

Beautiful Bovine

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.

Language Arts (Affixes, Fluency, Writing, Oral Language)

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.
 - stomachs—Blow up four balloons, and tie them together.
 - cow hide—leather or suede jacket or vest
- Place the props 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.
- Ask students to imagine what a cow looks like and what special parts it has that are different from a human. What makes a cow a cow?

P.A.S.S.

KINDERGARTEN

Creative Skills —1.1,2,3
Reading—4.; 6.2
Writing—1.1
Oral Language—1.2; 2.1;
3.1
Math—1.1; 2.1
Science Process—1.1

GRADE 1

Math Process —1.3; 5.1
Math Concept—5.1a
Reading—8.1d
Writing—1.1
Oral Language—1.1; 3.1
Science Process—2.1

GRADE 2

Math Process —1.3; 5.1
Math Concept—1.1; 5.2
Reading—4.1
Oral Language—1.1; 3.1,2
Science Process—2.1
Visual Arts—3.3

GRADE 3

Reading—1.2; 3.1
Oral Language—1.1; 3.1
Math Process —1.3; 5.1
Math Concept—5.2b
Visual Arts—3.3
Science Process—2.1
Life Science—2.1
Visual Arts—3.3

GRADE 4

Math Process —1.3
Math Content—5.1a
Reading—1.2b
Oral Language—1.1; 3.1,3
Science Process—2.1
Life Science—3.2
Visual Arts—3.3

Materials

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

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

—Ask students to 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. 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 (Problem Solving, Patterns, Data Analysis with Graphs) / Science Process (Compare, Classify)

1. 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.

2. Ask students what makes 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.

3. 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.

4. 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.

Visual Arts (Expression)

1. 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

Grave, Marc, and Grace Goldberg, *Farm Animals*, McClanahan, 1997. (Board Book)

Sill, Cathryn, and John Sill, *About Mammals: A Guide for Children*, Peachtree, 1998.

Walsh, Melanie, *Do Pigs Have Stripes?* Houghton Mifflin, 1996.

Name _____

Beautiful Bovine (Reading Page)

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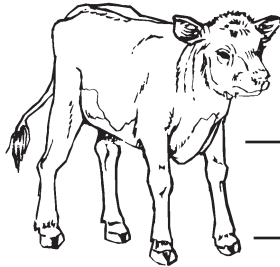
A cow's stomach has four compartments, while ours has only one.

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.



Different
Calves moo.

Alike

Both have eyes.



Different
People speak.

In two sentences, summarize what you learned on the back of this paper.