

**STATE OF WYOMING**  
**AGRICULTURE & NATURAL RESOURCES CLUSTER AND**  
**ANIMAL SCIENCE 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

### ANIMAL SCIENCE PATHWAY

#### *Pathway Core Competencies & Objectives*

##### COMPETENCY

**ASAS1**      **Students will understand animal anatomy, physiology, and health of domesticated animals.**

##### OBJECTIVES

- ASAS1-1      Students will understand the major internal body systems
- ASAS1-2      Students will identify the external anatomy of each species of livestock
- ASAS1-3      Students will describe the role of bacteria, fungi, viruses, genetics, and nutrition in disease
- ASAS1-4      Students will explain vital signs and normal behavior
- ASAS1-5      Students will identify management methods of control, treatment and prevention for disease and parasites.
- ASAS1-6      Students will identify appropriate tools and equipment

##### COMPETENCY

**ASAS2**      **Students will explain animal genetics and reproduction.**

##### OBJECTIVES

- ASAS2-1      Students will identify the anatomy and exhibit knowledge of physiology of the reproductive system
- ASAS2-2      Students will explain the uses of genetic selection in animal agriculture
- ASAS2-3      Students will list and describe systems of animal breeding
- ASAS2-4      Students will explain current technologies in animal reproduction

## **COMPETENCY**

**ASAS3 Student will identify current topics and career opportunities and animal science.**

### **OBJECTIVES**

- ASAS3-1 Students will identify current topics in animal science
- Identify the legal aspects of animal welfare and animal rights
  - Discuss ethical issues in modern biotechnology
- ASAS3-2 Students will appraise career opportunities in animal science
- Use available handbooks, career information, and computerized career information delivery systems to aid career exploration or to formulate tentative career choices
  - Match interests and aptitudes to an occupational area
  - Identify the skills, education and preparation needed for an occupational area

## **COMPETENCY**

**ASAS4 Students will demonstrate management practices for specific species of animals.**

### **OBJECTIVES**

- ASAS4-1 Students will analyze importance of the industry
- ASAS4-2 Students will demonstrate knowledge of management principles
- ASAS4-3 Students will evaluate and select depending on intended use
- ASAS4-4 Students will identify the nutritional requirements
- ASAS4-5 Students will demonstrate an understanding of fitting and showing techniques
- ASAS4-6 Students will demonstrate an understanding of safety around livestock

## **COMPETENCY**

**ASAS5 Students will understand animal science and production.**

### **OBJECTIVES**

- ASAS5-1 Students will explore the industry and related terminology
- List the common breeds and uses
  - Identify types of production enterprises and facility needs
  - Describe marketing options

**COMPETENCY**

**ASAS6            Students will demonstrate an understanding of the meat industry.**

**OBJECTIVES**

- ASAS6-1        Students will distinguish meat inspection from grading
- ASAS6-2        Students will identify wholesale and retail cuts of beef, lamb and pork
- ASAS6-3        Students will demonstrate knowledge of the meat industry from a consumer viewpoint
- ASAS6-4        Students will grade carcasses