

Appendix A: AFNR Career Cluster Content Standards-**Horse**

	Performance Measurement Levels	Event Activity Addressing Measurement	Related Academic Standards
ABS.01.02. Performance Indicator: Apply principles of entrepreneurship in businesses.			Social Studies: 7d
	ABS.01.02.01.a. Describe the meaning, importance and economic impact of entrepreneurship.	Team Activity	
ABS.02.01. Performance Indicator: Compose and analyze a business plan for an enterprise.			Language Arts: 3, 4, 5, 7 and 8 Social Studies: 7h
	ABS.02.01.02.a. Identify and observe ethical standards in planning and operating AFNR businesses.	Team Activity	
ABS.02.03. Performance Indicator: Apply appropriate management skills to organize a business.			Language Arts: 12 Social Studies: 7f
	ABS.02.03.01.b. Identify management types in AFNR businesses.	Team Activity	
ABS.06.01. Performance Indicator: Conduct appropriate market and marketing research.			Social Studies: 7b and 7h
	ABS.06.01.01.c. Implement and evaluate marketing strategies with agricultural commodities, products and services.	Team Activity	
ABS.06.02. Performance Indicator: Develop a marketing plan.			Language Arts: 3, 5, 7 and 8 Social Studies: 7b and 7d
	ABS.06.02.01.b. Perform a marketing analysis, including evaluation of the competitors, customers, international and domestic policy environment, regulations and rules, standards and AFNR business resources.	Team Activity	
ABS.06.03. Performance Indicator: Develop strategies for marketing plan implementation.			Social Studies: 7b and 7h
	ABS.06.03.01.b. Determine marketing strategies that are most likely to be effective in an AFNR business.	Team Activity	
AS.02.02. Performance Indicator: Apply principles of comparative anatomy and physiology to uses within various animal systems.			Science: C1, C5 and F2
	AS.02.02.01.c. Explain how the components and systems of animal anatomy and physiology relate to the production and use of animals.	Team Activity; Oral Reasons	
	AS.02.02.06.c. Explain the impact of animal body systems on performance, health, growth and reproduction.	Team Activity	

AS.02.03. Performance Indicator: Select animals for specific purposes and maximum performance based on anatomy and physiology.		Science: C5
AS.02.03.01.c. Evaluate and select animals to maximize performance based on anatomical and physiological characteristics that affect health, growth and reproduction.	Selection Classes	
AS.02.03.02.b. Assess an animal to determine if it has reached its optimal performance level based on anatomical and physiological characteristics.	Team Activity; Selection Classes	
AS.03.01. Performance Indicator: Prescribe and implement a prevention and treatment program for animal diseases, parasites and other disorders.		Science: C4, F1 and F5
AS.03.01.01.a. Explain methods of determining animal health and disorders.	Team Activity	
AS.03.01.02.a. Identify common diseases, parasites and physiological disorders that affect animals.	Team Activity	
AS.03.01.03.c. Design and implement a health maintenance and disease and disorder prevention plan for animals in their natural and/or confined environments.	Team Activity	
AS.03.02. Performance Indicator: Provide for the biosecurity of agricultural animals and production facilities.		Science: F5 and F6 Social Studies: 9d
AS.03.02.01.a. Explain the importance of biosecurity to the animal industry.	Team Activity	
AS.04.01. Performance Indicator: Formulate feed rations to provide for the nutritional needs of animals.		Math: 1C and 6B Science: A4 and C5
AS.04.01.01.b. Determine the relative nutritional value of feedstuffs by evaluating their general quality and condition.	Team Activity	
AS.04.01.02.b. Appraise the adequacy of feed rations using data from the analysis of feedstuffs, animal requirements and performance.	Team Activity	
AS.05.03. Performance Indicator: Apply scientific principles in the selection and breeding of animals.		Math: 6C Science: A4, C2 and E2
AS.05.03.01.c. Select a breeding system based on the principles of genetics.	Team Activity	
AS.05.03.04.a. Explain the advantages of major reproductive management practices, including estrous synchronization, superovulation, flushing and embryo transfer.	Team Activity	
AS.05.03.05.a. Discuss the uses and advantages and disadvantages of natural breeding and artificial insemination.	Team Activity	
AS.06.01. Performance Indicator: Demonstrate safe animal handling and management techniques.		Science: C6
AS.06.01.02.b. Design programs that assure the welfare of animals and prevent abuse or mistreatment.	Team Activity	

AS.07.01. Performance Indicator: Design animal housing, equipment and handling facilities for the major systems of animal production.		Science: C6 and F6
AS.07.01.01.b. Critique designs for an animal facility and prescribe alternative layouts and adjustments for the safe and efficient use of the facility.	Team Activity	
AS.07.01.02.b. Explain how modern equipment and handling facilities enhance the safe and economic production of animals.	Team Activity	
AS.08.02. Performance Indicator: Evaluate the effects of environmental conditions on animals.		Science: C6 and F4
AS.08.02.01.b. Describe the effects of environmental conditions on animal populations and performance.	Team Activity	
CS.01.01. Performance Indicator: Action: Exhibit the skills and competencies needed to achieve a desired result.		Social Studies: 4d and 4h
CS.01.01.01.c. Work independently and in group settings to accomplish a task.	Team Activity; Selection Classes	
CS.01.01.03.a. Exhibit good planning skills for a specific task or situation.	Team Activity	
CS.01.01.06.b. Assign project parts equitably amongst team members to achieve a given task.	Team Activity	
CS.01.02. Performance Indicator: Relationships: Build a constituency through listening, coaching, understanding and appreciating others.		Language Arts: 12 Social Studies: 4h
CS.01.02.04.c. Evaluate the effectiveness of team members.	Team Activity	
CS.01.04. Performance Indicator: Character: Conduct professional and personal activities based on virtues.		Social Studies: 4c and 4f
CS.01.04.04.c. Demonstrate respect for others.	Team Activity	
CS.02.02. Performance Indicator: Social Growth: Interact with others in a manner that respects the differences of a diverse and changing society.		Language Arts: 12 Social Studies: 1e
CS.02.02.02.c. Present oneself appropriately in various settings.	Team Activity	
CS.02.04. Performance Indicator: Mental Growth: Demonstrate the effective application of reasoning, thinking and coping skills.		Math: 6C Science: A4 Language Arts: 4 and 8
CS.02.04.01.c. Demonstrate critical and creative thinking skills while completing a task.	Team Activity; Selection Classes	
CS.02.04.02.c. Implement effective problem solving strategies.	Team Activity	
CS.02.05. Performance Indicator: Emotional Growth: Demonstrate healthy responses to one's feelings.		Social Studies: 4a
CS.02.05.03.c. Exhibit self-confidence while in the workplace.	Team Activity; Oral Reasons	
CS.03.01. Performance Indicator: Communication: Demonstrate oral, written and verbal skills.		Language Arts: 4, 5 and 12
CS.03.01.03.c. Make effective business presentations.	Team Activity; Oral Reasons	

CS.03.02. Performance Indicator: Decision Making –Analyze situations and execute an appropriate course of action.		Science: A1 and A5 Social Studies: 1c and 4h
	CS.03.02.01.c. Make decisions for a given situation by applying the decision-making process.	Team Activity; Selection Classes
	CS.03.02.02.c. Use problem-solving skills.	Team Activity; Selection Classes
CS.03.03. Performance Indicator: Flexibility / Adaptability: Describe traits that enable one to be capable and willing to accept change.		Science: A2, A6 and E2 Language Arts: 7 Social Studies: 8a
	CS.03.03.03.c. Respond to feedback to improve a situation, skill or performance.	Team Activity

## Appendix B: Related Academic Standards-**Horse**

National academic standards for mathematics, science, English language arts and social studies related to this event are reported below. The statements are based on information in reports of the respective associations/organizations in the academic areas. Some adjustment of numbering was done to facilitate the process of alignment with the standards that have been developed in the pathways of the Agriculture, Food and Natural Resources (AFNR) Career Cluster.

The approach was to determine the presence of alignment between the content standards, expectations or thematic strands of the four academic areas and the performance indicators of the AFNR Standards. Supporting statements have been included to clarify content of the respective content standards, expectations or thematic strands. The statements were initially developed independently by the respective organizations and, therefore, are not parallel in wording and presentation. Occasionally minor editing was done to adjust the background or stem of a statement but not the statement itself.

### **Mathematics**

- 1. Standard and Expectations: Number and Operations
- 1C. Compute fluently and make reasonable estimates.
- 6. Standard and Expectations: Problem Solving
- 6B. Solve problems that arise in mathematics in other contexts.
- 6C. Apply and adapt a variety of appropriate strategies to solve problems.

### **Science**

- A. Content Standard: Science as an Inquiry
- A1. Identify questions and concepts that guide scientific investigation.
- A4. Formulate and revise scientific explanations and models using logic and evidence.
- A5. Recognize and analyze alternative explanations and models.
- A6. Communicate and defend a scientific argument.
- C. Content Standard: Life Science
- C1. The cell.
- C2. Molecular basis of heredity.
- C4. Interdependence of organisms.
- C5. Matter, energy and organization in living systems. C6. Behavior of organisms.

- E. Content Standard: Science and Technology
- E2. Understanding about science and technology
- F. Content Standard: Science in Personal and Social Perspectives
- F1. Personal and community health.
- F2. Population growth.
- F4. Environmental quality.
- F5. Natural and human-induced hazards.
- F6. Science and technology in local, national and global challenges.

### **English Language Arts**

- 3. Students apply a wide range of strategies to comprehend, interpret, evaluate and appreciate texts. They draw on their prior experience, their interactions with other readers and writers, their knowledge of word meaning and of other texts, their word identification strategies and their understanding of textual features (e.g., sound-letter correspondence, sentence structure, context, graphics).
- 4. Students adjust their use of spoken, written and visual language (e.g., conventions, style, vocabulary) to communicate effectively with a variety of audiences and for different purposes.
- 5. Students employ a wide range of strategies as they write and use different writing process elements appropriately to communicate with different audiences for a variety of purposes.
- 7. Students conduct research on issues and interests by generating ideas and questions, and by posing problems. They gather, evaluate and synthesize data from a variety of sources (e.g., print and non-print texts, artifacts, people) to communicate their discoveries in ways that suit their purpose and audience.
- 8. Students use a variety of technological and information resources (e.g., libraries, databases, computer networks, video) to gather and synthesize information and to create and communicate knowledge.
- 12. Students use spoken, written and visual language to accomplish their own purposes (e.g., for learning, enjoyment, persuasion and the exchange of information).

### **Social Studies**

- 1. Thematic Strand: Culture
- 1c. apply an understanding of culture and an integrated whole that explains the functions and interactions of language, literature, the arts, traditions, beliefs and values and behavior patterns;
- 1e. demonstrate the value of cultural diversity, as well as cohesion, within and across groups;
- 4. Thematic Strand: Individual Development and Identity
- 4a. articulate personal connections to time, place and social/cultural systems;
- 4c. describe the ways family, religion, gender, ethnicity, nationality, socioeconomic status and other group and cultural influences contribute to the development of a sense of self;
- 4d. apply concepts, methods and theories about the study of human growth and development, such as physical endowment, learning, motivation, behavior, perception, and personality;
- 4f. analyze the role of perceptions, attitudes, values and beliefs in the development of personal identity;
- 4h. work independently and cooperatively within groups and institutions to accomplish goals;
- 7. Thematic Strand: Production, Distribution and Consumption
- 7b. analyze the role that supply and demand, prices, incentives and profits play in determining what is produced and distributed in a competitive market system;
- 7d. describe relationships among the various economic institutions that comprise economic systems such as households, business firms, banks, government agencies, labor unions

and corporations;

7f. compare how values and beliefs influence economic decisions in different societies;

7h. apply economic concepts and reasoning when evaluating historical and contemporary social developments and issues;

8. Thematic Strand: Science, Technology and Society

8a. identify and describe both current and historical examples of the interaction and interdependence of science, technology and society in a variety of cultural settings;

9. Thematic Strand: Global Connections

9d. analyze the causes, consequences and possible solutions to persistent, contemporary and emerging global issues, such as health, security, resource allocation, economic development and environmental quality;