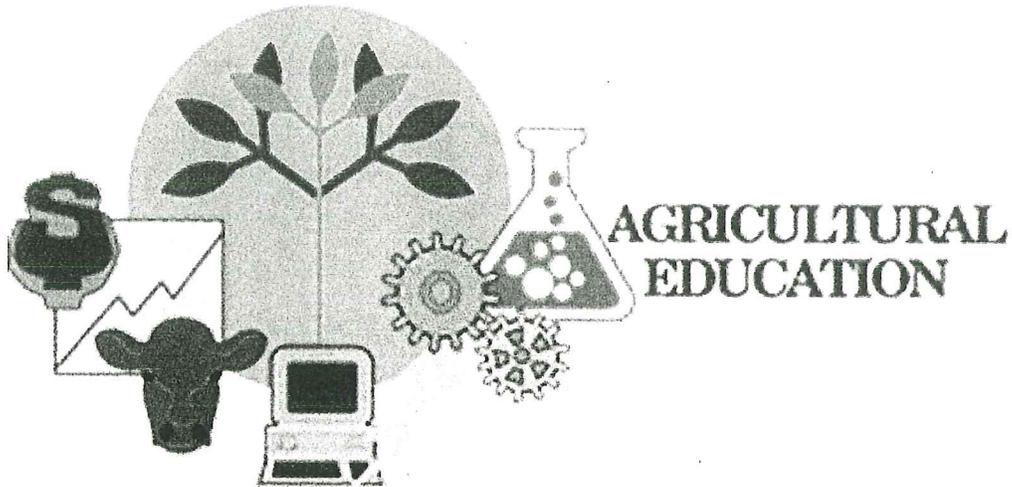


August 2

# Agriculture Curriculum



**Edgar School  
District**

## Animal Science Curriculum Map Summary

### Course Description

Introduction to the basics of livestock management will be discussed. This course includes management, nutrition, and breeding practices in a dairy operation through classroom and practical experience. Students will explore management of the Dairy herd with concentration on breed identification, reproduction, genetics, selection, calving management, and record keeping systems. This course is designed for students interested in a career involving animals both large and small animals. Emphasis is place on Dairy and dual credit can be earned through Northcentral Technical College. Time will be spent focusing on other livestock animals and the products they produce. Small animals will be discussed towards the end of the semester.

### Units of Study

- Unit 1: Nutrient Contributions of Animals
- Unit 2: Nutrition, Digestion, and Feedstuffs
- Unit 3: Animal Health
- Unit 4: Basic Animal Genetics
- Unit 5: Dairy Breed Identification
- Unit 6: Basic Bovine Reproduction
- Unit 7: Animal Husbandry
- Unit 8: Sustainable Agriculture
- Unit 9: Beef Selection, Feeding and Management
- Unit 10: Swine Selection, Feeding and Management
- Unit 11: Poultry Selection, Feeding and Management
- Unit 12: Equine Selection, Feeding and Management
- Unit 13: Small Animal Selection, Feeding and Management
- Unit 14: Meat Products Processing

## Forestry Curriculum Map Summary

### Course Description

Look around – there are trees in Wisconsin! Forestry is a natural resource that we take for granted in the community. Students will learn basic skills that a forester will need to know to manage a forest. The trips we take to the school forest is important to study and measure the trees and land that the trees are on, and witness management practices of these woodlots. Students will learn basic skills needed to manage a forest and receive training on chainsaw safety and operation. Wisconsin is a leading state in maple syrup production; emphasis will be placed on collection and production of maple syrup. Portfolio items for this class include the pictures/reflections of students completing course skills and competencies, and a tree identification project.

### Units of Study

- Unit 1: Forest History and Introduction to Forestry
- Unit 2: Dendrology/Tree ID
- Unit 3: Forest Ecosystems and Ecology
- Unit 4: Maple Syrup Production
- Unit 5: Chainsaw Safety
- Unit 6: Forest Products
- Unit 7: Forest Measurement/Timer Cruise
- Unit 8: Forest Health
- Unit 9: GPS/Orienteering

## Beginning Welding and Small Engines Curriculum Map Summary

### Course Description

This course is designed to introduce students to the basics of welding. Students will have the opportunity to practice Shielded Metal Arc Welding, Gas Metal Arc Welding, TIG welding, Flux Core, and CNC plasma cutting. There will be a component of CAD design to operate CNC equipment. This semester long course will consist of classroom instruction and individual work time. Lab time will be set aside to practice techniques learned in the classroom. Students will need to master the skills of this course to take Dual Credit Welding through Northcentral Technical College. The small engine portion of this course will study the theory of two and four stroke engines. We will cover units in troubleshooting, electrical systems, compression systems, fuel systems, ignition systems, cooling systems, measuring engine performance, tools and measuring instruments, and safety in the small gas engine shop. Students will conduct a complete teardown and rebuild of a small engine.

### Units of Study

- Unit 1: Metal Lab Safety
- Unit 2: Shielded Metal Arc Welding
- Unit 3: Gas Metal Arc Welding
- Unit 4: Flux Core Arc Welding
- Unit 5: Gas Tungsten Arc Welding
- Unit 6: Oxy Fuel Cutting
- Unit 7: CAD Drawing
- Unit 8: CNC Plasma Cutting
- Unit 9: Individualized Metal Project
- Unit 10: 4-stroke Small Engine Theory and Rebuild

## Advanced Welding Curriculum Map Summary

### Course Description

In Advanced Welding, the course will highlight the similarities in equipment and technique between the major arc welding processes. Students complete introductory level competencies in the Shielded Metal Arc Welding, Gas Metal Arc Welding, Flux Core Arc Welding, and Gas Tungsten Arc Welding processes. Material preparation skills include shearing, sawing, grinding, and thermal cutting. Once all welding competencies are met, students will earn Dual Credit in the Welding program at Northcentral Technical College. This course also features a day to job shadow professional welders at B and D Fabrication and a chance to weld alongside professionals in an industrial setting. The second half of the course centers around an individual welding project. The project is centered around the NTC welding competition. Students will create a design plan, bill of materials, cut list and create a portfolio of their work. Students are not required to enter competition, but highly encouraged to do so.

### Units of Study

- Unit 1: Metal Lab Safety
- Unit 2: Shielded Metal Arc Welding
- Unit 3: Gas Metal Arc Weldin
- Unit 4: Flux Core Arc Welding
- Unit 5: Gas Tungsten Arc Welding
- Unit 6: Individualized Metal Project and Portfolio

## Horticulture Curriculum Map Summary

### Course Description

This one semester course involves learning about many aspects of the horticulture industry, beginning from seed germination, and ranging to include the marketing and selling of mature annual plants. We start from the ground up literally learning about soil and how it affects plant growth. Time will be provided for developing lifelong skills in plant growth and maintenance. About half the class time will be spent in the school greenhouse or outside. If you do not mind getting a bit dirty from time to time, and you enjoy plants, this course is for you. If you enjoy being outdoors, then you will enjoy landscaping. Beautification of grounds and indoor landscaping will be covered in this class. The second half of the semester is spent outdoors applying landscape techniques by doing actual landscapes in the Village of Edgar. Students will use Landscape Pro CAD software.

### Units of Study

- Unit 1: Soil
- Unit 2: Plant Parts and Functions
- Unit 3: Environmental Factors and Conditions of Plant Growth
- Unit 4: Plant Propagation
- Unit 5: Media Use and Function
- Unit 6: Annual/House Plant Identification and Taxonomy
- Unit 7: Integrated Pest Management
- Unit 8: Landscape Design
- Unit 9: Pruning and Maintaining Landscape Plants
- Unit 10: Landscape Plants Identification
- Unit 11: Landscape Installation

## Curriculum Map Summary

### Course Description

This laboratory course is designed to provide students with introductory level experiences in selected major areas of agricultural mechanics technology, which may include large engine maintenance and repair, metal fabrication, electrical wiring, maintenance of tractors. Learning activities include reading manuals, researching resources, skill development and problem solving. During this course students will completely rebuild a tractor and fabricate parts to restore it. Portfolio items for this class include the pictures/reflections of students completing course skills and competencies.

### Units of Study

- Unit 1: Metal Lab Safety
- Unit 2: 4-stroke Engine Theory
- Unit 3: Manual and Reference Guides
- Unit 4: Tear down and rebuild of a 4-cylinder engine
- Unit 5: Metal Prep and Body Work
- Unit 6: Electrical Systems and Troubleshooting
- Unit 7: Engine, Transmission, and Drive Train
- Unit 8: Diesel Engine Theory and Function
- Unit 9: Engine Operation Troubleshooting
- Unit 10: Tool Identification

## Introduction to Agriculture Curriculum Map Summary

### Course Description

Introduction to Agriculture is just that, a class designed to explore the various areas in agriculture in small quantities to prepare the student for specific areas of interest. In this course we will cover Agriculture Education (what it is), the world of agriculture, Food Science, Soil Science, Plant Science, Ornamental Horticulture, Animal Science, Natural Resources, Forestry, and Agricultural Mechanics. Instruction and student learning will occur through lectures, student projects, group discussions, hands on experiences, FFA experiences, and developing an SAE program. This class will be an 18-week course.

### Units of Study

- Unit 1: Agriculture, FFA and SAE Development
- Unit 2: Agricultural Careers
- Unit 3: Forestry
- Unit 4: Horticulture
- Unit 5: Wisconsin Wildlife and Fish
- Unit 6: Renewable Energies
- Unit 7: Small Animal Production
- Unit 8: Wisconsin Agriculture Production
- Unit 9: Food Processing
- Unit 10: Basic Welding Unit