

Course Title:	Agriculture II
Grade(s):	10th

Course Description	
Required for all students in Grade 10 Prerequisite: Agriscience 1	Credit 1.0
This elective-driven course empowers students to architect their own academic journey through the diverse sectors of the agricultural industry. Utilizing a modular curriculum, students select a course within one of the four primary pathways of agricultural instruction: Plant Science, Animal Science, Natural Resources & Environmental Science, or Agricultural Mechanics each quarter. Throughout the year, students navigate a rigorous blend of core requirements and elective modules tailored to their specific career ambitions and agriculture interest. Beyond the laboratory, students are expected to engage in the complete agricultural education experience by assuming leadership roles within the FFA and engineering a personalized Supervised Agricultural Experience (SAE) program.	
Approved Curricular Materials/Textbook(s)	
This course utilizes a multi-dimensional approach to learning, sourcing content from a blend of foundational academic texts and real-world industry tools. By integrating diverse resources, students are exposed to the most current data, technologies, and professional standards in the field of Agriscience. Pathway-Specific Online Resources: Students leverage digital platforms such as iCEV, MyCAERT, and the National FFA AgExplorer. These resources provide interactive modules, current industry data, and virtual tours of global agricultural systems, ensuring students engage with 21st-century technological standards.	

Unit Title	Unit Description (Include Unit Objectives)	Unit Pacing
<u>Unit 1: Animal Science</u> Fitting and Showmanship:	● Animal Fitting & Showmanship ○ Students will: ■ Demonstrate safe animal handling with livestock	10 weeks each

- Students will learn how to properly fit and show animals for exhibition. Students will be able to explain the difference between fitting and showing and how these can help market an animal to the public. Veterinary Practice: - Students will investigate the basics of the veterinary industry and learn how to provide basic care as animal owners. Students will learn through labs and small animal care projects. Large Animal Production: - Students will learn through various hands-on labs in the large animal facility how to raise and work with species, including beef cattle, dairy cattle, sheep, goats, and poultry. Small Companion Animals: - In this section, students will be immersed in the small animal lab, providing care and management while also participating in other classroom lab activities to learn about domestic companion animal species. Equine Science: - This section is a jump start into the equine industry, where students will get the opportunity to participate in hands-on labs while learning about the basics of horses and other	and companion animals. ■ Identify common grooming tools and equipment for each species. ■ Describe and demonstrate proper showing techniques used to display each species. ● Veterinary Practices ○ Students will: ■ Classify veterinary roles and responsibilities. ■ Demonstrate proper health care checks. ■ Handle and restrain small animal species for various scenarios. ■ Demonstrate and explain first aid care for animals. ■ Identify, test, and evaluate types of parasites and determine next steps. ● Large Animal Production ○ Students will: ■ Use proper animal terminology. ■ Identify large animal anatomy for beef cattle, dairy cattle, sheep, goats, and poultry. ■ Perform a vitals check on each species. ■ Describe common production practices used in each industry (animal identification, newborn care, vaccinations). ● Small Companion Animals ○ Students will: ■ Demonstrate proper handling and restraint of companion species. ■ Demonstrate management techniques for small animal species. ■ Classify dog breeds and groups. ■ Demonstrate and practice dog grooming techniques. ■ Evaluate and demonstrate care and management of reptiles and amphibians. ● Equine Science ○ Students will:	
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equine species.	■ Classify types of equine, markings, colors, and patterns. ■ Calculate horse height and convert to feet and inches. ■ Demonstrate proper handling and care of the equine species. ■ Classify equine disciplines, rider equipment, and horse tack. ■ Identify and reflect on horse evolution.	
<u>Unit 2: Horticulture</u> This comprehensive Horticulture program is designed into four quarters, offering students the flexibility to engage with different facets of the industry each term. The curriculum is structured as follows: ● Turf & Landscape: Students are introduced to the turfgrass industry and master foundational landscape installation and maintenance skills. ● Floriculture: Students develop skills in post-harvest care; work with permanent botanicals to create wreaths, and design professional vase arrangements. ● Interior Landscapes: Students explore indoor horticulture by building terrariums, practicing flower pounding and pressing, and expanding their technical knowledge of indoor plant identification. ● Sustainable Agriculture: Students apply principles of sustainable and regenerative agriculture. Utilizing the	Turfgrass and Landscape Students will: ● Demonstrate technical proficiency in operating and calibrating landscape machinery and hand tools. ● Utilize botanical knowledge to identify plants, weeds, and pests while managing soil fertility and pH. ● Apply artistic principles to create floral arrangements, permanent botanicals, and interior landscapes. ● Execute the landscape design process from initial client consultation to symbolic plan drafting and plant selection. ● Practice regenerative agricultural techniques to maintain sustainable and pollinator-friendly ecosystems. ● Evaluate industry career opportunities and perform business calculations, including labor and material estimation. Floriculture Students will: ● Learn to properly condition flowers and master the usage of dried flowers and permanent botanicals. ● Understand the core principles of floral design and demonstrate the skills necessary to earn a "bow license". ● Demonstrate the ability to construct traditional wreaths and kissing balls. ● Apply technical skills to create specialized Boxwood trees and seasonal decor.	10 weeks each

Ag Extension property, they develop field skills through hands-on work with harvestable landscapes and pollinator habitats.	• Create a variety of arrangements to customer satisfaction, simulating real-world floral shop demands. Interior Plantscapes Students will: • Identify a wide variety of indoor plants by their technical and common names to expand their foundational botanical knowledge. • Apply principles of interior plantscapes to design, construct, and maintain balanced, self-sustaining terrariums. • Demonstrate proper post-harvest botanical preservation techniques, including traditional flower pressing and flower pounding methods. • Analyze the unique environmental requirements (such as light, humidity, and water conditions) needed to keep indoor foliage healthy. • Utilize proper tools and materials safely while constructing interior plant projects to meet industry-standard craftsmanship. Sustainable Agriculture Students will: • Apply the foundational principles of sustainable and regenerative agriculture to manage and improve soil and plant health. • Develop essential field and industry-relevant technical skills through regular hands-on outdoor work at the Ag Extension property. • Design, install, and maintain harvestable landscape plantings to promote sustainable Holiday sale green production and design materials for floriculture and landscaping. • Establish and manage dedicated pollinator habitats to support local biodiversity and enhance regional ecosystem health. • Evaluate the environmental impact of agricultural practices to ensure they align with sustainable land-use and green technology standards.	
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<u>Unit 3: Ag Mechanics</u> Woodworking - Builds the skill sets necessary for students to be proficient in working in the woodshop and/or construction industries. Students will practice safely utilizing a variety of power tools. Tractor Driving: - Prepares students to safely operate equipment utilized in the agricultural industries, including UTVs, skid steers, and tractors. Welding - Explores skills utilized in the welding and metal fabrication industry. Students will develop the skills necessary to lay quality beads as well as build fabrication projects.	Woodworking - Students will: - Practice general shop safety rules. - Review safe operation procedures for power drills, miter saws, band saws, table saws, routers, and hand tools. - Properly utilize appropriate fasteners. - Students will demonstrate wood finishing procedures. Tractor Driving: - Students will: - Review safety procedures when working with agricultural equipment. - Demonstrate safe operational procedures utilizing a utility vehicle and trailer. - Demonstrate safe operational procedures utilizing a skid steer and attachments. - Demonstrate safe operational procedures utilizing a tractor. Welding - Students will: - Demonstrate safety procedures and protocols in the welding shop. - Evaluate bead quality. - Practice laying SMAW beads. - Practice welding different types of joints. - Create a sheet metal box using safe metal fabrication procedures.	10 weeks each
<u>Unit 4: Food Science</u> Students will be exposed to the area of food science and the careers involved related to agriscience. Students will be working in the food lab to learn food safety and handling protocols, and culinary skills needed to work safely.	Food Science - Students will: - Identify careers in the food science industry. - Demonstrate food-safe food handling skills in the food lab. - Participate in elements of the FFA Food Science CDE.	10 weeks each

	■ Participate in the development of a new food product and create marketing and packaging. ■ Demonstrate culinary skills.	
<u>Unit 5: Natural Resources</u> Aquaculture/Marine Science: - Students will be exposed to the aquaculture/marine science industry through hands-on labs, managing the aquaculture lab, local field trips, and exploring various freshwater and saltwater species. Natural Resources: - Students will learn about the natural resources and the environment that we live in. Students will learn through hands-on labs at the extension property and local parks.	● Aquaculture/Marine Science ○ Students will: ■ Practice aqua lab maintenance procedures. ■ Explore species commonly raised within the industry. ■ Create a recirculating system utilizing appropriate equipment. ■ Explore the aquaculture industry within Connecticut. ■ Identify the different areas classified under marine science and oceanography. ■ Explore marine habitats and the species found within them. ● Natural Resources ○ Students will: ■ Explore the natural resources found in Connecticut and how to manage them. ■ Compare and contrast flora and fauna. ■ Utilize tracks and scat to identify species. ■ Develop a plan to manage watersheds.	10 weeks each