or transplant plants. • safely operate a commercial walk behind mower. • collect and prepare soil sample for testing. • perform a simple soil test measuring for pH, N, P, and K.

Assessments:	<ul style="list-style-type: none"> • Various formative and interim assessments. • Performance Activities
Teacher Resources:	<ul style="list-style-type: none"> ❖ Various Primary and Industry Sources including Advisory Committee Member Input.