

Purpose:

Students will examine the importance of the beef cattle industry, including where cattle are produced in Colorado, the beef production life cycle, and the key role cattle play in a sustainable food system. Concepts related to Colorado land use and sustainability are also introduced.

**Cross Curricular Connections and
Colorado Academic Standards:****4th & 5th Grade Reading, Writing, and
Communicating:**

- Determine the meaning of words and phrases as they are used in a text, including figurative language such as metaphors and similes. (CCSS: RL.5.4)
- Refer to details and examples in a text when explaining what the text says explicitly and when drawing inferences from the text. (CCSS: RL.4.1)
- By the end of year, read and comprehend informational texts, including history/social studies, science, and technical texts, in the grades 4–5 text complexity band proficiently, with scaffolding as needed at the high end of the range. (CCSS: RI.4.10)

3rd Grade Science: Life Science

- Develop models to describe that organisms have unique and diverse life cycles but all have in common birth, growth, reproduction, and death. (3-LS1-1)

3rd Grade Social Studies: Geography

- Examine the characteristics of places and regions, and the changing nature among geographic and human interactions.

4th and 5th Grade Social Studies: Geography

- Use geographic tools to research and answer questions about geography.

More standard connections, particularly in science, can be met by using any of the suggestion lessons to go with this Reader.

How to use:

Use this *Colorado Reader* during your reading, science, or social studies time. Another option is to send these items home with your students (or include in homework/enrichment packets) to complete at home on virtual learning days. Or use during substitute days. Pass out one copy of the *Colorado Reader* to each student. Ask students to read the *Colorado Reader*, completing the activities within the *Reader* as they go. Answers to the activities in the *Reader* are included, should you desire to collect and score responses. To further enhance learning, incorporate

any of the additional lessons from the Curriculum Matrix that are identified on the back.

Vocabulary

byproduct: an incidental or secondary product made in the manufacture or synthesis of something else

calf: the name for baby cattle; plural: calves

cellulose: the main component of green plants like grass and shrubs; not digestible by humans but very nutritious to ruminant animals

cow: female cattle that have had a calf

digestion: the process by which food is changed to a simpler form after it is eaten

edible: suitable or safe to eat

feedlot or feedyard: a type of farm operation where cattle are fed balanced feed rations in preparation for harvesting

forage: bulky food such as grass or hay typically consumed by livestock

grazing: to eat grass or other plants that are growing in a field, pasture, etc.

heifer: female bovine that has not produced a calf

herd: a large group of animals, especially hoofed mammals, that live, feed, or migrate together or are kept together as livestock

land cover / use: the term used to describe the human use of land and represents the economic and cultural activities (i.e. agricultural, residential, industrial, mining, and recreational uses)

ruminant: an animal that has a four-compartment stomach and chews its cud in order to digest plant cellulose

steer: male bovine that has been castrated

Lesson Plans to go with this Reader

The Agricultural Literacy Curriculum Matrix is an online, searchable, and standards-based database for K-12 teachers. The Matrix contextualizes national education standards in science, social studies, and nutritional education with relevant instructional resources linked to Common Core Standards. Below are a few lesson plans that could be used in conjunction with this *Colorado Reader*. Go to www.GrowingYourFuture.com and click on Curriculum Matrix (on the Home Page or under the Educator's Tab), search each title within the Curriculum Matrix to find these lesson plans.

Beef Basics: Students will explain the importance of the beef cattle industry, including the products cattle produce, the production process from farm to plate, and how cattle can utilize and obtain energy from grass and other forage. (<https://agclassroom.org/matrix/lesson/284/>)

At Home on the Range (Grades 3-5): Students will learn about rangelands by participating in a hands-on activity of growing their own grass to represent a beef or sheep ranch. (<https://agclassroom.org/matrix/lesson/554/>)

Ranch Starter Kit: Students can grow their own ranch with this kit with enough materials for 35 students. Cost is \$8.00 per kit. Order here: <https://bit.ly/3sgl7z9>

Additional Lessons for K-12 Instruction: There are a wide variety of additional FREE ready-to-use lesson plans, companion resources, kits, maps/infographics, and movies/videos for K-12 instruction about cattle. These are available by searching the word "cattle" on the Agricultural Literacy Curriculum Matrix available at AgClassroom.org or simply use this link: <https://bit.ly/3tGghwP>



Page 2: Where are the Cattle?

Q: What county has the most beef cows and calves? A: Weld County

Q: Can you name the five counties that are in the 100,000 to 499,999 range? A: Yuma County, Morgan County, Logan County, Kit Carson County, and Prowers County

Q: What is the range of cattle numbers for the county where you live? A: Answers will vary based on location.

Q: How many counties raise between 10,000 and 99,999 beef cows and calves? A: 30 counties

Page 4: Match the Feeds

Answer 1: C - Rolled Oats

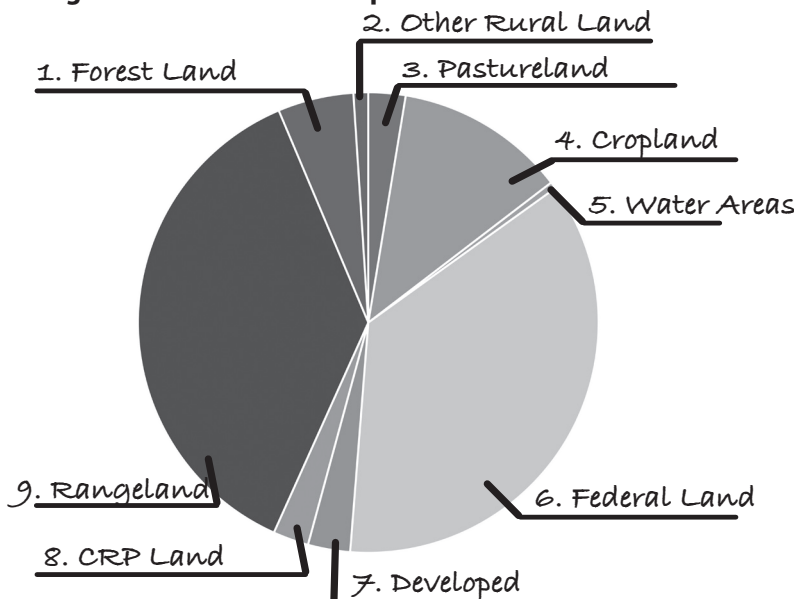
Answer 2: A - Grass/Hay

Answer 3: E - Mixed Ration

Answer 4: D - Sugar Beet Pellets

Answer 5: B - Steam Flaked Corn

Page 5: Colorado Land Use pie chart



Page 6: Test Your Beef Sustainability Knowledge

1. b; 2. b; 3. a; 4. c; 5. d; 6. b; 7. c; 8. a

Sources:

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