ALABAMA

Ag in the Classroom

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Beef Unit

Where's The Beef?

Objectives: Students will

- Learn the term *by-product*.
- Become aware of by-products of beef cattle and how they are used in everyday living.
- Understand that almost every part of the animal is used in some way.
- Show an understanding of "vertical", "horizontal", and "diagonal" while playing bingo.

Introduction:

Almost the entire beef animal can be used to benefit man in some way. From a typical 1,000 pound steer, 400 pounds is used for beef that we eat and the remaining 600 pounds are used as by-products.

These are some of the common types of beef: pot roast, sirloin steak, ground beef, rib eye steak, and tenderloin steak. Beef is a good source of protein (which builds, maintains, and repairs body tissues), iron (which helps the red blood cells carry oxygen to body cells and tissues), zinc (which is a mineral used for growth and maintaining the immune system), and B-vitamins (which promote healthy skin, keep the nervous system healthy, and are important for digestion and metabolism).

Beef by-products are anything made from a beef animal other than meat. They are called by-products since they are not the primary products of a beef animal. You probably use more beef by-products than you think!

<u>Bone, Horn, Hooves, and Gelatin</u>

Combs, gelatin candy (Gummy Bears), marshmallows, mayonnaise, gelatin, photographic film, steel ball bearings, fine bone china, pet food, and vitamin capsules/gel coatings.

<u>Hide and Hair</u>

Insulation, paintbrushes, glue for bookmaking and band-aides, clothes, shoes, luggage, saddles, furniture, automobiles, volleyballs, basketballs, and baseball gloves.

<u>Fats and Fatty Acids</u>

Shampoo, soaps, shaving creams, cosmetics, deodorants, candles, floor wax, detergents, hydraulic brake fluid, plastics, insecticides, paints, perfumes, and synthetic rubber.

Lesson:

1. Teach the by-products from beef cattle. Discuss raw products being manufactured into the products we buy. Give students the by-products board piece sheet to discuss those specific products.
2. Play Beef-O Bingo. Beef-O Bingo is played like regular Bingo. Make a copy of the game board for each student in the class. (The boards in the packet are different.) Give students markers to cover the pictures as you call out a letter and a by-product. When a student covers all the pictures in a row, a column or diagonally, they call out Beef-O! Play Beef-O with miniature marshmallows as markers, since they are beef by-products. After the game, students can eat their marshmallows.
3. Use hand outs.

Assessment:

1. Place a variety of products in the classroom. Ask the students to classify them accordingly as "Beef By-Product" or "Not Beef By-Product."
2. Provide a very large outline drawing of a beef animal on butcher paper. Provide magazines for students to cut out pictures of by products that were previously discussed. Paste these pictures on the outline drawing.

Information Sources National Cattlemen's Association www.beef.org or **www.beefusa.org**

Draw a line to match the correct picture and word. These products are each made from parts of a cow.

The Bones and Hooves help make:

Camera film

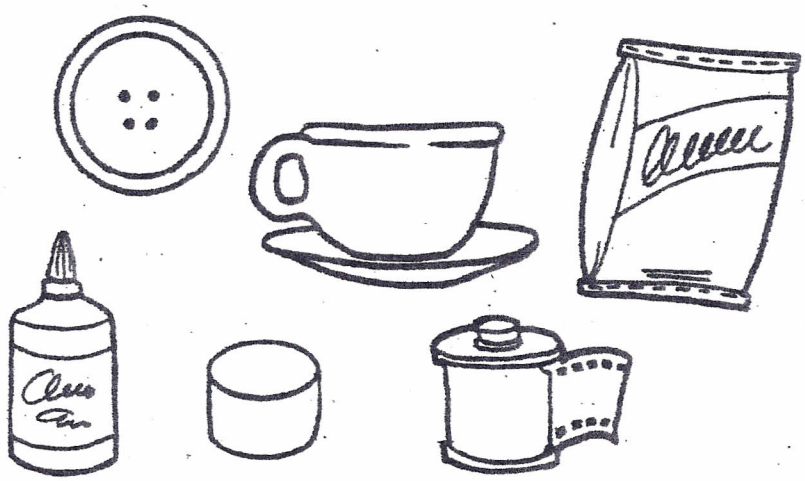
Buttons

Dishes

Glue

Fertilizer

Marshmallows



From the Hide and Hair we can make:

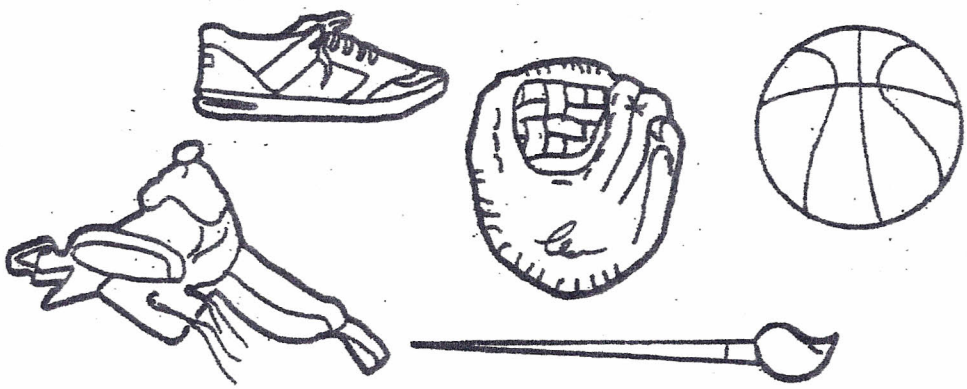
Baseball glove

Basketball

Paint brushes

Shoes

Saddle



Fats from the cow help us make:

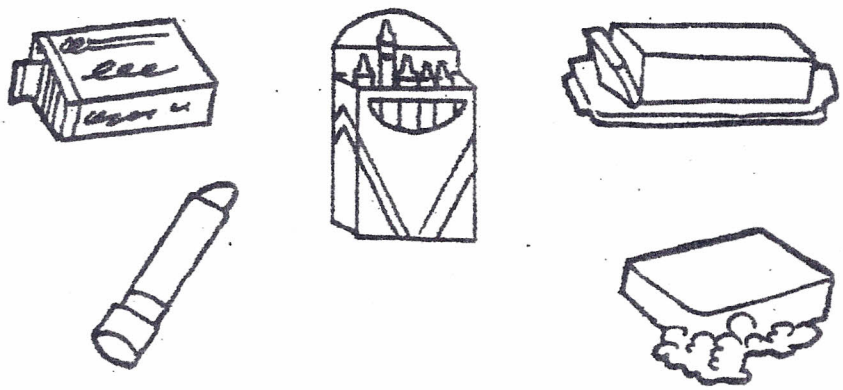
Crayons

Margarine

Soap

Chewing gum

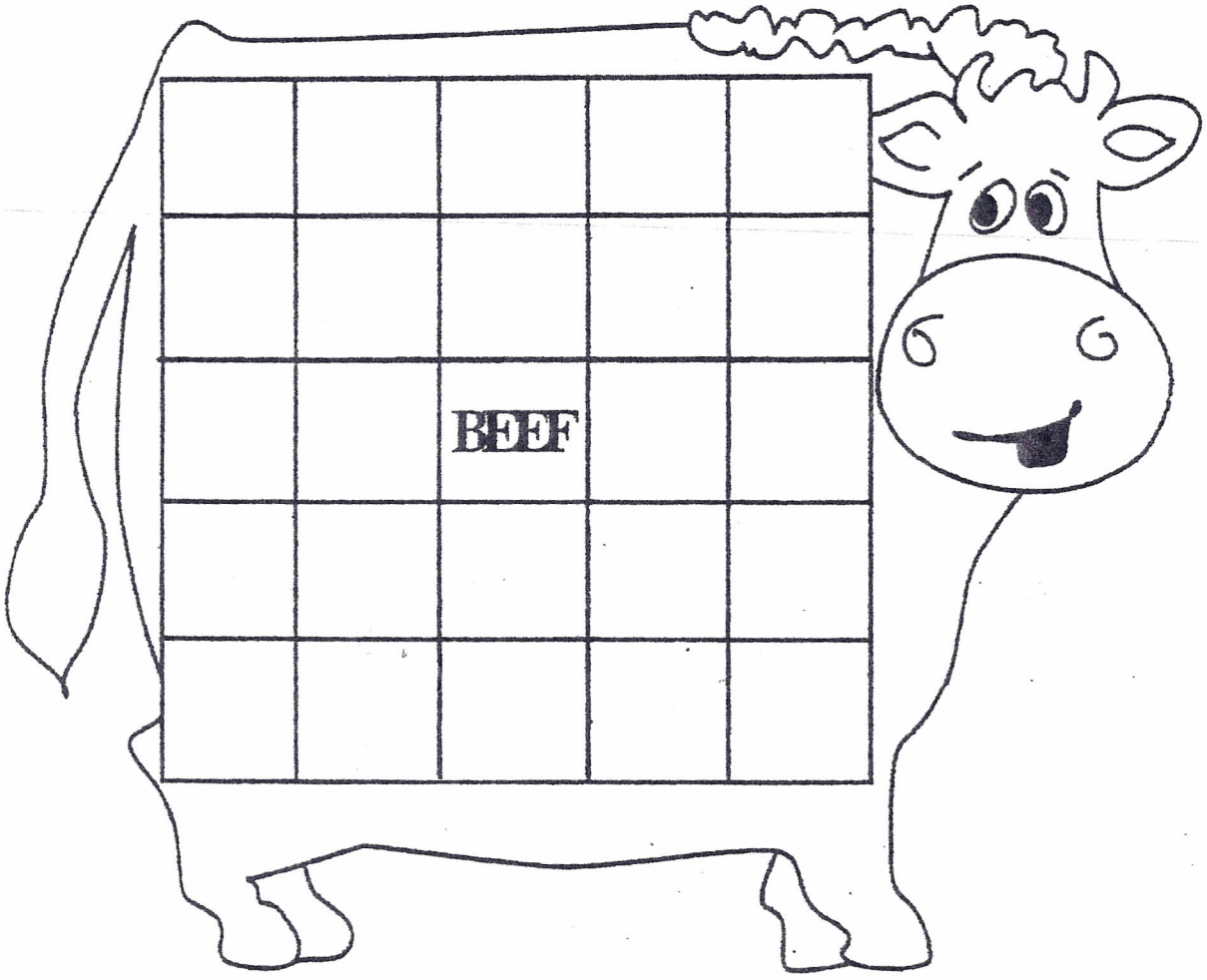
Lipstick



By-Products Board Pieces

Insecticide	Paints	Brake Fluids	Machine Oil	Tires	Car Polish
Feed	Steel Ball Bearings	Cake Mix	Marshmallows	Pasta	Mayonaise
Floor Wax	Soap	Gelatin	Leather Chairs	Candy	Candles
Thread	Glue	Leather Shoes	Baseballs	Footballs	Basketballs
Cosmetics	Deodorant	Shoe Cream	Shaving Cream	Iron Pills	Insulin
Emery Board	Bandages	Luggage	Cellophane	Ceramics	Detergent
Textiles for car upholstery	Car Wax	Piano Keys	Paint Brushes	Perfume	Vitamine B_{12}
Bone China	Pet Food	Chewing Gum	Photographic Film	Oleo Margarine	Linoleum

Beefo Bingo



Insecticides

Paints

Brake Fluid

Machine Oil

Tires

Car Polish

Textiles for car upholstery

Car Wax

Feed

Steel ball bearings

Cake mix

Marshmallows

Pasta

Mayonaise

Bone china

Pet food

Floor wax

Soap

Gelatin

Leather chairs

Candy

Candles

Piano keys

Paint brushes

Crayons

Glue

Leather shoes

Baseballs

Footballs

Basketballs

Chewing gum

Photographic film

Cosmetics

Deodorant

Shoe cream

Shaving cream

Iron pills

Insulin

Vitamine B12

Perfume

Emery board

Bandages

Luggage

Cellophane

Ceramics

Detergent

Linoleum

Oleo margarine

B E E F O

Crayons	Glue	Deodorant	Feed	Pet food
Cellophane	Candles	Leather chairs	Pasta	Brake Fluid
Luggage	Bandages	BEEF	Detergent	Machine Oil
Photographic film	Chewing gum	Soap	Candy	Tires
Footballs	Baseballs	Paints	Shaving cream	Leather shoes

B E E F O

Bandages	Crayons	Soap	Paint brushes	Pet food
Glue	Leather shoes	Basketballs	Mayonaise	Piano keys
Baseballs	Chewing gum	BEEF	Marshmallows	Leather chairs
Photographic film	Footballs	Gelatin	Candy	Paints
Cake mix	Pasta	Luggage	Feed	Candles

B E E F O

Oleo margarine	Leather shoes	Brake Fluid	Candy	Glue
Emery board	Car Polish	Luggage	Shoe cream	Candles
Piano keys	Bandages	BEEF	Gelatin	Tires
Pet food	Photographic film	Insecticides	Floor wax	Shaving cream
Ceramics	Vitamine B_{12}	Insulin	Footballs	Cellophane

B E E F O

Chewing gum	Luggage	Baseballs	Detergent	Steel ball bearings
Pet food	Glue	Marshmallows	Emery board	Cake mix
Photographic film	Mayonaise	BEEF	Leather shoes	Linoleum
Bandages	Basketballs	Ceramics	Bone china	Pasta
Footballs	Oleo margarine	Feed	Crayons	Cellophane

B E E F O

Mayonaise	Steel ball bearings	Paints	Floor wax	Shoe cream
Iron pills	Brake Fluid	Gelatin	Paint brushes	Oleo margarine
Glue	Machine Oil	BEEF	Insecticides	Bone china
Marshmallows	Car Polish	Vitamine B12	Photographic film	Leather chairs
Soap	Tires	Feed	Emery board	Car Wax

B E E F O

Photographic film	Perfume	Insulin	Piano keys	Basketballs
Linoleum	Detergent	Candles	Paint brushes	Footballs
Bone china	Textiles for car upholstery	BEEF	Ceramics	Mayonaise
Chewing gum	Vitamine B12	Candy	Car Polish	Pasta
Pet food	Car Wax	Oleo margarine	Iron pills	Tires

B E E F O

Brake Fluid	Paints	Gelatin	Car Polish	Car Wax
Leather chairs	Floor wax	Textiles for car upholstery	Machine Oil	Piano keys
Deodorant	Paint brushes	BEEF ✓	Shaving cream	Candy
Perfume	Vitamine B12	Candles	Cosmetics	Tires
Insulin	Iron pills	Soap	Shoe cream	Insecticides

n.gadow

B E E F O

Perfume	Pet food	Candy	Iron pills	Ceramics
Gelatin	Basketballs	Luggage	Detergent	Insulin
Cake mix	Photographic film	BEEF	Chewing gum	Paint brushes
Leather shoes	Oleo margarine	Mayonaise	Piano keys	Candles
Linoleum	Bone china	Shoe cream	Vitamine B12	Footballs

B E E F O

Leather shoes	Candles	Chewing gum	Detergent	Iron pills
Cake mix	Soap	Perfume	Tires	Cosmetics
Bandages	Photographic film	BEEF	Paints	Shoe cream
Leather chairs	Mayonaise	Bone china	Marshmallows	Luggage
Pet food	Cellophane	Car Polish	Paint brushes	Linoleum

B E E F O

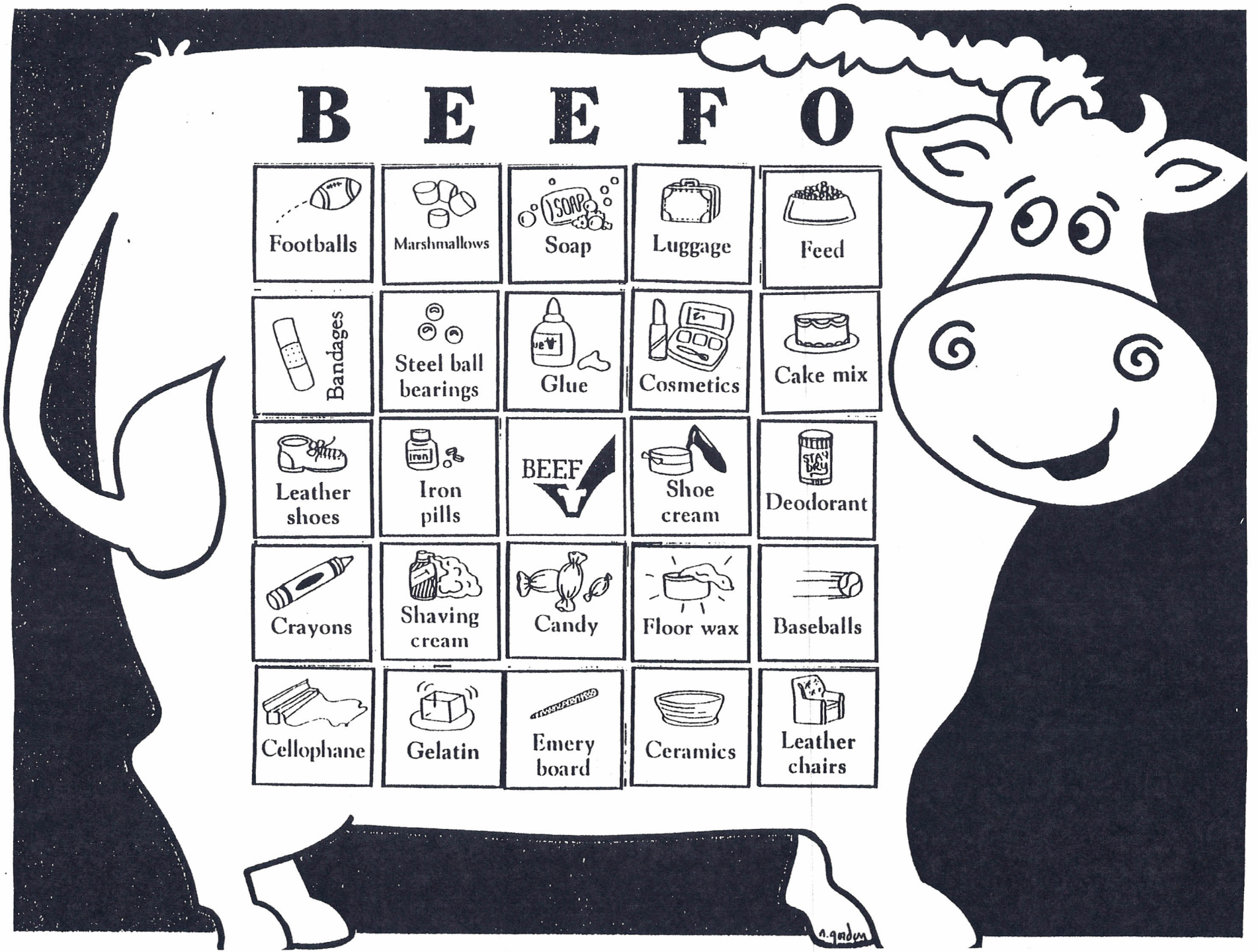
Crayons	Luggage	Mayonaise	Marshmallows	Glue
Leather shoes	Feed	Bone china	Footballs	Cosmetics
Perfume	Bandages	BEEF	Photographic film	Chewing gum
Deodorant	Pet food	Soap	Baseballs	Cake mix
Paints	Paint brushes	Pasta	Basketballs	Candy

B E E F O

Leather chairs	Steel ball bearings	Car Wax	Marshmallows	Mayonaise
Deodorant	Perfume	Chewing gum	Soap	Cake mix
Pasta	Linoleum	BEEF	Basketballs	Paint brushes
Bone china	Crayons	Iron pills	Machine Oil	Baseballs
Detergent	Paints	Cosmetics	Feed	Textiles for car upholstery

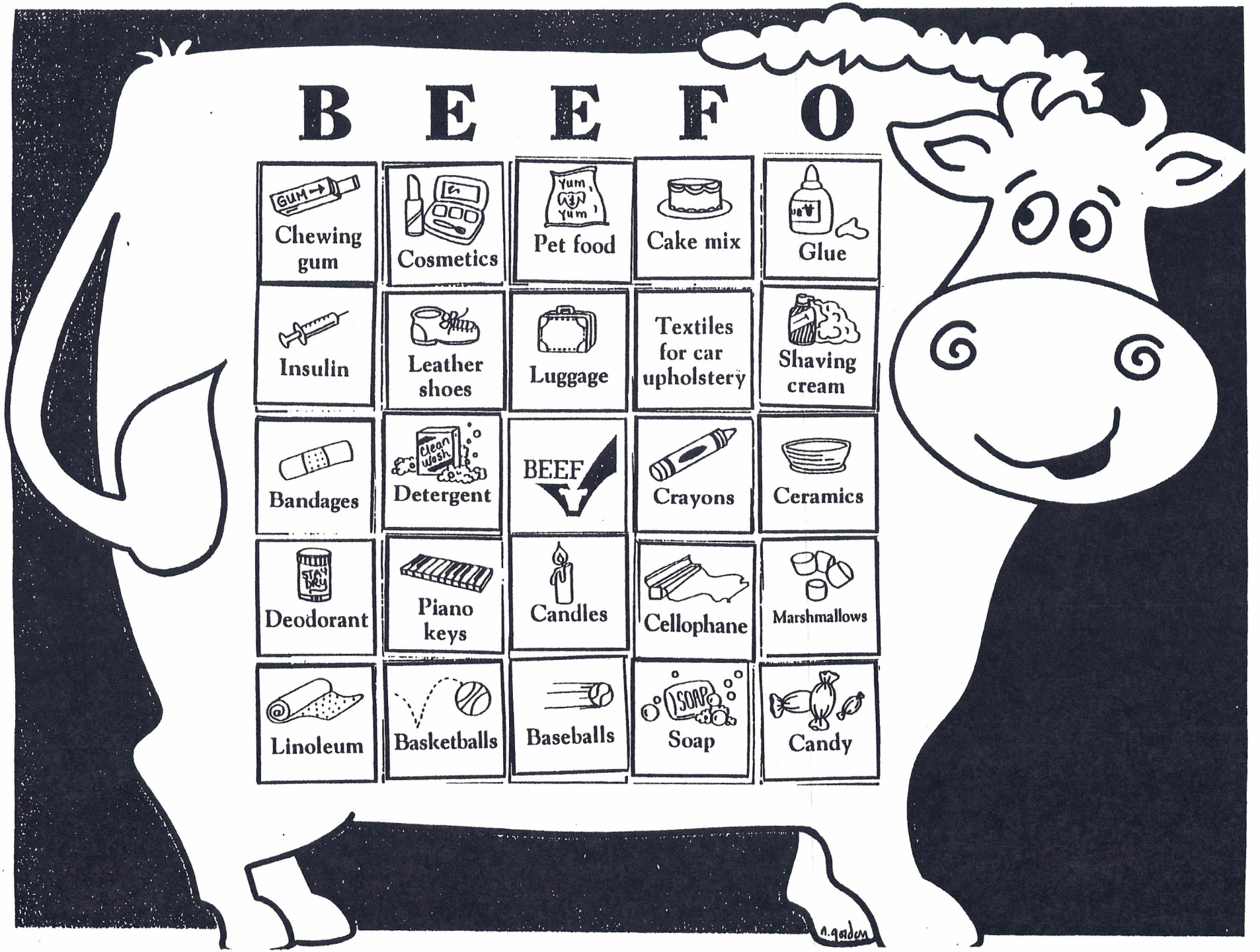
B E E F O

Footballs	Marshmallows	Soap	Luggage	Feed
Bandages	Steel ball bearings	Glue	Cosmetics	Cake mix
Leather shoes	Iron pills	BEEF	Shoe cream	Deodorant
Crayons	Shaving cream	Candy	Floor wax	Baseballs
Cellophane	Gelatin	Emery board	Ceramics	Leather chairs



B E E F O

Chewing gum	Cosmetics	Pet food	Cake mix	Glue
Insulin	Leather shoes	Luggage	Textiles for car upholstery	Shaving cream
Bandages	Detergent	BEEF	Crayons	Ceramics
Deodorant	Piano keys	Candles	Cellophane	Marshmallows
Linoleum	Basketballs	Baseballs	Soap	Candy



B E E F O

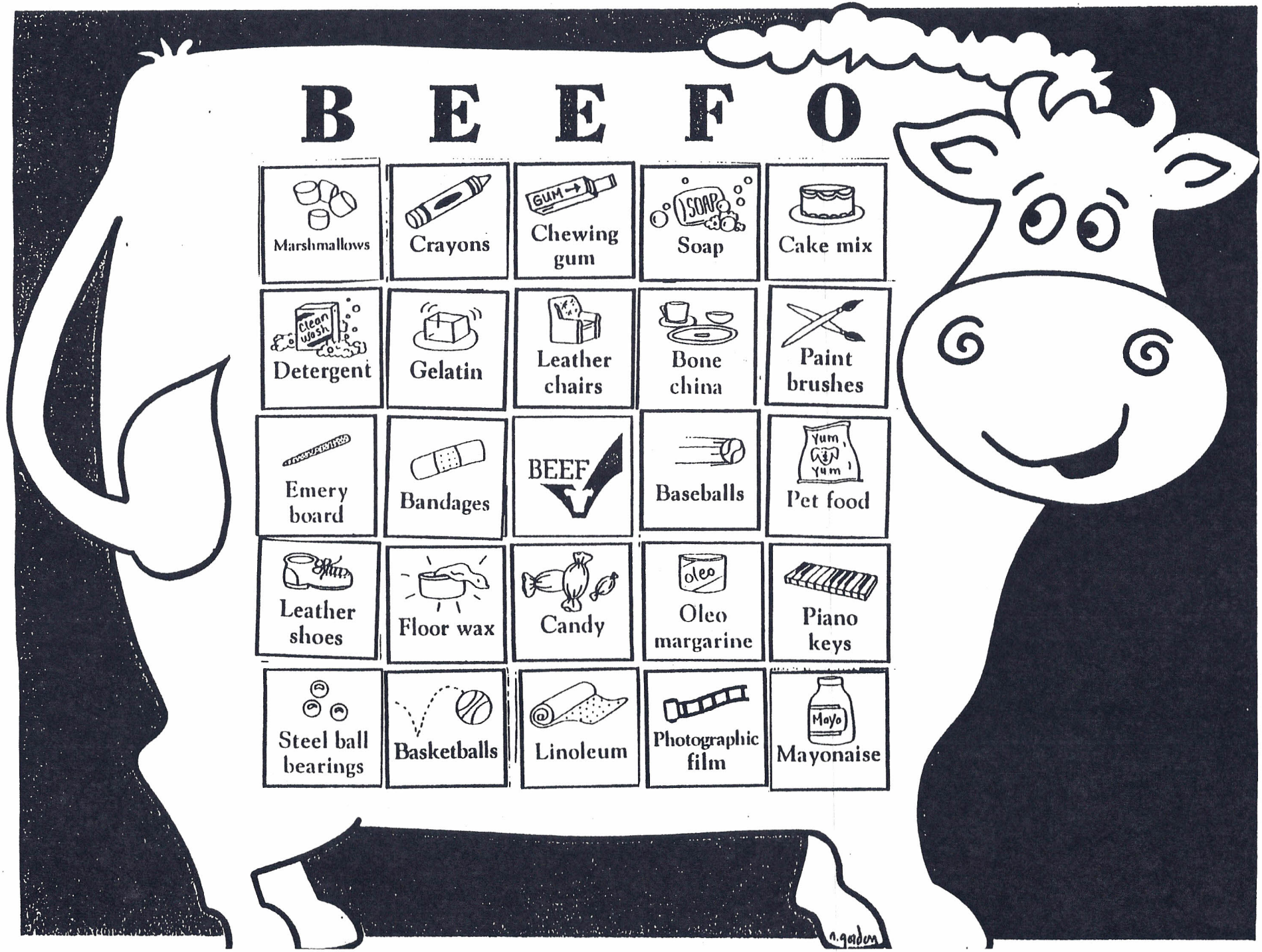
Ceramics	Perfume	Footballs	Car Polish	Paint brushes
Iron pills	Insulin	Car Wax	Chewing gum	Mayonaise
Candy	Piano keys	BEEF	Basketballs	Textiles for car upholstery
Pet food	Bone china	Candles	Photographic film	Oleo margarine
Detergent	Tires	Pasta	Vitamine B12	Linoleum

B E E F O

Cake mix	Soap	Leather chairs	Paints	Machine Oil
Brake Fluid	Steel ball bearings	Cellophane	Leather shoes	Marshmallows
Shoe cream	Cosmetics	BEEF	Feed	Shaving cream
Emery board	Luggage	Gelatin	Glue	Crayons
Insecticides	Deodorant	Bandages	Floor wax	Baseballs

B E E F O

Marshmallows	Crayons	Chewing gum	Soap	Cake mix
Detergent	Gelatin	Leather chairs	Bone china	Paint brushes
Emery board	Bandages	BEEF	Baseballs	Pet food
Leather shoes	Floor wax	Candy	Oleo margarine	Piano keys
Steel ball bearings	Basketballs	Linoleum	Photographic film	Mayonaise



B E E F O

Brake Fluid	Mayonaise	Bone china	Paint brushes	Leather chairs
Paints	Marshmallows	Pasta	Pet food	Textiles for car upholstery
Insecticides	Cake mix	BEEF	Piano keys	Machine Oil
Steel ball bearings	Car Polish	Gelatin	Floor wax	Tires
Feed	Car Wax	Soap	Candy	Candles

B E E F O

Steel ball bearings	Luggage	Machine Oil	Baseballs	Cellophane
Brake Fluid	Gelatin	Leather chairs	Emery board	Crayons
Soap	Cake mix	BEEF ✓	Deodorant	Paints
Marshmallows	Cosmetics	Feed	Leather shoes	Glue
Shaving cream	Bandages	Floor wax	Insecticides	Shoe cream

B E E F O

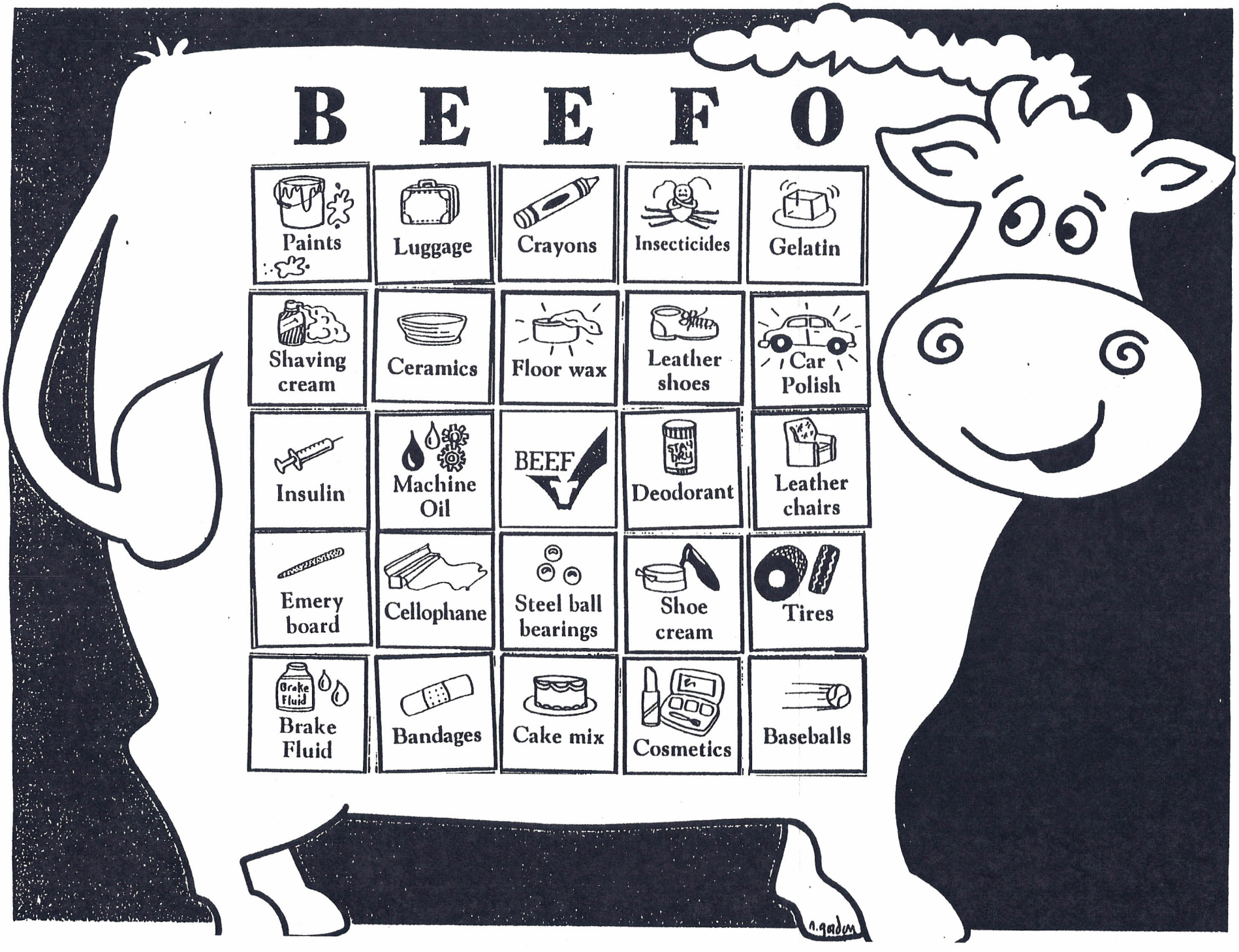
Car Polish	Tires	Crayons	Gelatin	Mayonaise
Car Wax	Machine Oil	Leather shoes	Soap	Marshmallows
Bandages	Linoleum	BEEF	Candy	Pet food
Luggage	Cellophane	Baseballs	Basketballs	Leather chairs
Paints	Glue	Footballs	Chewing gum	Photographic film

B E E F O

Crayons	Glue	Bandages	Luggage	Deodorant
Leather shoes	Baseballs	Cellophane	Ceramics	Vitamine B12
Photographic film	Footballs	BEEF	Shaving cream	Cosmetics
Basketballs	Emery board	Linoleum	Perfume	Iron pills
Chewing gum	Detergent	Oleo margarine	Insulin	Paint brushes

B E E F O

Paints	Luggage	Crayons	Insecticides	Gelatin
Shaving cream	Ceramics	Floor wax	Leather shoes	Car Polish
Insulin	Machine Oil	BEEF	Deodorant	Leather chairs
Emery board	Cellophane	Steel ball bearings	Shoe cream	Tires
Brake Fluid	Bandages	Cake mix	Cosmetics	Baseballs



B E E F O

Crayons	Luggage	Car Polish	Candles	Perfume
Pasta	Bone china	Cake mix	Paints	Soap
Iron pills	Linoleum	BEEF	Gelatin	Pet food
Marshmallows	Chewing gum	Leather shoes	Brake Fluid	Oleo margarine
Photographic film	Glue	Deodorant	Shoe cream	Tires

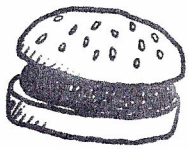
How The Cheeseburger Fills A Pyramid

Objectives: Students will:

- Begin to understand the food groups of the food pyramid and how a cheeseburger fits into that pyramid.

Materials Needed:

- Poster of the USDA Food Pyramid



Keywords: Food pyramid, beef, condiments, nutritious

Brief Description:

Most burgers are made from ground beef and some kind of bread. Ground beef can be made from just about any part of a beef animal. Ground beef or ground sirloin has the least amount of fat. The average hamburger patty contains between 16 and 19 grams of fat. Ground beef is high in protein, containing 18 amino acids, eight of which are essential to human life. You can make your hamburger even more nutritious by choosing different breads and condiments. Whole-wheat buns add nutritional value.

The average American eats about 64 pounds of beef each year, more than the people in any other country. Nearly one-half of that comes from ground beef and about one-fourth in the form of hamburgers.

Lesson:

1. In a group, with a large poster of the food pyramid, the teacher will introduce the sections of the pyramid. Then pass out the "What's in a Burger" sheet. Have a group discussion as to where all the condiments of the burger will fit into the food pyramid. Children may color the "What's in a Burger" sheet. Referring to the last statement on this sheet (It all begins on a Farm) the teacher could lead a discussion about how each condiment was raised on a farm and tended by many workers and a farmer.
2. Review the food groups and have the children complete the "Build a Burger" worksheet.

What's in a burger?

Meat Patty — *ground meat made from beef, pork and poultry.*

Cheese — *made from the curd of milk.*

Lettuce — *the most popular salad ingredient.*

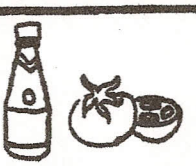
Tomato — *a tender fruit native to Peru.*

Onion — *an edible bulb with a pungent flavor.*

Pickles — *a cucumber in a vinegar solution.*

Mayonnaise combination of eggs, oils, spices and vinegar.

Mustard — ground mustard seed and oil.



Ketchup — a tomato sauce used for spreads and dip.

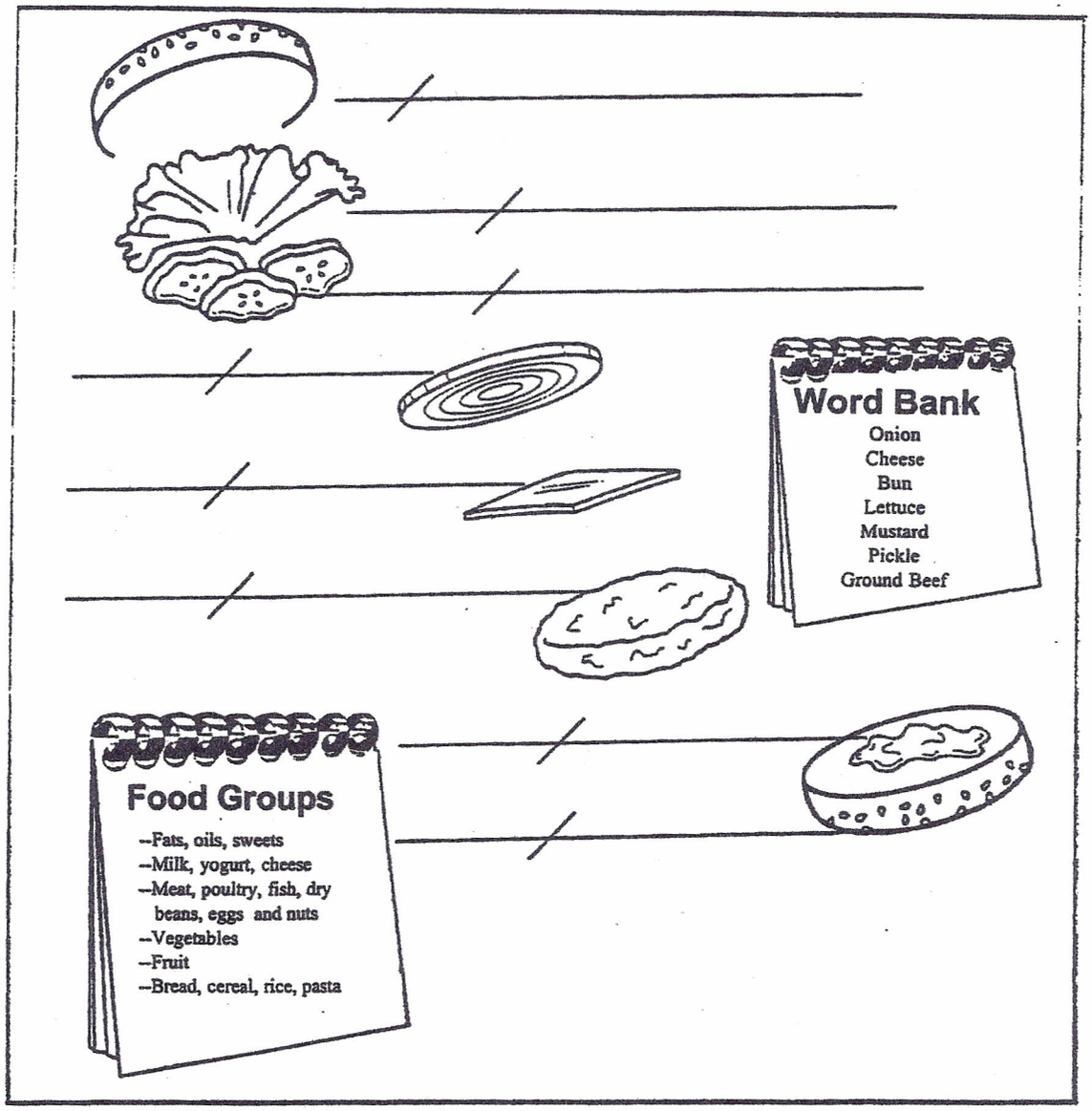
Buns — *a leavened, unsweetened bread used to hold a sandwich.*

It all begins on a Farm. . . .

Name _____

Build a Burger

Usually, a cheeseburger has products from all the food groups. Can you identify the parts of this cheeseburger? In the left blank, write the name of the cheeseburger part. In the right blank, list the food group it belongs to. Color the cheeseburger.



BURGER BUILDER

A V N Z C C L A M E T T N D C

R I Q M H M D S S U N R Z R O

C L S E I J Z I X M E Z T A Z

O U E E H C A L C O M R P T O

S S C F I N Q W S N N G J S N

E E Z U N T O M A T O E S U I

B O I O M B T B E A R I H M O

F U Y R M B L A P N I F D M N

N A R F F E E U P A V I N R S

M I E G T H H R V I N E G A R

H E A T E C C B U N E X N F T

B L U R T R A N S E L K C I P

N C U E G O G H E L R V Y K I

E M K P Y I X Z V R U I T V E

S E C I P S M N Y W F P V J W

BEEF
CHEESE
FARM
KETCHUP

PATTIES
TOMATOES

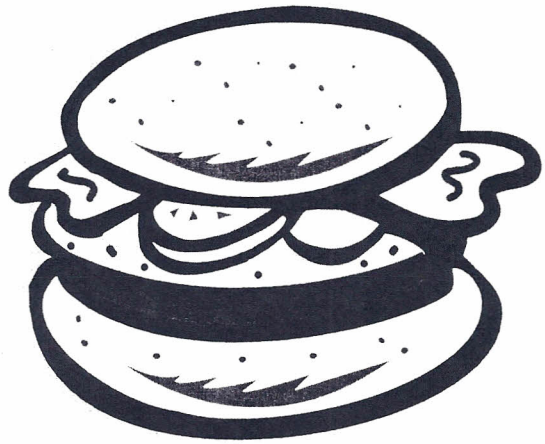
BUN
CUCUMBER
FRENCHFRIES
LETTUCE
MUSTARD
PICKLES
VINEGAR

BURGER
ENVIRONMENT
GRAIN
MAYONNAISE
ONIONS
SPICES

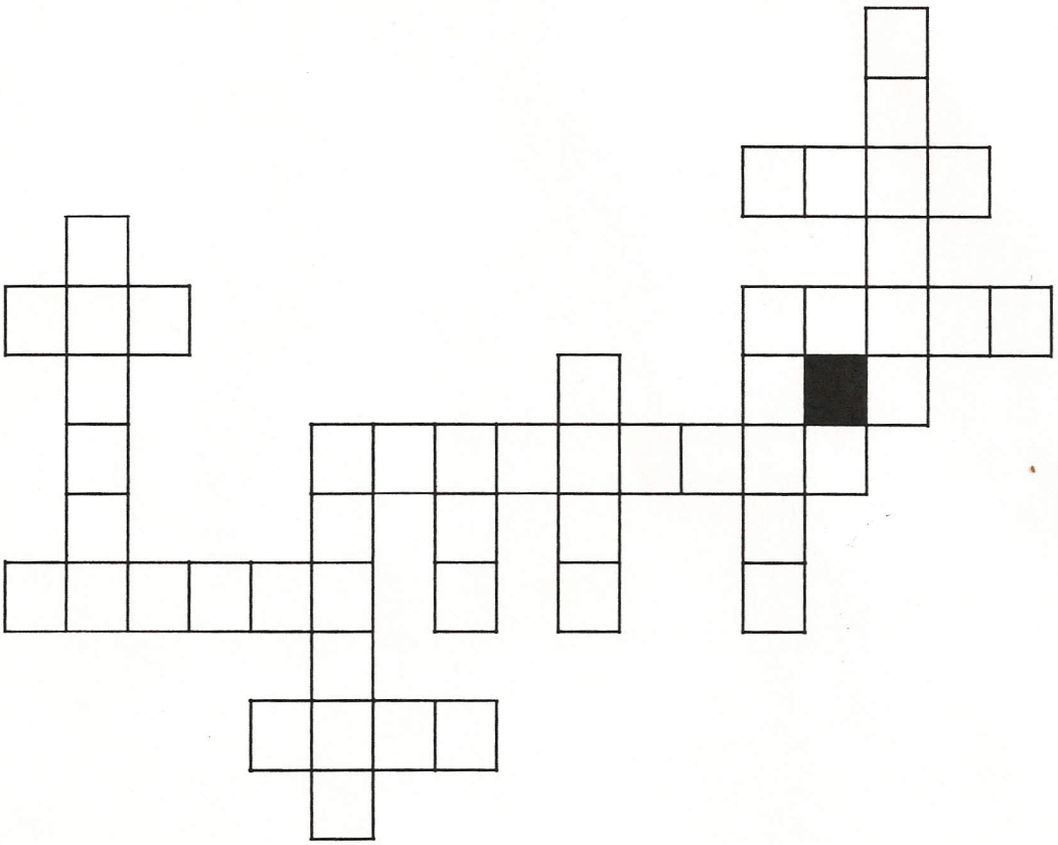
B

Beef, it's what's for dinner®.

Beef has **ZIP** — **Z**inc, **I**ron, **P**rotein.



Beef/Dairy



Fill in the crossword with these words:

beef
bovine
bull
cow
hamburger
heifer
horned
milk
moo
polled
steak
steer

Each day, a cow spends six hours eating and eight hours chewing its cud.