

## Gee Whiz in Agriculture Content Standards

### “Why Can a Cow Eat Grass?”

**\*Project Area Skill (PAS) refers to the subject matter based skill which youth demonstrate in relation to the correlating content standard.\***

**Objectives:**

#### Career Readiness-

1. **Students will identify their career interests and aptitudes to develop an educational plan which supports personal career goals.**

**Benchmarks: K-4: 1 A, B, C; 5-8: 1 A, B, C, D**

**Project Area Skill: The youth understand the importance of learning about digestive systems in cattle. The topic covers nutrition and how a ruminant’s stomach works. Youth can identify possible career goals by learning about this system.**

2. **Students will utilize and manage resources effectively to produce quality services and products.**

**Benchmarks: K-4: 2 A, B, C; 5-8: 2 A, B**

**Project Area Skill: The youth use time management skills to complete assigned activities. Youth utilize available learning resources which help to gain knowledge in this topic area.**

3. **Students will demonstrate the technological knowledge and skills required for future careers.**

**Benchmarks: K-4: 3 A, B, C, D; 5-8: 3 A, B, C, D**

**Project Area Skill: The youth use computers and other forms of technology to complete assignments. Internet access allows them to further research the topic. Youth learn spreadsheet and word processing programs.**

4. **Students will develop and demonstrate responsible and ethical workplace behaviors.**

**Benchmarks: K-4: 4 A, B, C, D, E; 5-8: 4 A, B, C, D**

**Project Area Skill: The youth understand the importance of working with others in an educationally enriched setting, as they achieve common goals. Youth learn that good behavior learned at school helps them to make better decisions outside of school.**

5. Students will develop effective leadership, interpersonal, and team skills.

**Benchmarks: K-4: 5 A, B, C, D; 5-8: 5 A, B, C, D**

**Project Area Skill: The youth understand the importance of developing leadership skills as they interact with others. They develop strong, positive social skills as they work towards meeting goals.**

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##### Language Arts-

- 1. Reading and listening for comprehension: Students will apply strategies and skills to comprehend information that is read, heard, and viewed.**

**Benchmarks: K-4: 1 A, B, C, D; 5-8: 1 A, B, C, D**

**Project Area Skill: The youth learn about the different components of a ruminant’s digestive system by completing student activities and reading the text. Youth do oral presentations in front of groups.**

- 2. Writing and speaking for expression: Students will communicate effectively through speaking and writing.**

**Benchmarks: K-4: 2 A, B, C; 5-8: 2 A, B, C**

**Project Area Skill: The youth learn how to describe information which they have learned. They create essays and stories using different writing techniques. Youth share thoughts and ideas about this topic with adults and peers.**

- 3. Literature and media: Students will use literature and media to develop an understanding of people, societies, and the self.**

**Benchmarks: K-4: 3 A; 5-8: 3 A**

**Project Area Skill: The youth view a short video which serves as an overview of the topic. This video provides information in a realistic format to properly show the stomachs of a ruminant, and the function of each.**

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**Math-**

- 1. Number and operations: Students will understand numerical concepts and mathematical operations.**

**Benchmarks: K-4: 4 A, B, C; 5-8: 4 A, B, C**

**Project Area Skill: The youth solve word problems by calculating feed conversion rates to determine weight gain.**

- 2. Measurement: Students will understand measurement systems and applications.**

**Benchmarks: K-4: 1 A, B, C, D; 5-8: 1 A, B, C, D**

**Project Area Skill: The youth use units of measurement to solve word problems. These problems focus on cattle weights and amounts of fluid and food in the rumen. Youth calculate growth based on days fed and starting and ending weights.**

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##### **Science: Strand I: Scientific Thinking and Practice: Standard I-**

- 1. Understand the processes of scientific investigations and use inquiry and scientific ways of observing, experimenting, predicting, and validating to think critically.**
  - A. K-4: Benchmark I: Use scientific methods to observe, collect, record, analyze, predict, interpret, and determine reasonableness of data.  
5-8: Benchmark I: Use scientific methods to develop questions, design and conduct experiments using appropriate technologies, analyze and evaluate results, make predictions, and communicate findings.**

**Project Area Skill: The youth learn to observe the digestive system of cattle, and understand how to make predictions and generalizations about how the process works. They learn about types of feed and how each is digested.**

##### **Science: Strand II: Content of Science: Standard II: Life Science-**

- 1. Understand the properties, structures, and processes, of living things and the interdependence of living things and their environments.**
  - A. K-4: Benchmark I: Know that living things have diverse forms, structures, functions, and habitats.  
5-8: Benchmark I: Explain the diverse structures and functions of living things and the complex relationships between living things and their environments.**

**Project Area Skill: The youth understand that livestock have different types of digestive systems. Understand the function and purpose of multi-stomach animals, and how they differ from single stomach animals. Youth learn that the foods which are fed and digested are dependent upon the environment in which the cattle live.**

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**Objectives:**

#### **Social Studies: Strand: Geography: Content Standard II-**

- 1. Students understand how physical, natural, and cultural processes influence where people live, the ways in which people live, and how societies interact with one another and their environments.**

**F. K-4: Benchmark I: Describe how natural and man-made changes affect the meaning, use, distribution, and value of resources.**

**5-8: Benchmark I: Understand the effects of interactions between human and natural systems in terms of changes in meaning, use, distribution, and relative importance of resources.**

**Project Area Skill: The youth understand the importance of the effect of the cattle industry on the United States. The youth also learn the impact that cattle have upon the environment in which they live and how humans utilize available resources to produce cattle.**