

**STATE OF WYOMING**  
**AGRICULTURE & NATURAL RESOURCES CLUSTER AND**  
**NATURAL RESOURCE MANAGEMENT PATHWAY COMPETENCIES**

**AGRICULTURE COMPETENCIES**

***Cluster Level Core Competencies & Objectives***

**COMPETENCY**

**AS1**            **Students will demonstrate knowledge of impacts of agriculture on society.**

**OBJECTIVES**

AS1-1            Students will identify careers in agriculture/ industries

- Identify occupations in agriculture
- Identify individual agriculture career interests

AS1-2            Students will recognize the role of agriculture in society

- Trace major changes and accomplishments in the history of agriculture
- Analyze the importance of agriculture to society
- Demonstrate understanding of the scope of world agricultural production
- Describe the role of consumers in world agriculture systems
- Describe the use of science and technology in world food and fiber production

**COMPETENCY**

**AS2**            **Students will demonstrate written and verbal communication skills.**

**OBJECTIVES**

AS2-1            Students will demonstrate public speaking skills

- Demonstrate effective speaking techniques
- Organize and present a persuasive message

AS2-2            Students will read, comprehend, and interpret technical materials/publications

AS2-3            Students will produce

- Technical report/research paper
- Resume, letter of job application, cover letter application, cover letter and/or job application form

### **COMPETENCY**

**AS3**            **Students will demonstrate an understanding of agribusiness principles and skills.**

#### **OBJECTIVES**

- AS3-1            Students will describe personal finance management
- Demonstrate the components of personal finances and goal making
  - Distinguish the pros and cons of borrowing money
  - Identify sources of credit.
- AS3-2            Students will maintain and complete a set of financial records based on a Supervised Agricultural Experience Project (SAE) or a simulated class activity
- AS3-3            Students will explain keeping and using records in agricultural occupations
- Explain the purpose of record keeping
  - Complete a balance sheet
  - Demonstrate understanding of cash flow, income statements, and computerized record keeping

### **COMPETENCY**

**AS4**            **Students will demonstrate understanding of applied sciences in agriculture.**

#### **OBJECTIVES**

- AS4-1            Students will describe how the scientific method is used in agricultural research
- AS4-2            Students will explain the steps of the scientific method

### **COMPETENCY**

**AS5**            **Students will demonstrate understanding of the Future Farmers of America (FFA) organization.**

#### **OBJECTIVES**

- AS5-1            History and membership of FFA
- AS5-2            Parliamentary procedure
- AS5-3            Identify opportunities through FFA
- AS5-4            Demonstrate leadership, citizenship, and cooperation skills

## Agriculture & Natural Resources Cluster

### NATURAL RESOURCE MANAGEMENT PATHWAY

#### *Pathway Core Competencies & Objectives*

#### COMPETENCY

**ASNRM1**      **Students will demonstrate an understanding of natural resource management.**

#### OBJECTIVES

- ASNRM1-1      Students will explore natural resources
- Identify types of natural resources
  - Distinguish between renewable and nonrenewable resources.
- ASNRM1-2      Students will examine the relationship between natural resources and society, including conflict management
- Define natural resource management
  - Identify and compare major natural resource management agencies and companies
  - Investigate applicable acts and laws pertaining to natural resources
  - Describe human demands on natural resources
- ASNRM1-3      Students will demonstrate an understanding of water resources, watersheds and management
- Explain the water cycle
  - Determine water usage and conservation
  - Identify water sources and quality standards
  - Conduct water quality tests
  - Explain water distribution and regulation
  - Identify the importance of wetlands
- ASNRM1-4      Students will demonstrate an understanding of fisheries/wildlife resources and management
- Describe the food chain and natural selection
  - Define, recognize the importance of, and understand management of fish and wildlife habitat
  - Identify game animals and their respective food webs
  - Analyze and interpret endangered species
- ASNRM1-5      Students will demonstrate an understanding of forest resources and management
- Describe forest ecology and the importance of forests
  - Explain the role of fire in forest management
  - Examine reforestation practices.

- ASNRM1-6 Students will demonstrate an understanding of recreation and resources management
- Identify and explore outdoor recreational enterprises
  - Compare various recreational uses of the region
  - Investigate the economic and environmental impact of the outdoor recreation industry
- ASNRM1-7 Students will assess soil resources and management
- Explain the importance of soil
  - Describe soil texture, structure, and profile
  - Describe soil erosion and management practices
- ASNRM1-8 Students will demonstrate understanding of land classification, planning inventory, and monitoring methods
- Students will describe the interrelationships between land use planning and natural resources
  - Students will demonstrate how GIS applies to land use planning
  - Students will develop a basic plan for monitoring a natural resource project

**COMPETENCY**

**ASNRM2 Students will analyze waste generation, waste reduction, disposal and impacts.**

**OBJECTIVES**

- ASNRM2-1 Students will compare and contrast waste disposal methods
- ASNRM2-2 Students will assess agriculture’s impact on the environment through waste generation (i.e., animal waste, pesticide residue, fertilizer runoff, sedimentation/erosion, and odors/dust)

**COMPETENCY**

**ASNRM3 Students will demonstrate an understanding of range resources and management.**

**OBJECTIVES**

- ASNRM3-1 Students will evaluate range management systems, economics, and improvement techniques
- ASNRM3-2 Students will evaluate
- Livestock use of rangeland
  - Wildlife use of rangeland
  - Range plant succession

**COMPETENCY**

**ASNRM4      Students will understand ecology, ecosystems, and biomes.**

**OBJECTIVES**

- ASNRM4-1      Students will define concepts (i.e. communities, ecosystems, population ecology, food web, homeostasis, and succession)
- ASNRM4-2      Students will identify biomes and explain ecosystem diversity
- ASNRM4-3      Students will use research methodologies to investigate an ecological problem

**COMPETENCY**

**ASNRM5      Students will demonstrate an understanding of air resources and management.**

**OBJECTIVES**

- ASNRM5-1      Students will describe the effects of air pollution on people and their environment
- ASNRM5-2      Students will assess methods of controlling air pollution