

**Students have the opportunity to gain the following competencies (from the National Content Standards for Agriculture, Food, and Natural Resources\*) while participating in animal exhibition events.**

**Animal Science Career Pathway**

AS.01.01.02.a Define major components of the animal industry.	AS.01.01.02.b. Outline the development of the animal industry and the resulting products, services and careers.	AS.01.01.02.c. Predict trends and implications of future development of the animal systems industry.	Science C3. Biological Evolution  Social Studies 7h. Apply economic concepts and reasoning when evaluating historical and contemporary social developments and issues.
AS.02.01.02.a Identify major animal species by common and scientific names.	AS.02.01.02.b Compare and contrast the hierarchical classification of the major agricultural animal species.	AS.02.01.02.c Appraise and evaluate the economic value of animals for the various applications in the agriculture industry.	Science C3. Biological Evolution  Social Studies 7h. Apply economic concepts and reasoning when evaluating historical and contemporary social developments and issues.
		AS.02.02.01.c Explain how the components and systems of animal anatomy and physiology relate to the production and use of animals.	Science C5. Matter, energy, and organization in living systems.  Science F2. Population growth
AS.02.02.04.a Describe the properties, locations, functions, and types of animal tissues.	AS.02.02.04.b Explain the relationship of animal tissues to growth, performance, and health.	AS.02.02.04.c Explain the importance and uses made of animal tissues in the agriculture industry.	Science C5. Matter, energy, and organization in living systems.  Science F2. Population growth
AS.02.02.06.a Describe the functions of the animal body systems and system components.	AS.02.02.06.b Compare and contrast body systems and system adaptations between animal species.	AS.02.02.06.c Explain the impact of animal body systems on performance, health, growth, and reproduction.	Science C5. Matter, energy, and organization in living systems.  Science F2. Population growth
AS.02.03.01.a Identify ways an animal’s health can be affected by anatomical and physiological disorders.	AS.02.03.01.b Compare and contrast desirable anatomical and physiological characteristics of animals within and between species.	AS.02.03.01.c Evaluate and select animals to maximize performance based on anatomical and physiological characteristics that affect health, growth, and reproduction.	Science C5. Matter, energy, and organization in living systems.  Science F2. Population growth
AS.02.03.02.a Create a	AS.02.03.02.b Assess an	AS.02.03.02.c Develop	Science C5. Matter,

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program to develop an animal to its highest potential performance.	animal to determine if it has reached its optimal performance level based on anatomical and physiological characteristics.	efficient procedures to produce consistently high quality animals, well suited for their intended purposes.	energy, and organization in living systems.
		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.	Science C4. Interdependence of organisms.  Science F1. Personal and community health.  Science F5. Natural and human-induced hazards.
		AS.03.01.05.c Implement zoonotic disease prevention methods and procedures for the safe handling and treatment of animals.	Science C4. Interdependence of organisms.  Science F1. Personal and community health.  Science F5. Natural and human-induced hazards.
AS.04.01.01.a Compare and contrast common types of feedstuffs and the roles they play in the diets of animals.	AS.04.01.01.b Determine the relative nutritional value of feedstuffs by evaluating their general quality and condition.	AS.04.01.01.c Select appropriate feedstuffs for animals based on factors such as economics, digestive system, and nutritional needs.	Math 1C. Compute fluently and make reasonable estimates.  Math 6B. Solve problems that arise in mathematics in other contexts.  Science A4. Formulate and revise scientific explanations and models using logic and evidence.
AS.04.01.02.a Explain the importance of a balanced ration for animals.	AS.04.01.02.b Appraise the adequacy of feed rations using data from the analysis of feedstuffs, animal requirements, and performance.	AS.04.01.02.c. Formulate animal feeds based on nutritional requirements, using feed ingredients for maximum nutrition and optimal economic production.	Math 1C. Compute fluently and make reasonable estimates.  Math 6B. Solve problems that arise in mathematics in other contexts.  Science A4. Formulate and revise scientific explanations and models using logic and evidence.
AS.06.01.01.a. Discuss the	AS.06.01.01.b Outline	AS.06.01.01.c. Interpret	Science C6. Behavior of

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dangers involved in working with animals.	safety procedures for working with animals by species.	animal behaviors and execute protocols for safe handling of animals.	organisms.
AS.06.01.02.a Explain the implications of animal welfare and animal rights for animal agriculture.	AS.06.01.02.b Design programs that assure the welfare of animals and prevent abuse or mistreatment.	AS.06.01.02.c. Implement quality-assurance programs and procedures for animal production.	Science C6. Behavior of organisms.
AS.06.02.01.a. Identify animal production practices that could pose health risks or are considered to pose risks to some.	AS.06.02.01.b Discuss consumer concerns with animal production practices relative to human health.	AS.06.02.01.c. Implement a program to assure the safety of animal products.	Science F1. Personal and community health. Science F5. Natural and human-induced hazards.
AS.08.02.01.a. Identify optimal environmental conditions for animals.	AS.08.02.01.b. Describe the effects of environmental conditions on animal populations and performance.	AS.08.02.01.c. Establish and maintain favorable environmental conditions for animal growth and performance.	Science C6. Behavior of organisms. F4. Environmental quality.

**Leadership, LifeKnowledge, and Soft Skills Required by Community and Industry**

<b>CS. 01.01. Exhibit the skills and competencies needed to achieve a desired result.</b>	<b>Social Studies 4d. Apply concepts, methods, and theories about the study of human growth and development, such as physical endowment, learning, motivation, behavior, perception, and personality.</b>
<b>CS.01.02. Relationship: Build a constituency through listening, coaching, understanding, and appreciating others.</b>	<b>Social Studies 4h. Work independently and cooperatively within groups and institutions to accomplish goals.</b> Language Arts 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 4h. Work independently and cooperatively within groups and institutions to accomplish goals.
<b>CS.01.04. Character: Conduct professional and personal activities</b>	Social Studies 4c. Describe the ways

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based on virtues.

family, religion, gender, ethnicity, nationality, socioeconomic status, and other group and cultural influences contribute to the development of a sense of self.

Social Studies 4f. Analyze the role of perceptions, attitudes, values, and beliefs in the development of personal identity.

**CS.01.05. Awareness: Desire purposeful understanding related to professional and personal activities.**

Social Studies 1e. Demonstrate the value of cultural diversity, as well as cohesion, within and across groups.

Social Studies 4e. Examine the interactions of ethnic, national, or cultural influences in specific situations or event.

Social Studies 10b. Identify, analyze, interpret, and evaluate sources and examples of citizens' rights and responsibilities.

Social Studies 10j. Participate in activities to strengthen the "common good," based upon careful evaluation of possible options for citizen action.

**CS.01.06. Continuous Improvement: Pursue learning and growth opportunities related to professional and personal aspirations.**

Science A4. Formulate and revise scientific explanations and models using logic and evidence.

Social Studies 4h. Work independently and cooperatively within groups and institutions to accomplish goals.

**CS.02.02 Social Growth: Interact with others in a manner that respects the differences of a diverse and changing society.**

Language Arts 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 1e. Demonstrate the value of cultural diversity, as well as cohesion, within and across groups.

**CS.02.03. Professional Growth: Develop awareness and apply skills necessary for achieving career success.**

Language Arts 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 4a. Articulate personal connections to time, place, and

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**CS.02.04 Mental Growth: Demonstrate the effective application of reasoning, thinking, and coping skills.**

social/cultural systems.

Math 6C. Apply and adapt a variety of appropriate strategies to solve problems.  
Science A4. Formulate and revise scientific explanations and models using logic and evidence.

Language Arts 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.

**CS.03.02. Decision Making: Analyze situations and execute an appropriate course of action.**

Science A5. Recognize and analyze alternative explanations and models.

Social Studies 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.

Social Studies 4h. Work independently and cooperatively within groups and institutions to accomplish goals.

**CS.07.03 Follow appropriate procedures in case of an emergency.**

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