

# BEEF OR DAIRY?

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**SUBJECTS:** Science, Math, Visual Arts

**STUDENT SKILL:** (Math) The student will identify two-dimensional geometric shapes and objects in everyday situations. (Science) The student will compare and contrast similar and/or different characteristics in a given set of familiar organisms. (VA) The student will demonstrate beginning skills of composition using the elements of art and principles of design.

**OBJECTIVE:** Students will learn to distinguish between beef and dairy cows by identifying their basic body shapes.

## **BACKGROUND**

In Oklahoma, cattle are a familiar part of the rural landscape. Most of the cattle you see are beef cattle. Cattle and calf operations are the number one agricultural commodity in our state, and our state ranks fourth in the nation in the production of beef cattle. In 2001 Oklahoma had 1.9 million beef cows and 90,000 milk cows.

What is the difference between a beef cow and a dairy cow?

We get meat from beef cows and milk products from dairy cows. Although females from all cattle breeds produce milk and meat, some cattle are better at giving milk and some are better at providing meat.

Do dairy cows look different from beef cows?

Since we get milk from dairy cows, they usually have very large udders. For that reason their basic shapes are different from beef cows. The basic shape of a beef cow is a rectangle. The basic shape of a dairy cow is a triangle.

Some common dairy cattle have markings that make them easy to recognize. Holstein cattle are probably the easiest to recognize because they are white with black spots. But dairy cattle, like beef cattle, come in many different colors.

Do dairy farmers take care of dairy cattle the same way ranchers take care of beef cattle?

Because they must be milked every day, dairy cattle usually

## MATERIALS

chalkboard

chalk

common items  
representing a  
variety of basic  
shapes



**VOCABULARY**

udder  
herd  
beef  
cow  
calf  
steer  
heifer  
bull  
cattle  
bovine

stay close to the dairy barn. Beef cattle do not have to stay so close to home and are sometimes moved around from field to field. Sometimes the fields are many miles away from the farm or ranch house. That is another reason the cattle you see in fields along the side of the road are more likely to be beef cattle.

**ACTIVITY**

1. Draw a variety of basic shapes on the chalkboard—square, rectangle, circle, triangle, oval, etc. Provide several common items representing these shapes, and have students match them as closely as possible with the basic shapes you have drawn on the chalkboard.
2. Ask students to help you draw a cow on the chalkboard by telling you which basic shapes to use.
3. Ask students to tell you what they know about cows. Write their statements on the chalkboard. Use the questions in the background material to lead a discussion about cows.
4. Show students a picture of a dairy cow and a picture of a beef cow. Ask if they can see differences in their basic shapes. Hand out Student Worksheet A, and have students identify which cows are beef cows and which are dairy, based on their shape.
5. Hand out beef and dairy booklets (Student Worksheets B and C). Have students fold the booklets as directed, then read through them one at a time. Have students color the pictures according to the colors indicated for each breed.

**ADDITIONAL ACTIVITIES**

1. Have students design their own beef and dairy cows, starting with the appropriate shapes.
2. Bring products made from beef and dairy cattle to class and have students sort them to create beef and dairy product tables.
3. Bring beef and dairy snacks, and have students sort them before eating them.

**BOOKS**

Kaizuki, Kiyonari, *A Calf is Born*, Orchard, 1990.

**EVALUATION**

Were students able to recognize basic shapes in common things?  
Were they able to recognize the difference between beef and dairy cattle by looking at their shapes?

Oklahoma Ag in the Classroom is a program of the Oklahoma Cooperative Extension Service, 4-H Youth Development, in cooperation with the Oklahoma Department of Agriculture, Food and Forestry, and the Oklahoma State Department of Education.

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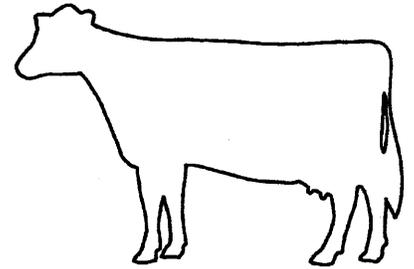
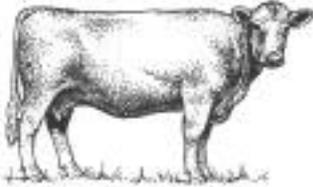


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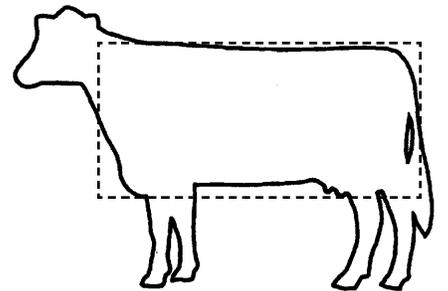
# Beef or Dairy?

# A

A dairy cow is shaped like a triangle; a beef cow is shaped like a block. Draw lines from the cows below to show if they are beef or dairy cows.



A dairy cow is shaped like a triangle.



A beef cow is shaped like a rectangle.



