



North Polk Community Schools Pacing & Course Description Guide



Grade Level: 9-10

Content: Introduction to Agriculture

Year: 2022-2023

Course Description/Rationale

The majority of 1st semester is consumed with FFA by learning the history of the FFA, parliamentary procedure, leadership, and SAE projects. Second semester concentrates on beef production, equine science, sheep production, swine production, small animal care, wildlife management, agricultural careers, and exotic breeds of livestock. Students will be introduced to Supervised Agricultural Experience Programs (SAE) as part of their FFA experience. *Students must join 1st semester unless they have instructor approval to join at mid-year.* (2 HS credits)

Name of Unit	Time Frame	Essential Learning Target	Standard(s)
Circle of Ag Education	2 weeks	ELT 1: Production of agricultural commodities occurs within specific regions of the United States. ELT 2: The National FFA Organization offers members many opportunities to build necessary employment and life skills, such as leadership, personal character, and career options. ELT 3: Career opportunities exist in agriculture for all levels of education in the areas of production, processing, marketing, and regulation.	CS.02. Personal Growth: Develop a skill set to enhance the positive evolution of the whole person. CS. 03 Career Success: Demonstrate those qualities, attributes and skills necessary to succeed in, or further prepare for, a chosen career while effectively contributing to society. CS.05. Systems: Identify how key organizational structures and processes affect organizational performance and the quality of products and services. CS.08 Technical Skills: Use tools, equipment, machinery and technology

			appropriate to work within areas related to AFNR. NRS.01. Explain interrelationships between natural resources and humans necessary to conduct management activities in natural environments.
Communicating Today	2 weeks	EL1: Demonstrate verbal and non-verbal forms of communication. EL2: Display effective public speaking characteristics. EL3: Work collaboratively to complete team goals.	CS.01 Premier Leadership: Acquire the skills necessary to positively influence others. CS.02. Personal Growth: Develop a skill set to enhance the positive evolution of the whole person. CS. 03 Career Success: Demonstrate those qualities, attributes and skills necessary to succeed in, or further prepare for, a chosen career while effectively contributing to society. CS. 04 Systems: Examine roles within teams, work units, departments, organizations, inter-organizational systems, and the larger environment.

Science of Agriculture	3 weeks	ES.1 Practice proper safety in the laboratory. ES.2 Use equipment appropriately to collect accurate data in an experiment. ES.3 Determine the effect of pH on various living organisms. ES.4 Identify characteristics to determine soil quality. ES.5 Investigate how pollution affects water quality.	CS.01 Premier Leadership: Acquire the skills necessary to positively influence others. CS.02. Personal Growth: Develop a skill set to enhance the positive evolution of the whole person. CS. 03 Career Success: Demonstrate those qualities, attributes and skills necessary to succeed in, or further prepare for, a chosen career while effectively contributing to society. CS. 04 Systems: Examine roles within teams, work units, departments, organizations, inter-organizational systems, and the larger environment. CS. 07 Safety, Health, and Environmental: Demonstrate appropriate health and safety procedures for AFNR occupations. CS. 08 Technical Skills: Use tools, equipment, machinery and technology appropriate to work within areas related to AFNR.
-------------------------------	----------------	---	--

			CS. 11 Scientific Inquiry: Utilize scientific inquiry as an investigative method. PS.02 Prepare and implement a plant management plan that addresses the influence of environmental factors, nutrients, and soil on plant growth. NRS.01 Explain interrelationships between natural resources and humans necessary to conduct management activities in natural environments. NRS.02 Apply scientific principles to natural resource management activities.
Natural Resources	6 weeks	ELT1: Investigate the effects organic matter has on soil porosity and soil air holding capacity. ELT2: Test soil permeability to understand the relationship between soil particle size and rate of water filtration. ELT3: Determine the spread of pollution from point and nonpoint sources. ELT4: Conduct an experiment to determine the interdependence of plants and animals.	- CRP.02.01: Use strategic thinking to connect and apply academic learning, knowledge and skills to solve problems in the workplace and community. - CRP.05.01:

			Assess, identify and synthesize the information and resources needed to make decisions that positively impact the workplace and community. • AG.6.2: Explain the interconnectedness of systems within AFNR. • AG-PL 1.2: Evaluate soil/media nutrients using tests of appropriate materials and/or by examining data. • AG-NR 2.1: Examine natural resource topics using science
--	--	--	---

			concepts, processes, and research techniques.
Plants and Animals	9 weeks	ELT 1: Identify and label the parts of a cell including each cell organelle function. ELT2: Conduct a germination trial to determine the germination rate of bean seeds. ELT3: Design and conduct an inquiry experiment on one environmental factor to investigate the optimal growth range for a plant. ELT4: Make decisions based on given priorities and criteria, and analyze objects as they compare ideal criteria. ELT5: Classify feedstuffs according to their nutrient value. ELT6: Solve a problem related to foodborne illness outbreak.	- CRP.04.02: Produce clear, reasoned and coherent written and visual communication in formal and informal settings. - AG-ANI 1.1: Explain the variety and scope of managed animal systems in the United States and around the world including: livestock, poultry, aquaculture, companion animals, zoo animals and exotic animals.

- AG-ANI 3.2: Assess whether the nutritional requirements of a given animal are being met by recording performance and comparing feed variations.

- AG-ANI 6.3: Explain how the components and systems of animal anatomy and physiology relate to the production and use of animals.

- AG-PL 2.3: Apply knowledge of plant anatomy and plant structures to plant systems activities.

- AG-PL

			1.3: Determine the influence of environmental factors on plants.
--	--	--	---

Ag Power and Technology	6 weeks	ELT1: Compare the energy content of two common fuels used for energy production. ELT2: Discuss issues pertaining to zoning and land use and present a persuasive debate at a mock town hall meeting. ELT3: Develop complete project plans for a birdhouse including researching the needs of the bird, designing, sketching, drawing, writing directions, and estimating a bill of materials.	• CRP.07.01: Select and implement reliable research processes and methods to generate data for decision-making in the workplace and community. • AG-PST 1.1: Select energy sources for power generation. • AG-PST 5.3 Use geospatial technologies in AFNR applications.
-------------------------	---------	--	---

			- AG-PST 4.4: Follow architectural and mechanical plans to construct AFNR structures. - CRP.02.02: Use strategic thinking to connect and apply technical concepts to solve problems in the workplace and community.
Looking Ahead	3 weeks	EL1: Write a vision statement and develop personal goals.	CRP.10.01: Identify career opportunities within a career cluster that match personal interests, talents, goals and preferences.
			CRP.10.04: Identify, prepare, update and improve the tools and skills

			necessary to pursue a chosen career path.
--	--	--	---