

Beef it Up

Teacher's Guide Grades 3-4

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Where's The Beef?

Nebraska State Standards:

- Language Arts 3.1.5, 3.4.1, 4.1.5, 4.4.1

Objectives:

- To determine students' prior knowledge of cattle.
- To learn facts and vocabulary related to raising cattle.

Materials:

- *General Information/Vocabulary* (Pages 1-2)
- *Where's the Beef?/Answer Key* (Pages 3-4)

Activity:

- Complete *Where's the Beef?*
- Correct *Where's the Beef?* Refer to *General Information/Vocabulary* for possible answers.

Extensions:

- Research the different ways cattle can be identified and sorted.
- Research the most popular breeds of cattle.

Cattle Calculations

Nebraska State Standards:

- Math 3.1, 3.2.2, 4.1, 4.2.2

Objectives:

- To learn more beef production facts through math computation.
- To show the application of math in the beef industry.

Materials:

- *Cattle Calculations/Answer Key* (Pages 5-6)

Activity:

- Complete *Cattle Calculations*.
- Discuss how problems were completed and new facts that were learned.

Extensions:

- Using "Cuts of Beef" diagram on General Information, survey students to determine their favorite cuts of beef; transfer to a graph.

From Our Farm to Your Fork

Nebraska State Standards:

- Language Arts 3.1, 3.2, 3.3, 4.1, 4.2, 4.3

Objectives:

- To understand the main facets of beef production and consumption and familiarize students with steps involved.
- To apply reading skills and strategies to comprehend non-fiction text.
- To develop test-taking skills.

Materials:

- *From Our Farm to Your Fork/Cattle Ranching Timeline* (Pages 7-8).
- Beef I.Q. Quiz/Answer Key (Pages 9-10).

Activity:

- Have students study/read *From Our Farm to Your Fork/Cattle Ranching Timeline* keeping in mind the questions being asked on the Beef I.Q. Quiz.
- Complete *Beef I.Q. Quiz* focusing on the understanding of the information read, eliminating answers that wouldn't work, and picking from the ones that would make sense.

Extensions:

- Interview a beef producer. Questions to include: "How did you get involved with beef production?" "What subjects in school have helped you most as a producer?" "What is going on in the beef industry today?" "Where do you see the beef industry in the future?"
- Invite a person involved in beef production to speak. Use Additional Resources (back inside cover) for contact information.
- Have students research careers in producing beef from the producers to consumer.

My Plate - My Beef

Nebraska State Standards:

- Language Arts 3.1, 3.2, 3.3, 4.1, 4.2, 4.3

Objectives:

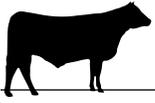
- To have students identify beef's place on MyPlate and the nutrients found in beef.
- To design a presentation titled "Beef - A Healthy Option for You" or "Delicious Beef on Your Plate."

Materials:

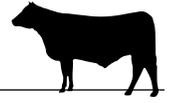
- *My Plate - My Beef* (Page 11-12)
- Materials needed for presentations can vary as determined by teacher and students.

Activity:

- Use *My Plate - My Beef* to inform students about the nutritional benefits of beef. Divide the class into groups to create an advertising presentation promoting "Beef - A Healthy Option for You" or "Delicious Beef on Your Plate." Encourage students to use a variety of visuals and media in their presentation.



General Information



Background

The word “cattle” comes from the Old French word “chat-tel” which means possession. It is believed that cattle were first domesticated in Europe and Asia during the Stone Age. The first cattle to graze Nebraska’s grasslands belonged to soldiers at Fort Atkinson, which was established in 1819. Nebraska is among the top states in the number of cattle fed and sold to market. Cattle occupy two-thirds of all the grazing land in Nebraska.

The United States and Australia are the top beef producing countries in the world. There are many breeds of beef cattle. Hereford and Black Angus are among the most popular. Some cattle are crossbred, which combines the best traits of two or more breeds.

Growth & Feeding

Female cattle are called heifers. After they have given birth they are called cows. Male cattle are either bulls or steers. Bull calves that have grown to full maturity are capable of reproducing. Steers are male cattle that have been castrated, much like a dog or cat may have been neutered, and are not able to reproduce. They do not become as large or aggressive as bulls.

A cow is pregnant for about nine months. She usually gives birth to one offspring, which is called a calf, but sometimes a cow may have twins. When a cow gives birth, it is called calving. Cows nurse their calves until they are about seven months old. Some heifer calves are kept in the herd to produce the next generation of calves. A heifer may have her first calf when she is two years old. Heifers that are not being kept for breeding will be moved to a feedlot until they are sold as market beef. Steers are also kept in a feedlot until they go to market.

Cattle in the feedlot eat corn, alfalfa, and silage. Their diets may also include crop by-products such as cotton seed hulls, corn stalks, and sugar beet pulp. Even leftover bakery products can be ground and used as part of a balanced feed ration. Feedlot cattle are usually ready for market at 14 to 16 months of age and weigh between 1,000 and 1,300 pounds.

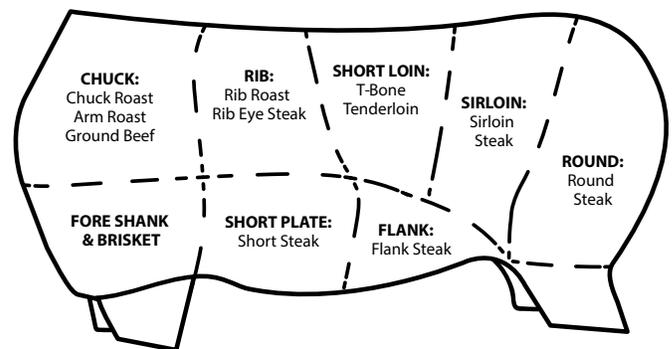
Ruminant Digestive System

Ruminant animals have a stomach with four compartments. They swallow food in large pieces into the first stomach compartment, bring the food back into the mouth, and chew it again. This is called “chewing the cud.” The food is swallowed again and moves through the four stomach compartments. Because they are ruminant animals, cattle can digest grass, roughage, food by-products, and other materials people can’t eat. They convert these otherwise unusable grasses and other products into nutrients for humans. Camels, deer, sheep, and llamas are also ruminant animals.

Products

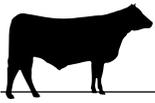
Meat from cattle is called beef. Cattle also produce a variety of by-products used in industrial, pharmaceutical, and household items. Fats and gelatin are used to make soap, shampoo, cosmetics, desserts, and many industrial products such as photographic film and light filters. The pancreas and liver are used for medicines for such diseases as anemia and hypoglycemia.

Hide, hooves, and hair are used in products such as sports equipment, leather goods, and paintbrushes. The leather from one hide is enough to make about 18 pairs of shoes. A football, frequently called a “pigskin,” is actually made from cow hide. Ninety-eight percent of every beef animal is used for meat or other products.

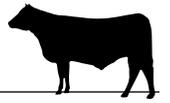


Cuts Of Beef

Cattle provide cuts of meat such as steaks, roasts, and ground beef (hamburger). A market beef that weighs 1,100 pounds will yield about 550 pounds of usable meat. The remaining parts of the beef are used in by-products.



Vocabulary



Talk Like A Rancher

Backgrounder – Contractor hired to take weaned calves and prepare them for the feedlot.

Beef Cattle – Breeds of cattle that are fit for meat production.

Bovine – Scientific name for cattle.

Brand – Mark on a specific area of the animal's body so that the owner can identify it.

Breed – Group of animals having inherited characteristics which make them special from other groups of animals.

Breeding – Male and female pairing which produces offspring/babies.

By-Product – Something made while making another product.

Bull – Male or a father bovine.

Calf – Young male or female bovine.

Calving – To give birth to a calf.

Castrate – To neuter a male calf and therefore, it will not be able to reproduce.

Cow – Mature female bovine that has had a calf.

Crossbred – Animal which has the best characteristics from two or more animal breeds.

Cud – Food that has come up from the stomach's first compartment to the animal's mouth to be chewed again.

Environment – Conditions affecting the development of life.

Feedlot/Feedyard – Type of feeding operation used for finishing animals before they are ready for harvest.

Finish – Feeding cattle to the desired weight to get them ready for market.

Forages – Plants (alfalfa, corn, silage, hay, or hay crops) eaten by animals.

Gestation Period – Length of the pregnancy; for beef cows it is 281 days.

Herd – Group of certain animals, either wild or domestic, of the same species.

Heifer – Young female cow that has not had a baby calf.

Livestock – Farm animals raised for production.

Market Weight – Weight at which a bovine may be sold and processed into beef products.

Meat Grader – Individual evaluating the cuts of meat for tenderness, juiciness, and flavor.

Meat Packer/Processor – Individual processing meat for sale to restaurants and grocery stores.

Monogastric – Having one stomach like humans.

Natural Resources – Soil, water power, minerals, etc., provided by nature.

Ration – Amount of feed given to an animal for a period of typically one day.

Retail Meat Cutter – Person who takes meat from packer and cuts them into small cuts for sale in grocery stores.

Ruminant – Animal having a four-compartment stomach.

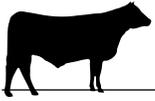
Silage – Entire plant that has been chopped, stored, and fermented for livestock feed.

Steer – Male bovine that has been neutered.

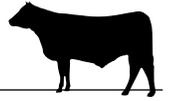
Tag – Numbered plastic identification tool attached to ears of the cattle.

USDA Inspector – Person who inspects the meat, meat products, and processing facilities; inspection must be done if meat is being processed for sale.

Veal – Meat from young cattle.

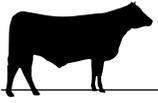


Where's The Beef?

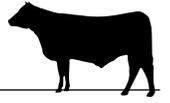


Test your trivia knowledge. True or False.

- _____ 1. A **cow** drinks 25 to 50 gallons of water each day or about a bathtub full.
- _____ 2. Nebraska ranks #1 in the nation for red meat production.
- _____ 3. From one cowhide, 70 baseballs can be produced.
- _____ 4. Cows have four stomachs and have a **ruminant** digestive system.
- _____ 5. A **brand** on cattle indicates the **breed** of the cattle.
- _____ 6. Cattle are red/green color blind.
- _____ 7. When cows are at **market weight**, they usually weigh between 500 and 1000 pounds.
- _____ 8. **Veal** is meat from a full-grown steer.
- _____ 9. **Bovine** is the scientific name for cattle.
- _____ 10. **Crossbreed** cattle combine the best traits of two or more breeds.



Where's The Beef?



(ANSWER KEY)

1. **True**

2. **True**

3. **False** - From one cowhide, 144 baseballs can be made.

4. **False** - Cows have one stomach with four compartments which is the definition of ruminant.

5. **False** - A brand is used to show ownership.

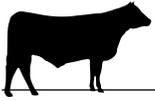
6. **True**

7. **False** - When cows are ready for market, they usually weigh between 1,000 and 1,300 pounds.

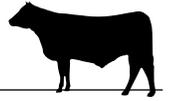
8. **False** - Veal is meat from a calf.

9. **True**

10. **True**



Cattle Calculations



- Rancher Ron's baby calf weighed 78 pounds when it was born. One year later, Rancher Ron was proud to say that his calf weighed 1,200 pounds.**
How many pounds did the calf gain in one year? _____
- Each cow eats about 20 pounds of grain, 5 pounds of silage, 5 pounds of hay, and drinks about 25 gallons of water each day.**
How many pounds of grain, silage, and hay does Rancher Ron need to provide for each of his cows every day?

- To take cattle to market, Rancher Ron needs to travel 122.2 miles one way.**
How many miles will Rancher Ron travel to get there and back home again? _____
- Saturday, Rancher Ron went to the local gas station to fill up his gas tank.**
If his gas tank holds 20 gallons and the price of gas is \$2.50 a gallon, how much money will he spend?

- A new fence is needed on Rancher Ron's property. It needs to be 100 feet wide and 125 feet long.**
How many feet of fence does he need to purchase? _____
- How many square feet will be fenced in when Rancher Ron's fence is completed?** (refer to question 5 above)

- One pound of hamburger can make how many "quarter pound" burgers for Rancher Ron?**

(Use the coordinate grid to answer the questions 8 - 12 about Rancher Ron's Ranch.)

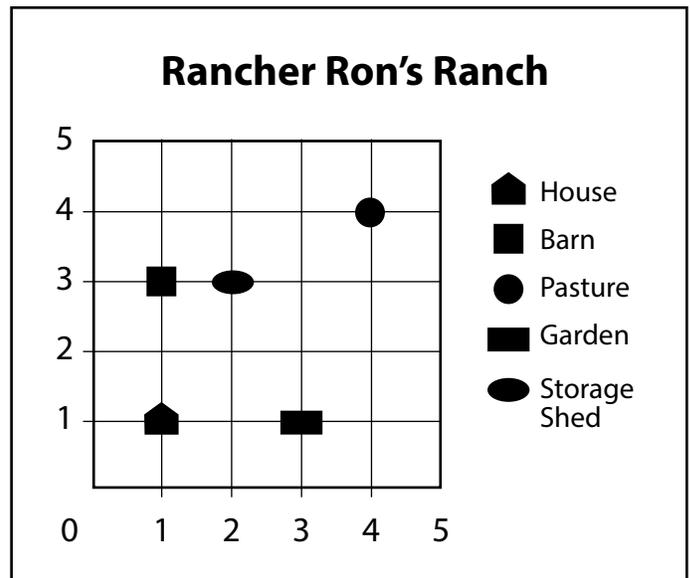
- What are the coordinates of the pasture?**

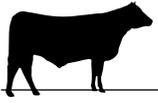
- What is located at the coordinates (2,3)?**

- What are the coordinates of Rancher Ron's house?**

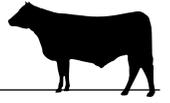
- What are the coordinates of the garden?**

- Place an "R" on point (1,4) where Rancher Ron is building a second storage shed.**





Cattle Calculations



(ANSWER KEY)

1. **1122 pounds**

2. **30 pounds**

3. **244.4 miles**

4. **\$50.00**

5. **450 feet**

6. **12,500 sq. ft.**

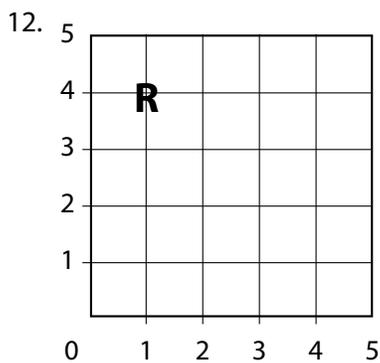
7. **4 hamburgers**

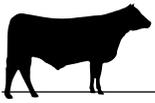
8. **(4, 4)**

9. **Storage Shed**

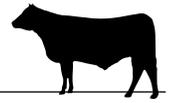
10. **(1, 1)**

11. **(3, 1)**





From Our Farm To Your Fork



**Did you know almost everything you eat started on a farm?
Follow me on a beef adventure from my farm to your fork.**

Stage 1 – The Farm

Here is where the calf is born. The calf will live with the cow until they reach about 500-600 pounds. At this time they are big enough to live on their own and are separated from the cow. This is called weaning. Some of the heifer calves will be kept on the farm to replace some of the older cows. These are called replacement heifers. The rest of the calves will be sold to a backgrounder.

Stage 6 – Your House

Your family purchases the beef products from the grocery store and takes it home to fix into your dinner. And this is how beef makes it into your house. Beef – it's what's for dinner!



Stage 2 – Backgrounders

This is where the calves eat and grow for four to five months. If you see calves roaming in a pasture or in a field of harvested corn, they probably belong to a backgrounder. When the calves hit around 800 pounds they are then sold to a feedlot operator.

Stage 5 – Retailer/Grocery Store

Retailers are the ones who sell food to your grocery store for you to buy. Retailers look for the freshest, best quality meats available. Did you know all meat that is sold must be inspected by the federal government to make sure it is safe!

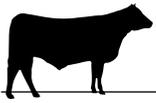
Stage 4 – Packer

The packer is the one who processes the cattle into yummy cuts of meat and other products. The packer then sells the meat and beef products to a retailer.

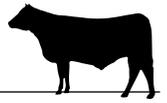
Stage 3 – Feedlot

At the feedlot, calves are fed special feed mixtures (rations) that help them grow large and muscular. Calves usually spend four to five months in a feedlot. Calves in the feedlot eat enough to gain three to four pounds each day. Once the calves reach 1,200 pounds, they are sold to a packer.

Extra Activity: With your class, discuss the role of producers, consumers, and decomposers in an ecosystem and answer the question: If cattle producers started to raise less cattle, what would happen to the price of meat to the consumer?



Cattle Ranching Timeline



Cattle Ranching can be described as ...“the year-round care of cows and bulls for the purpose to produce calves to raise and sell.” It is that, but it’s really much more. Ranchers must also be stewards of the land. That means they care for soils, grasses, other plants, water, and wildlife habitat.

Range and pasture land is used by the rancher to collect sunlight. Sunlight, soil, and water grow grasses and other plants. We might like to look out and see the open spaces, but we can’t eat those plants. The rancher uses cows to harvest the grasses. Cows turn the grass into a source of high-protein food and other by-products we can use.

Today, Nebraska’s cattle industry is one of the state’s top agricultural industries, and it continues as a top segment of American agriculture. Agricultural animals have always made a major contribution to the welfare of human societies by providing food, shelter, fuel, fertilizer, and many other products and services. Cattle ranchers (and all livestock owners) work very hard to take proper care of their animals. They provide the cattle with nutritious food like hay, grain, and corn; clean water, shelter, and medical care. A successful rancher wears many hats – cowboy, herdsman, nutritionist, businessperson, land manager, and financial manager among others.

January February March April May June July August September October November December

JANUARY-APRIL **Calving**

A cow will give birth to her calf any time between the months of January and April. A cow’s due date depends on when she was bred. Newborn calves will normally weigh 60 pounds or more. This is the time of year ranchers call “calving season”.

MAY **Branding**

All of the cows and calves are gathered in one location. The calves are separated from their mothers. Cowboys will brand, vaccinate, and put ear tags on the calves. After that’s done, the calves are returned to their mothers. Brands are the “return address” if the calf gets lost.

JUNE-OCTOBER **Summer Pasture & Breeding Season**

All of the cow and calf pairs are either trailed by horseback or hauled by truck and trailer to summer pasture. They will spend the next few months grazing the green pastures to gain weight and grow up healthy and strong. Bulls are turned out with the cows for breeding. There are approximately 25 cows for one bull.

MID-OCTOBER **Weaning**

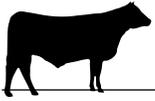
Cows and calves are gathered from their summer grazing areas. The calves (now weighing approximately 500-600 pounds) are “weaned,” or separated from their mothers. The mother cows are taken back to the ranch and turned out on pasture. The calves are taken to separate pastures.

NOVEMBER **Sorting**

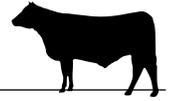
Calves are gathered again and sorted by the rancher. Most calves will be sold. The best female calves and heifers are kept by the ranches to join their cattle herd.

DECEMBER **Winter Feeding**

Pregnant cows are moved from pastures to pens near barns. These areas provide shelter from winter weather. Ranchers are feeding the cows hay. The cows are now nearby and can be helped if any of them calve early.



Beef IQ Quiz



Choose the best answer.

1. Which of the following is a false statement?

- A. The calf will live with the cow until they reach about 500-600 pounds.
- B. Weaning is when the calves are big enough to live on their own.
- C. A newborn calf will normally weigh 60 pounds or more.
- D. When a calf reaches 300 pounds, it is sold to a feedlot operator.

2. Agricultural animals help human societies by providing:

- A. Food and fertilizer
- B. Shelter and fuel
- C. Fertilizer, food, shelter, and fuel
- D. Fuel, food, shelter, fertilizer, and many other products and services

3. Why do cowboys brand their cattle?

- A. Brands are used to separate cows from calves.
- B. Brands are the return address if cattle get lost.
- C. Ranchers can develop a brand that is simple and unique.
- D. It allows ranchers to prepare cattle for market.

4. How are ranchers stewards of the land?

- A. They care for soils, grasses, and other plants.
- B. They protect water and wildlife habitat.
- C. Ranchers' grazing cattle aerate the land.
- D. All of the above

5. What is the correct order for the following stages?

- A. Retailer, Packer, Feedlot, Backgrounders, Farm
- B. Farm, Backgrounders, Feedlot, Packer, Retailer
- C. Feedlot, Packer, Backgrounders, Farm, Retailer
- D. Farm, Feedlot, Packer, Backgrounders, Retailer

6. What is included in a cattle's feed?

- A. Hay, grain and corn
- B. Clean water
- C. Vitamins and minerals
- D. All of the above

7. At what weight are calves are sold to a packer?

- A. 500 pounds
- B. 600 pounds
- C. 800 pounds
- D. 1,200 pounds

8. Which of the following is NOT done at a grocery store to market beef products?

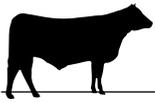
- A. Retailers look for the freshest meats available.
- B. Retailers sell the best quality meats.
- C. Retailers discourage the purchase of lean meats.
- D. Meat sold has been inspected by the federal government.

9. What kinds of jobs does a rancher perform?

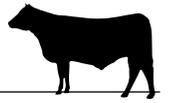
- A. Cowboy and herdsman
- B. Nutritionist
- C. Business, land, and financial manager
- D. All of the above

10. This non-fiction article was written to:

- A. Entertain
- B. Inform
- C. Persuade
- D. Explain



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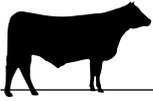
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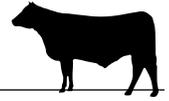
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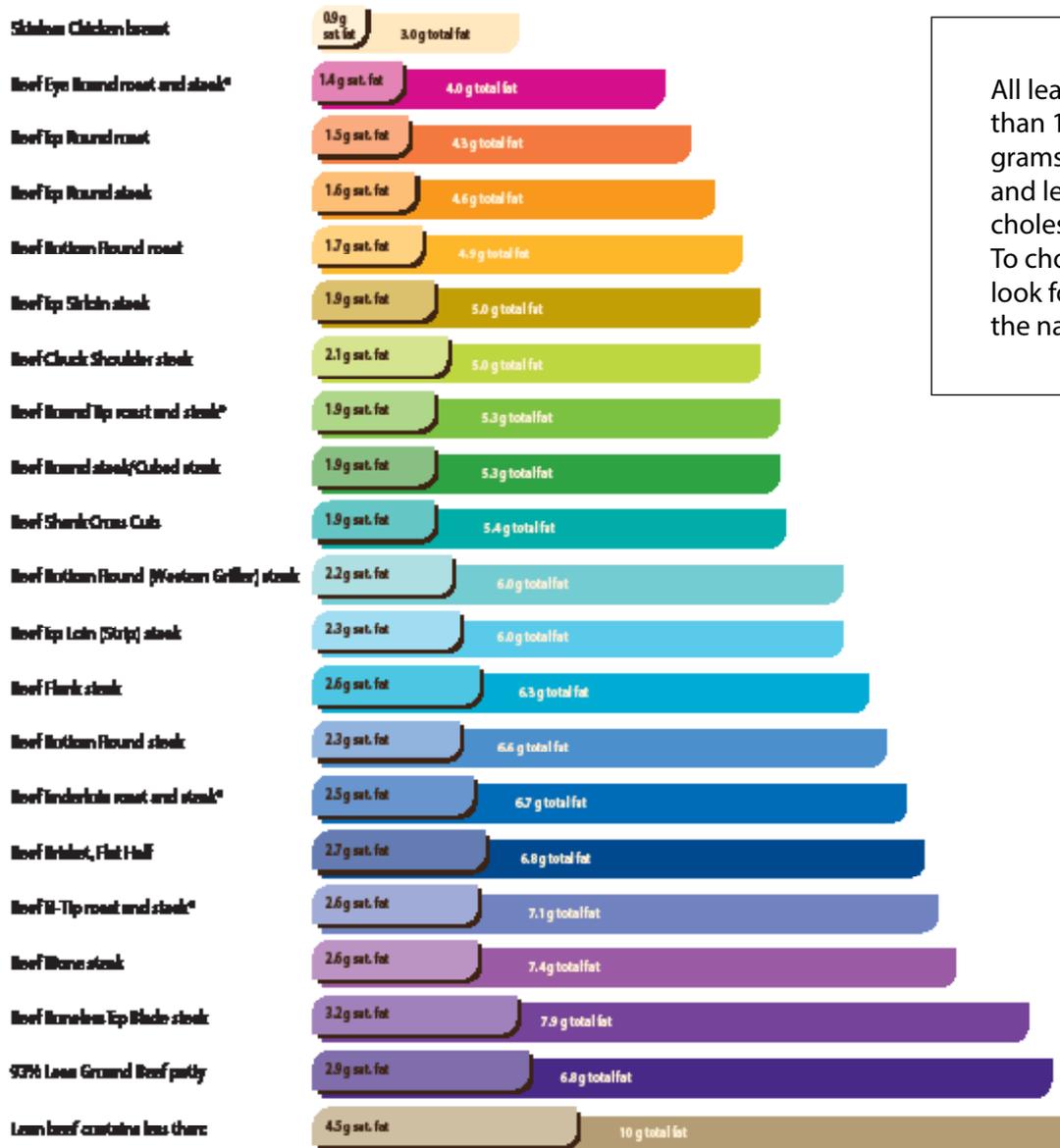
My Plate - My Beef



The Nebraska Beef Council has hired your ad agency to develop an advertising presentation that promotes “Beef - A Healthy Option for You” and “Delicious Beef of Your Plate.” Use a variety of visuals and media in the presentation. Your group’s presentation should include the following:

- Beef’s place on MyPlate
- Vitamins and minerals found in beef
- Fat, calories, and cholesterol of beef
- Suggested ways that beef fits into your diet (recipes, menus, etc.)
- An explanation as to why beef is a healthy or delicious option on your plate

The following information on both sides of this paper may be helpful in developing and designing your presentation:

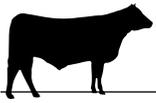


All lean beef cuts have less than 10 grams of total fat, 4.5 grams or less of saturated fat, and less than 95 milligrams of cholesterol per 3½-oz serving. To choose lean cuts of beef, look for “Loin” or “Round” in the name.

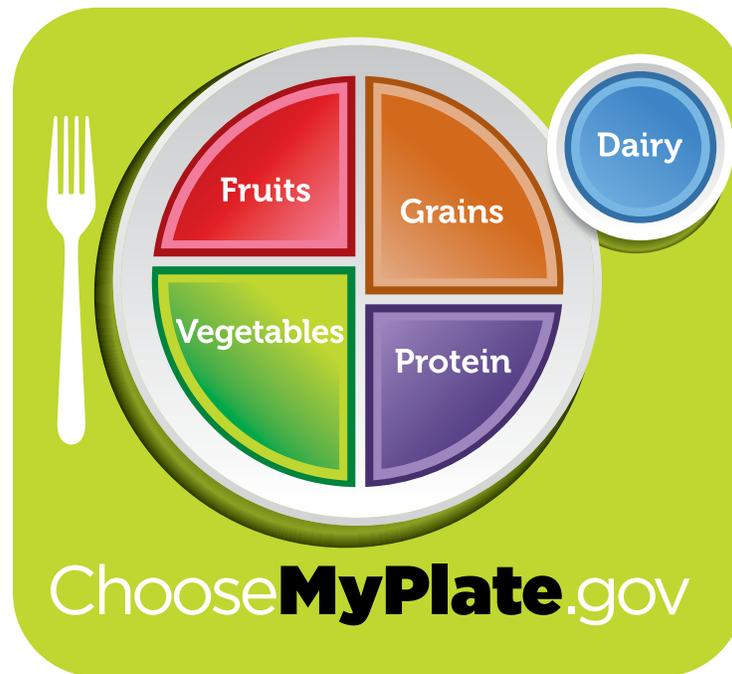
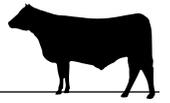
*Cuts combined for illustration purposes.

Total fat and saturated fat are based on 3-ounce cooked servings, visible fat removed. U.S. Department of Agriculture, Agricultural Research Service, 2012. USDA Nutrient Database for Standard Reference, Release 25. Nutrient Data Laboratory homepage www.ars.usda.gov/ba/bhnrc/ndl.

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My Plate - My Beef (Continued)



Beef Nutrients

Beef Provides Zip and B's

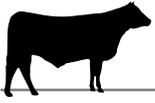
Beef is famous for providing Zip: zinc, iron and protein, all of which help your body have more energy.

- Zinc helps heal your injuries, build muscle and strengthen your body to fight infections. It helps you think, remember and pay attention. It is also important to your sense of smell and taste.
- Iron carries oxygen to body tissues where it helps make energy, fight infection, and is important to young children's brain development. Iron from beef is much more easily absorbed than iron from vegetable sources. If someone is iron deficient, they might feel tired, score lower on problem solving tests, or run out of energy sooner on the playing field.
- Protein is a source of energy for your body. It also builds and repairs body tissues like muscles and organs. Protein helps in the fighting of colds and aids in the movement of vitamins, minerals and other nutrients throughout your body. The protein in beef is a "complete protein" which means it has all the essential amino acids (building blocks) the body needs to build and repair tissue.
- Beef also is one of the best sources of B vitamins in the diet. B vitamins are important in metabolic activity – this means that they help make energy and set it free when your body needs it. Vitamin B12 is needed for normal functioning of body cells and of the nervous system; it is only found naturally in food from animals.

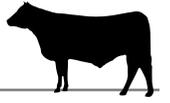
All lean beef cuts have less than 10 grams of total fat, 4.5 grams or less of saturated fat, and less than 95 milligrams of cholesterol per 3.5-ounce serving.

Grain-fed Nebraska beef is known worldwide for its flavor and quality.

Visit NEagriculture.com to learn more about the grading system for beef and a rundown of all the different lean cuts of beef as well as how to prepare them.



Everything But The Moo



The products we consume everyday in our households come from beef by-products (uses of beef other than meat) made by farmers and ranchers. It's hard to believe that so many things for our home come from cattle besides beef. Because of beef by-products, we have medical products that help us have a better quality of life. Travel is also enhanced by beef by-products. Categorize these by-products into the following three areas at the bottom of this page. When you go home, see how many of the following items you can find.

- Tires
- Shaving cream
- Antifreeze
- Dog food
- Brake fluid
- Auto lubricants
- Glue for car bodies
- Linoleum
- Heparin

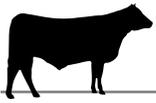
- Collagen
- Paper
- Crayons
- Outboard engine oil
- Thrombin
- Creams
- Glue
- Pantcreatin
- Gelatin

- Soap
- Cortisol
- Biodiesel
- Insulation
- Detergents
- Musical instrument strings
- Biofuel
- Deodorants
- Lotion

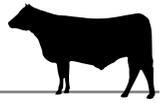
Household

Medical

Transportation



Everything But The Moo



(ANSWER KEY)

Household

Crayons
Creams
Deodorants
Detergents
Dog food
Gelatin
Glue
Insulation
Linoleum
Lotions
Musical instrument strings
Paper
Shaving cream
Soap

Medical

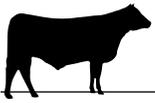
Collagen (in non-stick bandages)
Cortisol (anti-inflammatory)
Heparin (treats blood clots)
Pantcreatin (helps in food digestion)
Thrombin (helps blood clot)

Transportation

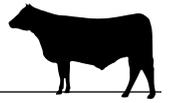
Antifreeze
Auto lubricants
Biodiesel
Biofuel
Brake fluid
Glue for car bodies
Outboard engine oil
Tires

Additional Information:

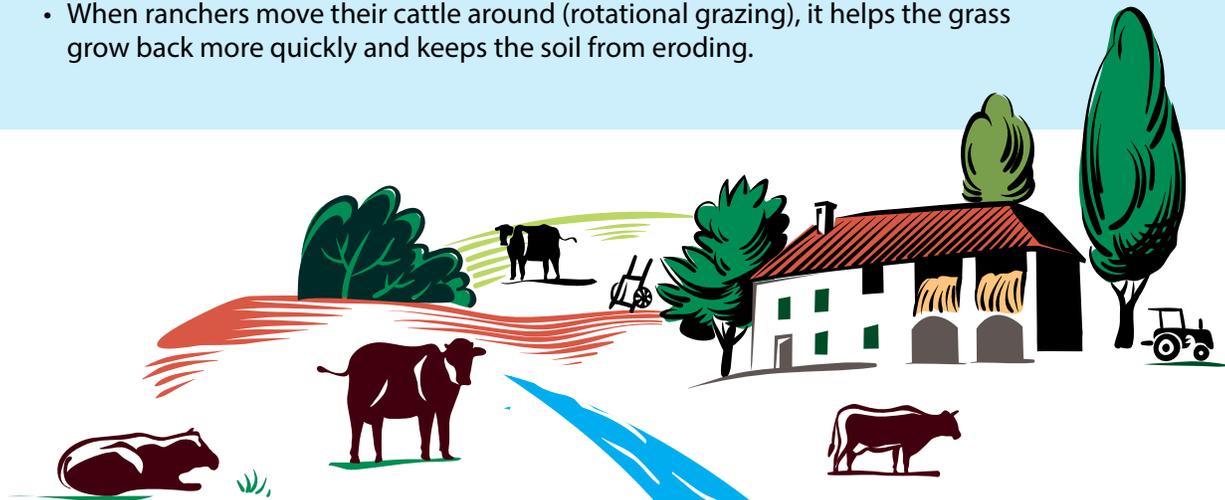
- In addition to making 144 baseballs, one cowhide can also be made into 20 footballs, 18 soccer balls, 18 volleyballs, 12 basketballs, or 12 baseball gloves.
- Leather from cowhide is also used to make clothing, shoes, boots, belts, purses, wallets, gloves, and upholstery.
- Some brake fluid and outboard engine oils contain fats and proteins from beef.
- Tires contain stearic acid which comes from beef fat and this helps rubber hold its shape.
- 99% of the beef animal is used for something; 41% of the beef animal is used as meat.



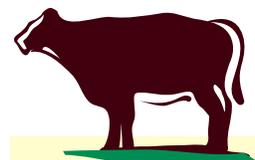
Cattle Help Out The Planet



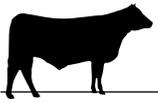
- Cattle graze on the land that can't be used for anything else because it is too steep or hilly on which to build.
- When ranchers move their cattle around (rotational grazing), it helps the grass grow back more quickly and keeps the soil from eroding.



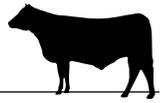
- The movement of cattle's hooves helps press grass seed into the soil.
- Cattle provide natural fertilizer or manure to help the seeds grow.
- Cattle, in certain situations, aerate (loosen up the soil) the land with their hooves. Aeration allows more oxygen to go into the soil which helps plants and grasses grow better. Soft soil absorbs water and nutrients more easily.



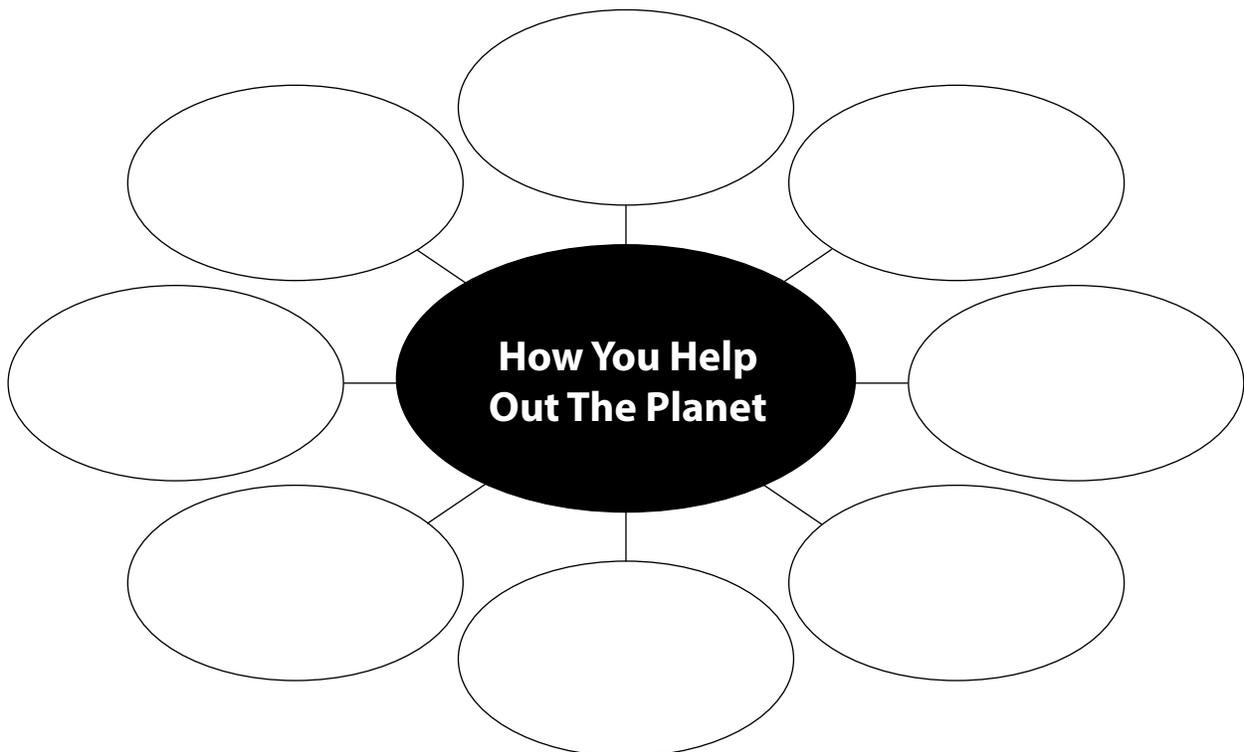
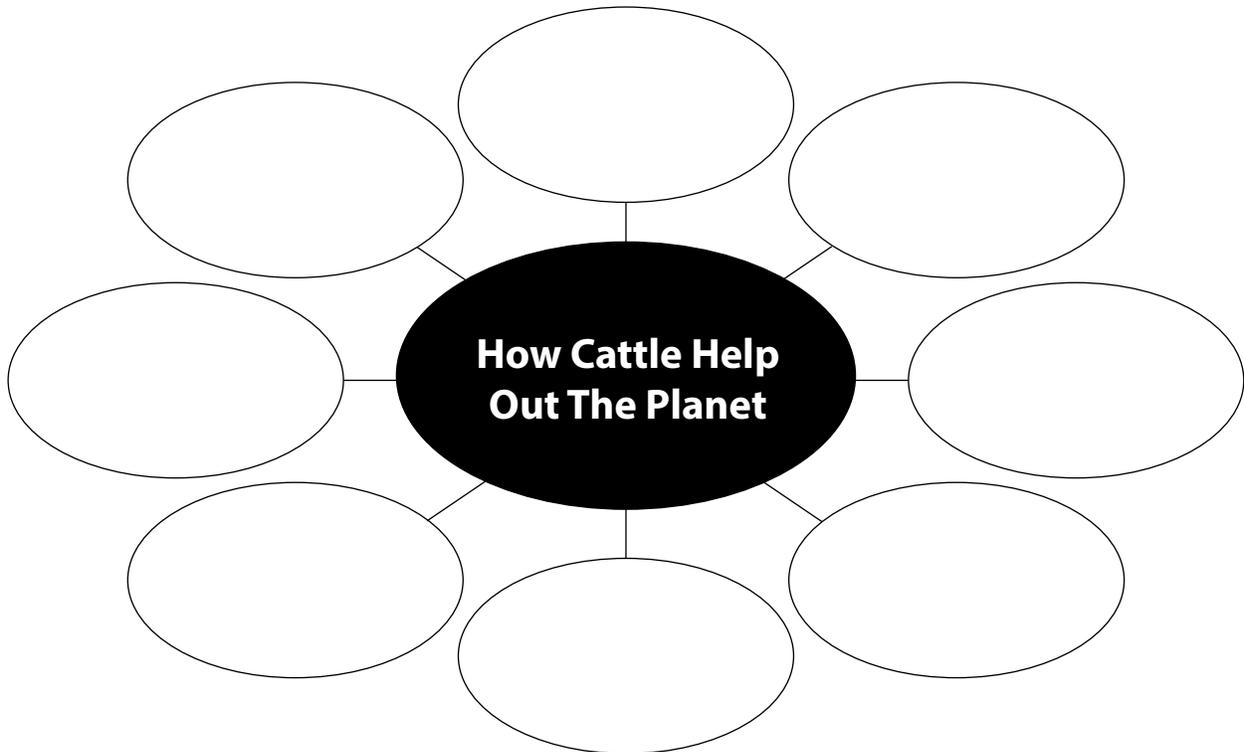
- When cattle graze, it reduces the height and thickness of grass; this helps control wildfires.
- Cattle can digest grass and produce nutritious meat.
- Some land is also too dry or rocky on which to grow food, so cattle use that land for their food, as well.



Cattle Help - How About You?



Below are two web diagrams. Using the information you learned from the Cattle Help the Planet, fill in the webs below. The first web, fill in the circles with things cattle do to help out the planet. On the second web, fill in the circles with things you do to help the planet.



Extensions:

- Share group presentations with other classrooms. Tour the grocery store and find as many different cuts of beef as possible. Collect beef recipes from around the world and create a class cookbook. Include a map locating the places where the recipes originated.

Everything But The Moo!

Nebraska State Standards:

- Language Arts 3.1, 3.2, 3.3, 4.1, 4.2, 4.3

Objectives:

- To make students aware of uses of beef by-products.
- To categorize beef by-products.

Materials:

- *Everything But the Moo!* Answer Key (Pages 13-14)

Activity:

- Share *Everything But the Moo* to stimulate classroom discussion of beef by-products.
- Complete with a partner.
- Encourage students to look for beef by-products at home and in the classroom.

Extensions:

- Research beef by-products. Play the role of a cattle by-product promoter and design a poster showing the benefits of the by-product.
- Write a narrative from the bovine's point of view titled "WOW that COW!"

Cattle Help Out The Planet

Nebraska State Standards:

- Language Arts 3.1, 3.2, 3.3, 4.1, 4.2, 4.3

Objectives:

- To make students aware that cattle/ranchers help care for and protect the environment.
- To compare and contrast respecting of the land by the cattle rancher to that of the student.

Materials:

- *Cattle Help Out the Planet* (Page 15)
- *Cattle Help - How About You?* (Page 16)

Activity:

- Students read and discuss *Cattle Help Out the Planet*. In small groups, students fill out *Cattle Help - How About You?*, comparing and contrasting the habits of each.

Extensions:

- Research one of the following topics: conservation, irrigation, erosion, and ecosystems.
- Discuss and illustrate the meaning of the following quote: "If you take care of the land, it will take care of you."

Additional Resources for Information about Beef Cattle



American National CattleWomen, Inc.
9110 E Nichols Ave Suite 302
Centennial, CO 80112
303-694-0313
ancw@ancw.org



National Cattlemen's Beef Association
9110 East Nichols Avenue, Suite 300
Centennial, CO 80112
303-694-0305
www.beef.org
www.teachfree.com
www.beefitswhatsfordinner.com
www.beefnutrition.org



Nebraska Agriculture in the Classroom
5225 South 16th Street
P.O. Box 80299
Lincoln, NE 68501-0299
402-421-4747
www.agclassroom.org/ne



Nebraska Beef Council
1319 Central Avenue
P.O. Box 2108
Kearney, NE 68848-2108
www.nebeef.org
1-800-421-5326 or 308-236-7551



Nebraska Department of Agriculture
301 Centennial Mall S #4
Lincoln, NE 68508
402-471-6876
www.nda.nebraska.gov



Resources Used

- Nebraska Farm Bureau's Foundation for Agriculture Ag in the Classroom Beef Reader and Livestock Cards
- Cattlemen's Beef Promotion & Research Funded by the Beef Check off Beef Bytes
- American National Cattle-Women Inc. Wow that Cow

Beef Bytes

Fun Facts

- Beef is the #1 food source for protein, vitamin B12, and zinc.
- Cattle, like people, are curious animals.
- Cattle have a keen sense of smell and can hear high and low frequencies that humans cannot detect.
- One cow hide can be used to make 144 baseballs.
- Cattle outnumber people in Nebraska four to one.
- There are over one billion cattle in the world.
- Cattle are red-green colorblind.
- The United States supplies 25% of the world's beef with 10% of the world's cattle.
- Cattle are herbivores (eat plants) and only have teeth on the bottom.
- When it comes to American agriculture, raising of beef cattle is the single largest division.
- A cow's stomach has four compartments called the rumen, the reticulum, the omasum, and the abomasum.
- Americans eat about 68 pounds of beef a year per person.

On The Lean Side

- What do you call a cow that eats grass? *A lawn-mooer!*
- What are cattle's favorite games to play? *Moo-nopoly and mar-bulls!*
- What did the mamma cow say to the baby cow? *It's pasture bedtime!*
- How does a rancher keep track of all the cattle? *With a cow-culator!*
- Where do cows go to dance? *The meat ball!*
- What's another name for a cowhand? *Hamburger Helper!*
- What do you call it when one bull spies on another? *A steak-out!*
- What do you call a cow with a good sense of humor? *Laughing stock!*