

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