

# Beautiful Bovine

## Objective

Students will identify the similarities and difference between cows and humans. Students will classify different types of cattle. Students will use their creativity to design and create a fantasy cow.

## Key Words

bovine, cows, farm animals, affixes, fluency, vocabulary, patterns, data analysis, graphs, glyphs, classify, modeling, permutation

## Background

How is a cow different from you and me? Cows have four legs instead of two. It's a good thing they are built the way they are, since they get much of their food from the ground. Cows have hooves instead of feet. They do have toes, but only two on each hoof. The hooves of cattle help loosen up the soil so new grass can grow more easily.

The ears of a cow are much larger than ours and help transfer heat. Breeds that originated in warmer climates have larger ears and looser skin to help their bodies get rid of heat. Some cattle can even use their ears to fan themselves in warm weather. Loose skin also protects the cattle from insect bites.

Cows have tails, which is a good thing, since they don't have hands to swat away the flies, like we do.

A female cow has one udder and four teats that produces milk after she has had her first calf. A male is called a "bull," and a female is called a "cow."

A cow's stomach has four compartments, while people have only one.

The cow's long tongue feels like sandpaper and helps pull in the grass and hay that she eats.

## Science

1. Assemble the pretend parts of a cow as follows:

- udder—Stuff surgical glove with tissue. attach yarn to tie around student's waist.
- horns and ears—Cut cardboard in the shape of a cow's ears and horns, and attach them to a plastic headband.
- hooves—Cut four cardboard hoof prints, and attach them to the bottoms of the four socks.
- tongue—Cut sand paper in the shape of a cow's tongue. Attach yarn to tongue to hang around student's head.

## Oklahoma Academic Standards

### PRE-KINDERGARTEN

Data & Probability: 1.1,2

Speaking & Listening: 1.R.1,2,3,4;  
1.W.1,2

Vocabulary: 4.R.1

### KINDERGARTEN

Life Science: 1-1

Earth and Human Activity: 3-1

Data & Probability: 1.1,2,3

Speaking & Listening: 1.R.1,2,3,4;  
1.W.1,2,2

Vocabulary: 4.R.1

### GRADE 1

Life Science: 1-1

Data & Probability: 1.1,2,3

Speaking & Listening: 1.R.1,2,3,4;  
1.W.1,2

Vocabulary: 4.R.1,2,4,5

Visual Art—3.1,2; 4,4

### GRADE 2

Life Science: 4-1

Data & Probability: 1.1,2,3

Speaking & Listening: 1.R.1,2,3,4;  
1.W.1,2

Reading Foundations: 2.PWS.2,3

Vocabulary: 4.R.1,2,4,5

Visual Art—3.1,2; 4,4

### GRADE 3

Life Science: 3-1,2; 4-2,3,4

Data & Probability: 1.1,2

Speaking & Listening: 1.R.1,2,3,4;  
1.W.1,2

Reading Foundations: 2.PWS.2,3

Vocabulary: 4.R.1,2,4,5

Visual Art—3.1,2; 4,4

## Materials for Dressing Up a Cow

surgical glove  
yarn  
fly swatter  
plastic headband  
cardboard  
four socks  
sand paper  
four balloons  
leather jacket (optional)  
large bag  
elastic  
yarn  
mirror



- stomachs—Blow up four balloons, and tie them together.
  - cow hide—Leather or suede jacket or vest
- Place the items in the large bag.
- Ask one of your students to volunteer to be dressed up to look like a cow, or ask your principal or another adult to be the volunteer.
- Students will imagine what a cow looks like and what special parts it has that are different from a human. What makes a cow a cow?
- Students will suggest ways to make the volunteer look like a cow. As they come up with ideas, dress the student volunteer with the props in your bag. If the volunteer is a student, hold the mirror so he or she can see why the others are laughing.
- Read and discuss background information regarding each body part as you dress up your volunteer. Model expressive reading, or provide students with copies of the Reading Page for expressive oral reading practice.

2. Hand out the student worksheet.
  - Students will list the similarities and differences between a cow and a human on the Venn diagram.
  - Draw a Venn diagram on the chalkboard.
  - Record and discuss the similarities and differences students have listed.
3. Ask students what makes each of them different from their classmates.
  - List all the suggestions on the chalkboard.
  - Create a classroom graph based on hair color, eye color and other differences suggested by students.
4. A cow has two toes on each hoof. People have five toes on each foot. A cow has four hooves. People have two feet.
  - Students will create tables to compare the number of toes on a person with the number of hooves on a cow.

## English Language Arts

1. Write the following words on the chalkboard in one column: “bovine,” “equine,” “porcine,” “ovine,” “canine.” In another column, write these words: “swine,” “cow,” “horse,” “dog,” “sheep.”
  - Students will look in the dictionary to connect the words in the first column with words in the second column. (Answers: bovine—cow; equine—horse; porcine—swine; ovine—sheep; canine—dog.)

## Math

1. Write the following cattle breeds on the chalkboard: Hereford, Angus, Brahma, Jersey, Holstein, Guernsey.

- Students will list the breeds in as many permutations as possible. Students will make Cow Glyphs, using the following key:
  - color of ear tag=month of birthday
  - number of spots=age of child
  - color of pipe cleaner tail=favorite cow book (black=Book 1, white=Book 2)



## Visual Art

- Students will work in groups to design their own cows.
  - Assign each person in the group to one part of the cow.
  - After each student has completed his/her part, the group will put all the parts together to form one cow.
  - Students will share their creations with the class.

## Extra Reading

- Denslow, Sharon Phillips, and Lynne Rae Perkins, *Georgie Lee*, Greenwillow, 2002.
- Cronin, Doreen, and Betsy Lewin, *Click, Clack, Moo: Cows That Type*, Little Simon, 2011.
- Murphy, Andy, *Out and About at the Dairy Farm*, Picture Window, 2004.
- Patrick, Jean LS, and Alvis Uptis, *Cows, Cats and Kids: A Veterinarian's Family at Work*, Boyd's Mills, 2003.
- Peterson, Cris, *Clarabelle: Making Milk and So Much More*, Boyds Mills, 2007.
- Peterson, Cris, *Amazing Grazing*, Boyd Mills, 2002.
- Ray, Hannah, *Cows (Down on the Farm)*, Crabtree, 2008.
- Simmons, Lynn Sheffield, *Sugar Lump, The Orphan Calf*, Pelican, 2003.
- Townsend, Una Belle, Bob Artley and Yolanda Powell, *Grady's in the Silo*, Pelican, 2003.
- Wheeler, Lisa, and Ponder Goembel, *Sailor Moo: Cow at Sea*, Atheneum, 2002.
- Wolfman, Judy, and David Lorenz Winston, *Life on a Cattle Farm*, Lerner, 2002.

## Materials for Cow Glyphs

white paper plates with one hole punched out for a tail

several construction paper squares in the following colors: red, orange, yellow, light green, dark green, light blue, dark blue, purple, pink, brown, black, white (enough colors to represent each month your students have birthdays)

extra black, brown and/or white paper for ears

black circles to represent spots (between 75 and 125, depending on the age and number of students)

black Chenille sticks

white Chenille sticks

chart paper (for tallying)

crayons

scissors (1 per student)

glue (1 per student)

## Vocabulary

**bovine**—any of a group of ruminant mammals including the oxen, bison, and buffalo that have hollow horns and are related to the sheep and goats

**breed**—a group of animals or plants usually found only under human care and different from related kinds

**hoof**—a covering of horn that protects the front of or encloses the ends of the toes of some mammals (as horses, oxen, and pigs) and that corresponds to a nail or claw

**poll**—to cut off or cut short the horns of (cattle)

**udder**—a large bag-shaped organ (as of a cow) consisting of two or more mammary glands enclosed in a common pouch but with each having a separate nipple

**veterinarian**—a person who is qualified and has been given the authority to treat diseases and injuries of animals

# Beautiful Bovine

---

How is a cow different from you and me? Cows have four legs instead of two. it's a good thing they are built the way they are, since they get much of their food from the ground. Cows have hooves instead of feet. They do have toes, but only two on each hoof. The hooves of cattle help loosen up the soil so new grass can grow more easily.

The ears of a cow are much larger than ours and help transfer heat. Breeds that originated in warmer climates have larger ears and looser skin to help their bodies get rid of heat. Some cattle can even use their ears to fan themselves in warm weather. Loose skin also protects the cattle from insect bites.

Cows have tails, which is a good thing, since they don't have hands to swat away the flies, like we do.

A female cow has one udder and four teats that produces milk after she has had her first calf.

A male is called a "bull," and a female is called a "cow."

A cow's stomach has four compartments, while ours has only one.

The cow's long tongue feels like sandpaper and helps pull in the grass and hay that she eats.

Name \_\_\_\_\_

# Beautiful Bovine

Can you think of some ways that a person and a calf are alike? How are they different? Be sure to include eyes, hair, legs, etc.

