Update 1

Grades 7-12

Seven Major Breeds of Dairy Cattle in the U.S.

Objectives:

- Students will be able to name the major breeds of dairy cattle in the United States.
- Students will be able to explain at least on benefit for each breed of dairy cattle.
- Students will be able to name the differences between each breed of dairy cattle.

Approximate Lesson Length: 40 to 45 minutes (additional time for activities)

Materials Needed:

- Computer or paper and pencil
- Multimedia projector and screen
- Seven Major Breeds of Dairy Cattle in the United States PowerPoint
- Copies of "Seven Major Breeds of Dairy Cattle Lab Sheet" and Answer Key
- AAC Calves Representing Major Breeds Cards

Vocabulary:

Ayrshire, Breed, Brown Swiss, Guernsey, Holstein, Jersey, Milking Shorthorn, and Red and White

Lesson Components:

Component	Time	Component	Time
Intro & Activating Strategy	10 min.	Seven Breeds of Dairy Lab	15 min.
PowerPoint & Discussion	10 min.	Lesson Closure—Kahoot Game	10 min.

Introduction:

Red, white or brown cow? There are currently seven major breeds of dairy cattle recognized by the Purebred Dairy Cattle Association, a group that governs breed standards and characteristics. Today we are going to learn about each of the seven major breeds of dairy cattle in the United States.

Activating Strategy:

Being able to recognize dairy breeds at a glance is a valuable skill for anyone interested in the dairy industry. In addition, there are certain breeds that have desirable traits for certain production scenarios.

Let's watch a <u>video</u> to help you recognize each of the major breeds of dairy cows and some special characteristics.

PowerPoint and Discussion:

Using slides 8 -14, go over the basic facts about each of the seven major breeds of dairy cattle.

Alternative Engagement—Seven Breeds Jigsaw Activity. Instead of telling the students these basic facts on slides 8 -14, you could divide the class into seven groups and have students complete this PowerPoint slide of facts instead. You could give the students the breed association links (provided on slide 15) and have each group research the specific website to find these basic facts. All information will be found on these websites as they were used to gather the facts on these slides.

Connection to Adopted Calf Closure: "Today you learned about the seven major breeds of dairy cattle in the United States. Identify the breed of our Adopt a Cow calf and share one important point you learned about this breed."

Seven Major Dairy Cattle Breeds Lab:

For this lab, we used one adopted calf to represent each of the seven major breeds of dairy cattle. If your adopted calf has been used, then you are able to complete the lab without collecting the necessary information on slide 19. However, if your adopted calf is not one of the seven, then you will need to provide the information to the students.

Introducing the lab: "Let's look at some of the Adopt a Cow calves to compare and contrast them with our learned information about the seven major breeds of dairy cattle in the United States. You will be working together with a partner to apply this information to some Adopt a Cow calves which represent each of the main breeds. But first, we will list the necessary information we have received about our very own Adopt a Cow calf."

After completing slide 19 together, assign students partners. Give each pair the "AAC Calves Representing Major Breeds Cards" and the "Seven Major Breeds of Dairy Cattle Lab Sheet." Allow students class time to work together on the lab, walking around providing assistance as needed.

Comparison Closure: "Today we compared our adopted calf with other calves in the program which are the same or different breed. Looking at our adopted calf and her breed, how does she compare to the calf used to represent her breed?"

Lesson Closure—Kahoot Game:

To formatively assess what students learned in this lesson, you will facilitate a Kahoot game. You need to have a Kahoot account (free to all educators) to access the already prepared game.

Kahoot Activity: "Today we learned about each of the seven breeds of dairy cattle and their important qualities. Let's play a <u>Kahoot game</u> to test your recognition of the breeds and what makes each breed special."

Use Slide 31 to make sure students know how to play Kahoot. Click <u>Kahoot game</u> to access the 16-question multiple choice assessment. Facilitate the game play.

Lesson Closure: "Today you learned about each of the seven breeds of dairy cattle and their important qualities. Tell us your favorite breed of dairy cow and at least two reasons why it is your favorite breed of the seven."

Date:

Adopt a Cow Update 1 Lesson

Seven Major Breeds of Dairy Cattle Lab

Directions: Answer the questions below in the spaces provided.

1.	Given what you have learned already about the seven major breeds of dairy cattle in the U.S., complete the following questions.
	Which breed of dairy cow is the biggest in size?
	b. Which breed of dairy cow is the smallest in size?

2. Using the information on your adopted calf, record the following information in the table below.

Name	Breed	Birth Height (in)	Birth Weight (lb)	Farm Name	State

3. Using the information of the AAC calves representing the major breeds of dairy cattle, complete the table below.

Name	Breed	Birth	Birth	Farm Name	State
		Height (in)	Weight (lb)		

Us	Using the information in the table, answer the following questions.					
4.	Which calf is the tallest?	What is her breed?				
5.	Which calf is the shortest?	_What is her breed?				
6.	Do your results from problems 4 and 5 match the a					
	Looking at your adopted calf and her breed, how one of the breed?	loes she compare to the calf used to represent				
8.	Which breed of dairy cow in the United States is y Explain why you chose this breed.					

Date:

Adopt a Cow Update 1 Lesson

Seven Major Breeds of Dairy Cattle Lab

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1.	Given what you have learned already about the seven major breeds of dairy cattle in the U.S., complete the following questions.
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6.	Do your results from problems 4 and 5 match the a					
	Looking at your adopted calf and her breed, how one of the breed?	loes she compare to the calf used to represent				
8.	Which breed of dairy cow in the United States is y Explain why you chose this breed.					

Meet Annie

Ayrshire / Holstein Cross

Birth Height (in):

27 inches

Birth Weight (lb):

55 pounds

Farm Name:

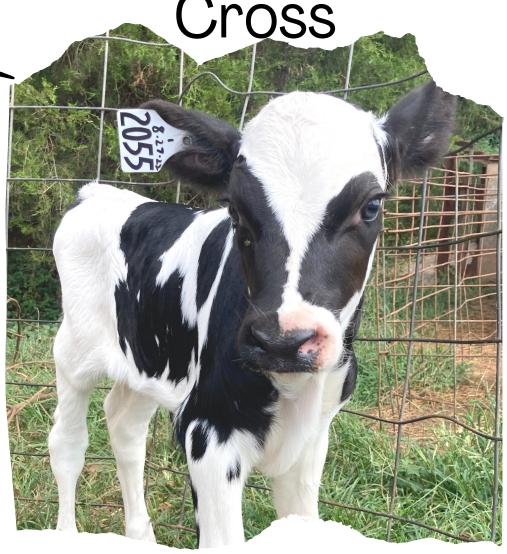
Nance Farm

State:

South Carolina

Owner:

Farmer Caci



Meet Tawny

Birth Height (in):

30 inches

Birth Weight (lb):

70 pounds

Farm Name:

Gervais Family Farm

State:

Vermont

Owner:

Farmer Kati

Brown Swiss



Meet Fancy

Guernsey

Birth Height (in):

28 inches

Birth Weight (lb):

40 pounds

Farm Name:

Triple H Dairy

State:

Kentucky

Owner:

Farmer Chris



Meet Snickerdoodle

Holstein

Birth Height (in):

36 inches

Birth Weight (lb):

100 pounds

Farm Name:

Four Pines Farm LTD

State:

Ohio

Owner:

Farmer Mackenzie



Meet Margie

Jersey

Birth Height (in):

28 inches

Birth Weight (lb):

78 pounds

Farm Name:

Long Green Farms

State:

Maryland

Owner:

Farmer Alice



Meet Ruby

Milking Shorthorn

Birth Height (in):

30 inches

Birth Weight (lb):

72 pounds

Farm Name:

JJC Jerseys

State:

Nebraska

Owner:

Farmer Jodi



Meet Red and White

Courtny

Birth Height (in): 29.5 inches

Birth Weight (**Ib**): 85 pounds

Farm Name:

Rottinghaus Holsteins

State:

Kansas

Owner:

Farmer Stacy





Adopt a Cow Update 1

The Seven Major Breeds of Dairy Cattle in the United States



Introduction



Introduction

Red, white or brown cow? There are currently seven major breeds of dairy cattle recognized by the Purebred Dairy Cattle Association, a group that governs breed standards and characteristics.

Today we are going to learn about each of the seven major breeds of dairy cattle in the United States.



Learning Objectives

- •Students will be able to name the major breeds of dairy cattle in the United States.
- •Students will be able to explain at least on benefit for each breed of dairy cattle.
- •Students will be able to name the differences between each breed of dairy cattle.



Essential Vocabulary

<u>Ayrshire</u> – a breed of dairy cow with reddish-brown spots on a white body, medium in size, and known for her ruggedness and ability to adapt to any environment.

<u>Breed</u> – a group of domestic animals, originated and maintained by humans and having a clearly defined set of characteristics.

<u>Brown Swiss</u> – a breed of dairy cow with gray-brown coloring, large in size, and known as the oldest breed of dairy cow dating back to 400 BC.

<u>Guernsey</u> – a breed of dairy cow with white spots on a light yellowish-tan body, medium in size, and known for her golden colored milk due to a high content of beta carotene & higher amounts of butterfat and protein.

<u>Holstein</u> – a breed of dairy cow with a black-and-white spotted body, largest in size, and making up the largest number of cows of any breed at 90% of dairy cows.

<u>Jersey</u> – a breed of dairy cow with light to medium brown color and large eyelashes, smallest in size and known for the high butterfat content in her milk.

<u>Milking Shorthorn</u> – a breed of dairy cow with red; red and white; or white and roan color; medium in size and known for being the first dairy cow brought to America.

<u>Red & White</u> – a breed of dairy cow with red and white spots; large in frame, and known for being the newest breed of dairy cow since the 1960's.



Seven Major Breeds of Dairy Cattle in the United States



Activating Strategy

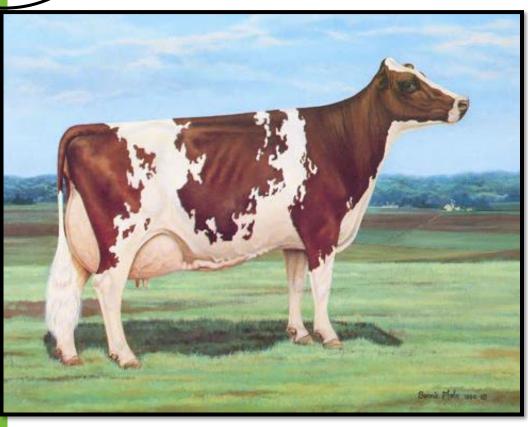
Being able to recognize dairy breeds at a glance is a valuable skill for anyone interested in the dairy industry. In addition, there are certain breeds that have desirable traits for certain production scenarios.

Let's watch a <u>video</u> to help you recognize each of the major breeds of dairy cows and some special characteristics.





Ayrshire



- > Origin: County of Ayr, Scotland
- ➤ Color: Reddish-brown or mahogany and white
- > Arrival in the U.S.: 1822
- > Avg. Size: 1,200 pounds
- > Avg. Milk Production: 17,230 lbs.
- **≻ % Butterfat:** 3.86%
- **% Protein:** 3.15%
- ➤ Misc.: Adaptability to any environment



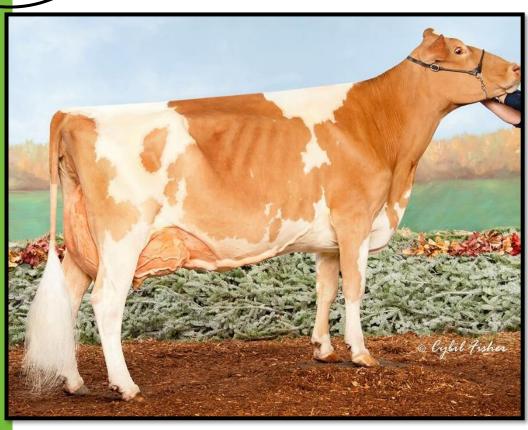
Brown Swiss



- > Origin: Switzerland
- Color: Grey, dark brown, tan, or almost white
- > Arrival in the U.S.: 1869
- > Avg. Size: 1,400 pounds
- > Avg. Milk Production: 23,090 lbs.
- **> % Butterfat:** 4.05%
- **% Protein:** 3.32%
- ➤ Misc.: Oldest breed of dairy cow



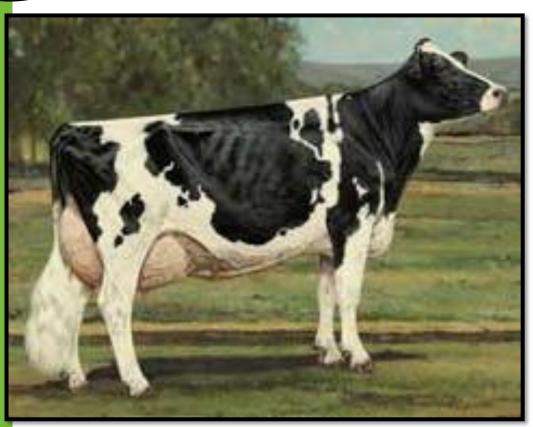
Guernsey



- Origin: Isle of Guernsey, English Channel
- > Color: Golden color and white
- > Arrival in the U.S.: 1840
- > Avg. Size: 1,300 pounds
- > Avg. Milk Production: 17,578 lbs.
- **>** % Butterfat: 4.41%
- **% Protein:** 3.27%
- ➤ Misc.: Milk is golden in color due to high beta carotene



Holstein



- > Origin: The Netherlands
- > Color: Black and white
- > Arrival in the U.S.: 1852
- > Avg. Size: 1,500 pounds
- > Avg. Milk Production: 25,293 lbs.
- > % Butterfat: 3.67%
- **% Protein:** 3.08%
- ➤ Misc.: Makes up 90% of all dairy cows and is the largest of all breeds



Jersey



- Origin: Isle of Jersey, English Channel
- > Color: Brown or fawn
- > Arrival in the U.S.: 1850's
- > Avg. Size: 1,000 pounds
- > Avg. Milk Production: 18,040 lbs.
- **> % Butterfat:** 4.81%
- **% Protein:** 3.65%
- ➤ Misc.: Highest butterfat content in her milk and is the smallest of all breeds



Milking Shorthorn



> Origin: England

Color: Red, red and white, white, or roan

> Arrival in the U.S.: 1783

> Avg. Size: 1,400 pounds

> Avg. Milk Production: 15,000 lbs.

➢ % Butterfat: 3.33%

% Protein: 3.1%

➤ Misc.: First dairy cow brought to America



Red and White Holstein



- ➤ Origin: United States
- > Color: Red and white
- > Arrival in the U.S.: 1964
- > Avg. Size: 1,500 pounds
- > Avg. Milk Production: 25,293 lbs.
- **> % Butterfat:** 3.67%
- **% Protein:** 3.08%
- ➤ Misc.: Newest breed and only breed to originate from the U.S.



Source: Dairy Cattle Breeds Organizations

- Ayrshire Breeders Association <u>www.usayrshire.com</u>
- Brown Swiss Association <u>www.brownswissusa.com</u>
- American Guernsey Association <u>www.usguernsey.com</u>
- Holstein Association www.holsteinusa.com
- American Jersey Cattle Association <u>www.usjersey.com</u>
- American Milking Shorthorn Society www.milkingshorthorn.com
- Red and White Dairy Cattle Association www.redandwhitecattle.com

Connection to Adopted Calf Closure

Today you learned about the seven major breeds of dairy cattle in the United States. Identify the breed of our Adopt a Cow calf and share one important point you learned about this breed.





Seven Major Dairy Cattle Breeds Lab



Introduction

Let's look at some of the past and present Adopt a Cow calves to compare and contrast them with our learned information about the seven major breeds of dairy cattle in the United States.

You will be working together with a partner to apply this information to some Adopt a Cow calves which represent each of the main breeds.

But first, we will list the necessary information we have received about our very own Adopt a Cow calf.



Our Adopted Calf

- Name:
- Breed:
- Birth Height (in):
- Birth Weight (lb):
- Farm Name:
- State:
- Owner:

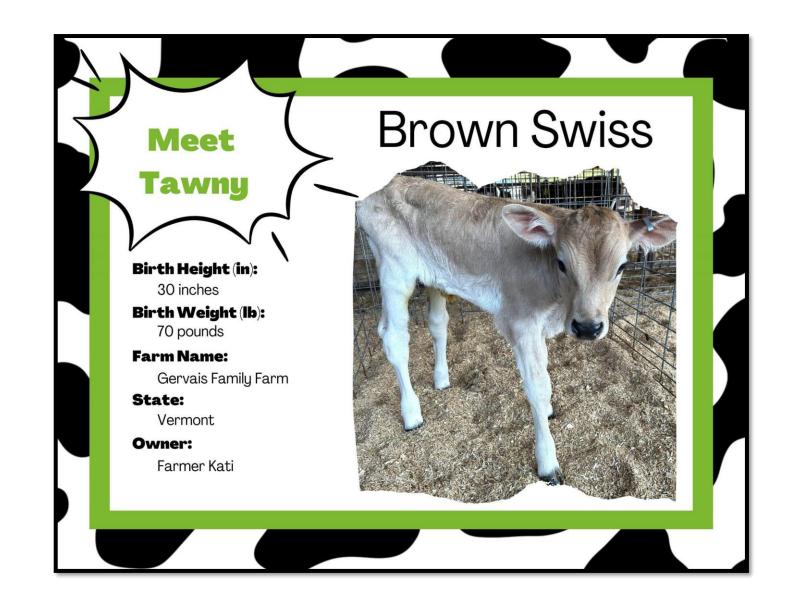


Ayrshire



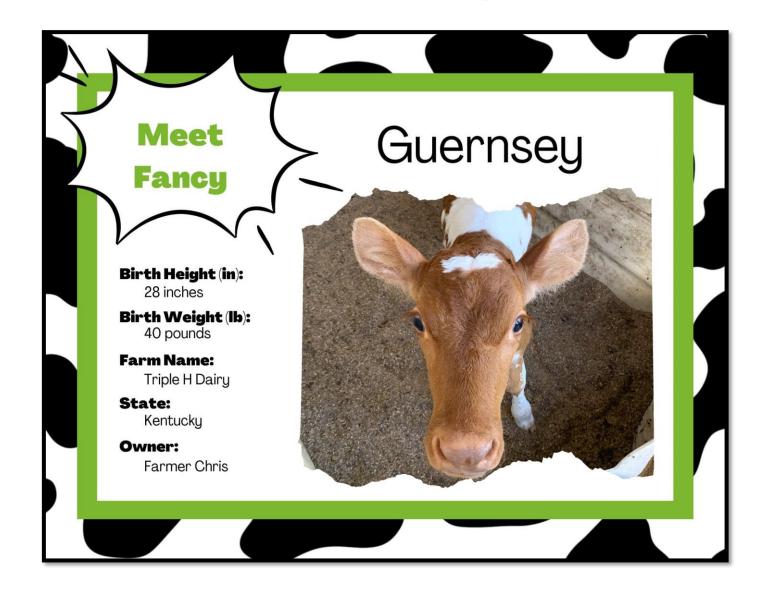


Brown Swiss



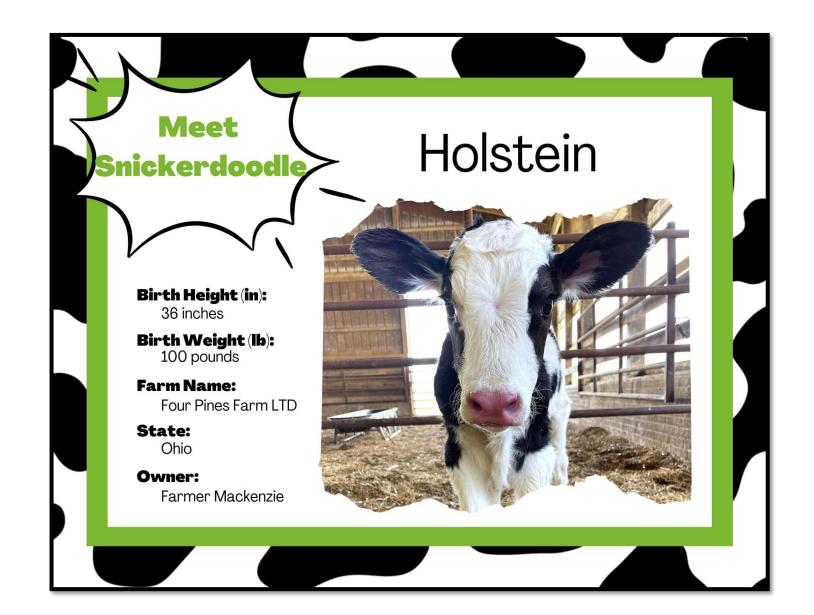


Guernsey





Holstein





Jersey





Milking Shorthorn





Red and White





Seven Major Breeds Lab

Take time in class to work on the Seven Major Breeds of Dairy Cattle lab with a partner.

Comparison Closure

Today we compared our adopted calf with other calves in the program which are the same or different breed. Looking at our adopted calf and her breed, how does she compare to the calf used to represent her breed?





Kahoot Activity



Introduction

Today we learned about each of the seven breeds of dairy cattle and their important qualities. Let's play a Kahoot game to test your recognition of the breeds and what makes each breed special.



It's time to play...



How to Play

- 1.When directed, click the Kahoot box above
- Type in the pin number provided for you and click "ENTER"
- 3.Wait for everyone to join the game
- 4.When the game begins, select the answers you think are correct as fast as you can. As you answer questions, you will earn points.
- 5.The top three winners will be highlighted on the screen

Lesson Closure

Today you learned about each of the seven breeds of dairy cattle and their important qualities. Tell us your favorite breed of dairy cow and at least two reasons why it is your favorite breed of the seven.

