

**Campbell County School District #1
Gillette, Wyoming**

**VOCATIONAL AGRICULTURE
AGROECOLOGY**

Agro Ecology offers students the chance to become more aware of agriculture and its relationship to the environment. Plant science, soil science, water quality, and range management will be the main focus.

VA-VA-01 AGROECOLOGY (Content Standard)

C - Critical--Assessment Reporting Required

State Standard and Benchmark Correlation:

- CV11.1.3 Management of Time, Materials, Resources
- CV11.2.1 Diversity in the Workplace
- CV11.2.4 Demonstrate/Teach Learned Skills
- CV11.3.1 Acquire/Evaluate Workplace Information
- CV11.3.2 Organize/Update Workplace Information
- CV11.4.1 Quality and Performance of Systems
- CV11.4.2 Modifications of Systems; Alternate Systems
- CV11.5.1 Choose/Use Procedures/Tools/Equipment/Technology
- CV11.5.2 Setup, Operation, Maintenance of Equipment
- CV11.5.3 Workplace Equipment to Solve Problems
- CV11.5.4 Apply Safe and Ethical Practices
- CV11.6.2 Locate/Interpret Career Information, Labor Trends

Students will demonstrate knowledge and understanding of plant science, wildlife management, and environmental science.

VA-VA-01-01 - Plant Growth and Reproduction (Objective)

C-CS - Critical-Assessment at Content Standard

Students will understand the different methods of plant reproduction and what plants need for growth.

VA-VA-01-02 - Introduction to Range Management (Objective)

C-CS - Critical-Assessment at Content Standard

Students will know and understand the terms and definitions used in range management.

VA-VA-01-03 - Pasture and Range Management (Objective)

C-CS - Critical-Assessment at Content Standard

Students will understand the problems involved with managing rangeland.

VA-VA-01-04 - Soils (Objective)

C-CS - Critical-Assessment at Content Standard

Students will have an understanding of the importance and physical properties of soil.

VA-VA-01-05 - Chemicals (Objective)

C-CS - Critical-Assessment at Content Standard

Students will gain general pesticide information. They will interpret pesticide labels and safe handling instructions.

VA-VA-01-06 - Horticulture (Objective)

C-CS - Critical-Assessment at Content Standard

Students will research career opportunities in horticulture.

VA-VA-01-07 - Environmental Science (Objective)

C-CS - Critical-Assessment at Content Standard

Students will identify environmental issues and analyze the environment.

VA-VA-01-08 - Wildlife Management (Objective)

C-CS - Critical-Assessment at Content Standard

Students will learn the importance of managing wildlife.

VA-VA-01-09 - Careers Exploration (Objective)

C-CS - Critical-Assessment at Content Standard

Students will research careers that are related to the environment or agriculture.

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VOCATIONAL/AGRICULTURE
AGRI-SCIENCE I

Introduction to Vocational Agricultural Science emphasizes the fundamentals of animal science, crop science, FFA, and basic skills in arc and gas welding. Students are required to furnish coveralls and gloves for shop. Students are encouraged to join FFA.

VA-AG-01 LIVESTOCK SCIENCE (Content Standard)

C - Critical--Assessment Reporting Required

State Standard and Benchmark Correlation:

CV11.4.1 Quality and Performance of Systems

CV11.5.1 Choose and Use Procedures, Tools, Equipment

CV11.5.3 Workplace Equipment to Solve Problems

Students will learn about animal science.

VA-AG-01-01 - Beef Cattle Science (Objective)

C-CS - Critical-Assessment at Content Standard

Students will become familiar with the different breeds of cattle and their respective origins and characteristics. Students will know the different types of beef enterprises and will understand how an individual might become established in the beef industry.

VA-AG-01-02 - Horse Science (Objective)

C-CS - Critical-Assessment at Content Standard

Students will know terms used in the horse industry and be familiar with the different types of horse enterprises. Students will understand how an individual might become established in the horse industry.

VA-AG-01-03 - Sheep and Wool Science (Objective)

C-CS - Critical-Assessment at Content Standard

Students will know the terms used in the sheep industry and be familiar with the different types of sheep enterprises. Students will understand how an individual might become established in the sheep industry.

VA-AG-01-04 - Swine Science (Objective)

C-CS - Critical-Assessment at Content Standard

Students will know terms used in the swine industry and be familiar with the different types of swine enterprises. Students will understand how an individual might become established in the swine industry.

VA-AG-01-05 - Poultry Science (Objective)

S - Supporting

Students will know terms used in the poultry industry and be familiar with the different types of poultry enterprises. Students will understand how an individual might become established in the poultry industry.

VA-AG-01-06 - Dairy Science (Objective)

S - Supporting

Students will know terms used in the dairy industry and be familiar with the different types of dairy enterprises. Students will understand how an individual might become established in the dairy industry.

VA-AG-02 AG TECHNOLOGY (Content Standard)

State Standard and Benchmark Correlation:

CV11.3.3 Interpret/Communicate Workplace Information

CV11.4.1 Quality and Performance of Systems

CV11.5.1 Choose/Use Procedures/Tools/Equipment/Technology

CV11.5.2 Setup, Operation, Maintenance of Equipment

CV11.5.3 Workplace Equipment to Solve Problems

CV11.5.4 Apply Safe and Ethical Practices

Students will learn about shop safety, tools, and welding and cutting methods.

VA-AG-02-01 - Shop Safety (Objective)

C-CS - Critical-Assessment at Content Standard

Students will pass a safety test with a 100% before entering the shop.

VA-AG-02-02 - Gas Welding and Cutting (Objective)

C-CS - Critical-Assessment at Content Standard

Students will:

- know and follow all safety rules.
- know the correct and safe way to handle a cutting torch.
- know the correct way to run a bead.
- understand the working principles of a gas welder.
- successfully complete a series of gas welds.

VA-AG-02-03 - Tools and Materials (Objective)

C-CS - Critical-Assessment at Content Standard

Students will identify hand and power tools, and they will use proper materials in the shop.

VA-AG-02-04 - MIG Welding (Objective)

C-CS - Critical-Assessment at Content Standard

Students will know the working principles of a MIG welder and the correct procedure for running a MIG welder. Students will demonstrate and follow all safety rules, and they will successfully complete a series of mig welds.

VA-AG-02-05 - Arc Welding (Objective)

C-CS - Critical-Assessment at Content Standard

Students will know the working principles of arc welding and the correct procedure for running an arc welder. They will correctly identify the various electrodes and demonstrate and follow all safety rules. Students will successfully complete a series of arc welds.

VA-AG-03 FFA (Content Standard)

C - Critical--Assessment Reporting Required

State Standard and Benchmark Correlation:

CV11.1.1 Prepare/Analyze Personal Financial Information

CV11.2.3 Leadership to Accomplish Group Goals

CV11.5.3 Workplace Equipment to Solve Problems

Students will be introduced to the FFA organization, procedures, and record keeping.

VA-AG-03-01 - FFA Organization (Objective)

C-CS - Critical-Assessment at Content Standard

Students will understand the FFA organization and learn the history of the FFA. They will memorize and recite the FFA Creed.

VA-AG-03-02 - Parliamentary Procedure (Objective)

C-CS - Critical-Assessment at Content Standard

Students will understand the different types of motions and their precedence, and they will know how to present a motion and how to conduct a meeting.

VA-AG-03-03 - SAEP - Basic Record-Keeping and Computer Skills (Objective)

C-CS - Critical-Assessment at Content Standard

Students will understand basic record keeping skills. They will keep an FFA record book and become familiar with agricultural projects and experience.

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**Campbell County School District #1
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**VOCATIONAL AGRICULTURE
AG MECHANICS**

Ag Mechanics I emphasizes fundamentals in concrete, hydraulics, welding, and electrical skills. Time is spent in shop on more technical skills and in building projects which are student- and instructor-selected.

Prerequisite: Ag I, safety test must be passed with 100% accuracy, instructor recommendation

VA-AM-01 AG FABRICATION (Content Standard)

C - Critical--Assessment Reporting Required

State Standard and Benchmark Correlation:

- CV11.1.2 Assess Individual Skills, Evaluate Performance
- CV11.1.3 Management of Time, Materials, Resources
- CV11.2.1 Diversity in the Workplace
- CV11.2.4 Demonstrate/Teach Learned Skills
- CV11.5.1 Choose/Use Procedures/Tools/Equipment/Technology
- CV11.5.2 Setup, Operation, Maintenance of Equipment
- CV11.5.3 Workplace Equipment to Solve Problems
- CV11.5.4 Apply Safe and Ethical Practices
- CV11.6.1 Identify/Assess Personal Ability/Interests/Values
- CV11.6.2 Locate/Interpret Career Information, Labor Trends
- CV11.6.4 Skills to Find, Acquire, Keep, Change Jobs

Students will understand ag mechanics and technology.

VA-AM-01-01 - Review Shop Safety (Objective)

C-CS - Critical-Assessment at Content Standard

Students will pass the safety test with a score of 100% before going to the shop.

VA-AM-01-02 - First Aid (Objective)

C-CS - Critical-Assessment at Content Standard

Students will become familiar with first aid procedures to follow when working in the shop.

VA-AM-01-03 - Planning a Farm Shop (Objective)

S - Supporting

Students will know the factors involved in planning a farm shop; they will know how to plan utilities for a shop.

VA-AM-01-04 - Becoming Acquainted With Hydraulics (Objective)

C-CS - Critical-Assessment at Content Standard

Students will understand the terms and tools used when working with hydraulics and hydraulic equipment.

VA-AM-01-05 - Agricultural Plumbing (Objective)

C-CS - Critical-Assessment at Content Standard

Students will understand the tools and equipment used when plumbing.

VA-AM-01-06 - Small Wood or Metal Project Construction (Objective)

S - Supporting

Students will be able to construct a small wood or metal project.

VA-AM-01-07 - Ag Electrification (Objective)

C-CS - Critical-Assessment at Content Standard

Students will be familiar with the basics of electricity and the safety rules to follow when wiring.

VA-AM-01-08 - Career Exploration (Objective)

C-CS - Critical-Assessment at Content Standard

Students will complete an interest questionnaire program and research a career that interests them.

VA-AM-01-09 - Small Engines (Objective)

S - Supporting

Students will be familiar with the functions and the structure of an internal combustion engine.

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VOCATIONAL AGRICULTURE ANIMAL SCIENCE I

Animal Science I emphasizes selection, health care, feeds and feeding, and management of livestock, horses, and companion animals.

VA-A1-01 ANIMAL SCIENCE (Content Standard)

C - Critical--Assessment Reporting Required

State Standard and Benchmark Correlation:

- CV11.2.2 Communication in the Workplace
- CV11.2.3 Leadership to Accomplish Group Goals
- CV11.2.4 Demonstrate/Teach Learned Skills
- CV11.3.4 Computers to Process Workplace Information
- CV11.4.1 Quality and Performance of Systems
- CV11.5.2 Setup, Operation, Maintenance of Equipment
- CV11.5.4 Safe and Ethical Practices
- CV11.6.1 Identify/Assess Personal Ability/Interests/Values
- CV11.6.3 Create, Evaluate, Revise Career Plans

Students will study various facets of animal science.

VA-A1-01-01 - Livestock Evaluation (Objective)

C-CS - Critical-Assessment at Content Standard

Students will:

- identify the body parts of beef, sheep, and swine
- know the market grades of beef, sheep, and swine
- understand the major and minor points of selecting breeding and marketing animals
- know the correct format for giving oral reasons

VA-A1-01-02 - Using Performance Data and EPD's (Objective)

C-CS - Critical-Assessment at Content Standard

Students will interpret given scenarios, identify the important criteria, and analyze the given data correctly.

VA-A1-01-03 - Breeding and Improving Beef, Sheep, Swine (Objective)

C-CS - Critical-Assessment at Content Standard

Students will understand the factors used when selecting breeding stock. They will be familiar with the breeding systems used for beef cattle, sheep, and swine. Students will have a basic knowledge of how to care for breeding animals.

VA-A1-01-04 - Feeds and Feeding (Objective)

C-CS - Critical-Assessment at Content Standard

Students will be introduced to balancing rations and nutrition requirements of livestock to maximize health and growth of market and breeding animals.

VA-A1-01-05 - Marketing Livestock (Objective)

C-CS - Critical-Assessment at Content Standard

Students will know the market classes and grades of the livestock classes. They will understand the best time to market the various species of livestock and will know market terms and costs of marketing.

VA-A1-01-06 - Meats (Objective)

C-CS - Critical-Assessment at Content Standard

Students will identify wholesale and retail cuts of meat along with learning about judging, evaluating, and grading beef, pork, and lamb.

VA-A1-01-07 - Fitting and Showing (Objective)

C-CS - Critical-Assessment at Content Standard

Students will learn the most current techniques in fitting an animal for the show ring. Students will learn how showmanship makes a difference in the appearance of an animal.

VA-A1-01-08 - Grading Wool (Objective)

C-CS - Critical-Assessment at Content Standard

Students will understand the importance of grading wool. They will also know the wool grading standards and how the grades influence imports into our country along with how the wool is used.

VA-A1-01-09 - Equine Management (Objective)

C-CS - Critical-Assessment at Content Standard

Students will have knowledge of:

- evaluation at halter and performance
- yearly calendar of management
- feeds and feeding
- health and hoof care

VA-A1-01-10 - Animal Welfare (Objective)

C-CS - Critical-Assessment at Content Standard

Students will learn the different animal activist associations and their purposes along with having the knowledge when confronted by an activist.

VA-A1-01-11 - Small Animal Care (Objective)

C-CS - Critical-Assessment at Content Standard

Students will understand the proper care and health requirements for small animals along with researching breeds of dogs and their history.

VA-A1-01-12 - Public Speaking (Objective)

C-CS - Critical-Assessment at Content Standard

Students will understand the importance of public speaking. They will research, prepare, and deliver a five- to seven-minute speech.

VA-A1-01-13 - Careers Exploration (Objective)

C-CS - Critical-Assessment at Content Standard

Students will complete an interest questionnaire and research a career that interests them.

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VOCATIONAL AGRICULTURE ANIMAL SCIENCE II

Animal Science II emphasizes livestock production and horse care and management. Specific topics will include artificial insemination, embryo transfer, nutrition, and anatomy of beef, sheep, swine, and horses.

Prerequisite: Ag I, Animal Science I

VA-A2-01 ANIMAL SCIENCE (Content Standard)

C - Critical--Assessment Reporting Required

State Standard and Benchmark Correlation:

CV11.1.1 Personal Finances

CV11.1.3 Management of Resources

CV11.3.1 Acquire/Evaluate Workplace Information

CV11.3.3 Interpret/Communicate Workplace Information

CV11.3.4 Computers to Process Workplace Information

CV11.5.1 Choose and Use Procedures, Tools, Equipment

CV11.5.3 Workplace Equipment to Solve Problems

Students will study various aspects of animal science.

VA-A2-01-01 - Basic Anatomy of Cattle, Sheep, Swine (Objective)

C-CS - Critical-Assessment at Content Standard

Students will have a basic knowledge of the anatomy of cattle, sheep, and swine.

VA-A2-01-02 - Artificial Insemination (Objective)

C-CS - Critical-Assessment at Content Standard

Students will understand the advantages and disadvantages of artificial insemination and will know about the AI process. They will learn about the reproduction cycles of cattle, sheep, and swine.

VA-A2-01-03 - Embryo Transfer (Objective)

C-CS - Critical-Assessment at Content Standard

Students will understand the advantages and disadvantages of embryo transfer. They will be familiar with the procedure for beef cattle.

VA-A2-01-04 - Semen Collection, Testing, and Storage (Objective)

C-CS - Critical-Assessment at Content Standard

Students will know how to collect semen, test for fertility, and proper storage.

VA-A2-01-05 - Parasitology and Diseases (Objective)

C-CS - Critical-Assessment at Content Standard

Students will know how to prevent disease, identify symptoms, and treat for disease and parasites.

VA-A2-01-06 - Pregnancy Testing (Objective)

C-CS - Critical-Assessment at Content Standard

Students will know the importance of pregnancy testing and when to pregnancy test cows, ewes, and sows. Students will become acquainted with the procedure for pregnancy testing.

VA-A2-01-07 - Genetics and Genetic Engineering (Objective)

C-CS - Critical-Assessment at Content Standard

Students will become familiar with genetic terms and understand dominant and recessive characteristics. Students will know how to improve livestock through genetic selection.

VA-A2-02 CAREERS, PUBLIC SPEAKING, RECORD KEEPING (Content Standard)

C - Critical--Assessment Reporting Required

State Standard and Benchmark Correlation:

CV11.6.4 Skills to Find, Acquire, Keep, Change Jobs

Students will become familiar with animal science careers, public speaking, and record keeping.

VA-A2-02-01 - Careers Exploriation (Objective)

C-CS - Critical-Assessment at Content Standard

Students will know how to seek and apply for a job, and they will learn important traits needed to maintain employment.

VA-A2-02-02 - Public Speaking (Objective)

C-CS - Critical-Assessment at Content Standard

Students will understand the purpose of public speaking. Students will prepare and deliver a five- to seven-minute speech.

VA-A2-02-03 - Record Keeping (Objective)

C-CS - Critical-Assessment at Content Standard

Students will close out the record books to determine where they make or lose money.

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VOCATIONAL AGRICULTURE - AG BUSINESS

Ag Business emphasizes planning livestock facilities, insurance, equipment financing, record keeping, and ag law. Career exploration and self employment opportunities will be searched.

VA-AB-01 AGRICULTURE AS A BUSINESS (Content Standard)

C - Critical--Assessment Reporting Required

State Standard and Benchmark Correlation:

- CV11.1.1 Personal Finances
- CV11.1.3 Management of Resources
- CV11.2.2 Communication in the Workplace
- CV11.2.3 Leadership to Accomplish Group Goals
- CV11.2.4 Demonstrate/Teach Learned Skills
- CV11.3.1 Acquire/Evaluate Workplace Information
- CV11.3.2 Organize/Update Workplace Information
- CV11.3.3 Interpret/Communicate Workplace Information
- CV11.3.4 Computers to Process Workplace Information
- CV11.4.1 Quality and Performance of Systems
- CV11.5.1 Choose and Use Procedures, Tools, Equipment
- CV11.5.2 Setup, Operation, Maintenance of Equipment
- CV11.5.3 Workplace Equipment to Solve Problems
- CV11.5.4 Apply Safe and Ethical Practices
- CV11.6.2 Locate/Interpret Career Information, Labor Trends
- CV11.6.3 Create, Evaluate, Revise Career Plans
- CV11.6.4 Skills to Find, Acquire, Keep, Change Jobs

Students will study agriculture as a business.

VA-AB-01-01 - Size and Scope of Ag Business (Objective)

Students will be able to define as ag business and understand how it relates to the economics, science, technology, management, finance, and marketing of the food and fiber industry.

VA-AB-01-02 - Computerized Record Keeping (Objective)

Students will be familiar with some computerized record keeping software program available along with gaining basic computer skills developing their own simple record keeping systems with Microsoft Excel.

VA-AB-01-03 - Career Exploration (Objective)

Students will complete an interest questionnaire program and research careers available in ag business.

VA-AB-01-04 - Structure of Business Organization (Objective)

Business structures determine how the business will operate. The most common forms of businesses are sole proprietorship, partnership, corporation, S corporation, and Limited Liability Company (LLC). Students will study advantages and disadvantages of each type.

VA-AB-01-05 - Record Keeping (Objective)

Students will close out their personal record books to determine where they make or lose money.

VA-AB-01-06 - Developing Resumes and Portfolios (Objective)

Students will have knowledge relating to the general outline and contents of a resume, develop a personal resume and perceive how well designed and kept portfolios may help support applications and gain employment.

VA-AB-01-07 - Net Worth Statements (Objective)

Students will learn to recognize assets and liabilities and how to develop a Net Worth Statement related to personal and business needs.

VA-AB-01-08 - Income Statements (Objective)

Identifying receipts, fixed expenses, variable expenses and finding the Net Income of a personal operation or farm will be essential to developing Income Statements.

VA-AB-01-09 - Budgeting (Objective)

Developing a budget and understanding the pros and cons of the process will encourage students to plan ahead when making financial decisions. They will also understand how to develop and use enterprise budgets, partial budgets and whole budgets.

VA-AB-01-10 - Cost and Return Analysis (Objective)

Students will look at how to find the most efficient amount of inputs for producing an output. They will be able to identify and develop a production function graph.

VA-AB-01-11 - Cash Flow (Objective)

Learners will develop cash flow charts utilizing information related to income, expenses, operating loans, interest and every day transactions of a business and how to interpret the completed spreadsheet.

VA-AB-01-12 - Planning Livestock Facilities and a Farmstead (Objective)

Students will understand basic space requirements for livestock along with studying sensible ways to efficiently move, handle and process a number of domestic livestock. They will design facilities and utilize their knowledge to develop a practical plan for livestock facilities.

