

## Adopt A Cow Growth Chart Activity

### Objectives:

- Students will be able to compare and contrast measurements of different objects using the heights and weights of the six breeds of dairy cows.
- Students will be able to describe how their dairy calf will grow and develop as she reaches adulthood.

### Materials Needed:

- Adopt a Cow Growth Chart (Six Pages)
- Tape to assemble growth chart on wall
- Dry erase markers or pens to mark heights on growth chart

### Introduction:

By participating in the Adopt A Cow Program, your classroom will have the opportunity to follow along with your adopted dairy calf's growth and development throughout the next six months. This growth chart allows students to visualize how big a dairy cow gets throughout her entire life cycle. You can mount this growth chart on your wall and use it to involve your students in Adopt A Cow learning activities during the times in between when you receive Updates about your calf. Follow the directions below to mount the growth chart and select the activities that appeal most to you.

### Mounting Procedures:

- Print all five pages of the growth chart activity out in color. Consider printing them on heavier or cardstock paper to improve their durability during the school year.
- If available, consider laminating all five pages.
- Use scotch tape or clear packing tape to connect the pages together to make a full growth chart measuring from 10 inches at the bottom to 60 inches at the top.
- Identify an empty spot on your wall where students could easily access the chart.
- Measure **10 inches up from your floor** and mount the bottom of the growth chart there.
- Use clear packing or scotch tape to mount the growth chart so it measures to five feet.

### Activity Suggestions:

- **Week 1 Activity:** Once you share the information about your calf, including her birthdate, breed, height, and weight, ask for a volunteer to mark the calf's height on the growth chart. *Be sure to help younger students find the right place to mark and have them write her name and age* (IE: Daisy 1 Week Old). Ask students to identify what breed your calf is. Based on that breed, ask students to look on the growth chart to identify what range of height she should be. Discuss whether your calf is tall, short, or average for her breed. Compare that to how students in your class have a range of heights and weights.

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### Activity Suggestions (continued):

- **Week 3 Activity:** Share the picture you received of your adopted calf with the class and ask students how old she would be right now. After they respond, ask the kids how much they think she has grown in the last three weeks. Then ask them to look at the growth chart and estimate how tall they think she will be when she is fully grown. They would need to know the breed of the calf to find that information. Then have them compare it to how tall they think they will be when they are fully grown. Will the calf be taller than them, or will they be taller than the calf? Who will weigh more? By how much?
- **Week 5 Activity (or week after you receive Update 1):** Ask for a volunteer to chart the calf's height in the latest Update on the growth chart. Then ask the students to look at how tall she is now and how tall she was when you first received information about her. How much did she grow in the past month? Ask for students to share how much they grew in the past month. Who grew more?
- **Week 8 Activity:** It's been about a month since you received an update about your adopted calf. Ask the students to use the growth chart to estimate about how tall they think she might be. They should use their measurement from the last update (at one month old) and what the chart says she will be at six months old based on her breed. If she is two months old, how would you estimate how tall she is using those two numbers?
- **Week 12 Activity (or as you share the information from Update 2):** Ask for students to estimate how tall your calf will be in the latest update. Write their guesses on a white board and then share what Update 2 says her height is. Ask for a volunteer to chart the calf's height in the latest Update on the growth chart. Did anyone's estimate come close to the calf's actual measurement? *Use the lesson plan that comes with Update 2 to lead a discussion on your calf's growth and development.*
- **Additional Activity Ideas:**
  - Use the growth chart to engage the class in a discussion about growth and development. Ask the students to share what they think the words "growth" and "development" mean. Are they the same? How are those two words different? Measuring your height and measuring your weight are two ways to measure your growth. What other ways could you measure growth? How else could you measure development?
  - This growth chart measures your calf's weight and height in pounds and inches. Work with your students to convert that measurement to centimeters and kilograms, which is the metric system of measuring height and weight. Every one inch equals 2.54 centimeters. It takes 453 grams to make a pound. Ask students to use those formulas to figure out what their calf's metric height and weight is. *(IE: at four months old, a calf weighing 400 pounds and measuring 41 inches tall would not yet weigh a full kilogram and would be 104 centimeters tall.)*
  - Explain to students that dairy calves grow to adulthood within two years. That means that your Adopted Calf will reach her full height when they are two years older than they are now. Ask them to look on the chart and estimate how many inches she will grow in those two years. Then have them estimate how many inches they will grow in two years. Who will grow more? How long will it take them to reach their full height?

# DISCOVER Dairy

## ADOPT A COW

### GROWTH CHART ACTIVITY

When full grown,  
Holstein and Brown  
Swiss cows will be  
about five feet tall and  
weigh between 1,400  
and 1,600 pounds.



**GUERNSEY**

A full grown Guernsey  
cow will be about  
52 – 55 inches tall and  
weigh about 1,200  
pounds. How tall would  
they be in feet?

60" \_\_\_\_\_

59" \_\_\_\_\_

58" \_\_\_\_\_

57" \_\_\_\_\_

56" \_\_\_\_\_

55" \_\_\_\_\_

54" \_\_\_\_\_



**HOLSTEIN**

The smallest breed of dairy cows is the Jersey, with most Jersey cows being only about 48 inches tall and 800 pounds when they are full grown.



**JERSEY**



At 14 months of age, a dairy heifer has grown big enough to become pregnant with her first calf. She will begin producing milk when that calf is born 10 months later.

53" \_\_\_\_\_

52" \_\_\_\_\_

51" \_\_\_\_\_

50" \_\_\_\_\_

49" \_\_\_\_\_

48" \_\_\_\_\_

47" \_\_\_\_\_

46" \_\_\_\_\_

45" \_\_\_\_\_

44" \_\_\_\_\_

43" \_\_\_\_\_



**MILKING SHORTHORN**

Both Ayrshire and Milking Shorthorn cows will be about 50 – 52 inches tall and weigh about 1,299 pounds when they are full grown.



**AYRSHIRE**



At six months of age, Holstein, Brown Swiss and Guernsey calves will be about 40 – 42 inches tall and weigh about 400 pounds.



**BROWN SWISS**



A Jersey calf will only be about 35 – 37 inches tall at six months old, weighing about 250 – 300 pounds.

42" \_\_\_\_\_

41" \_\_\_\_\_

40" \_\_\_\_\_

39" \_\_\_\_\_

38" \_\_\_\_\_

37" \_\_\_\_\_

36" \_\_\_\_\_

35" \_\_\_\_\_

34" \_\_\_\_\_

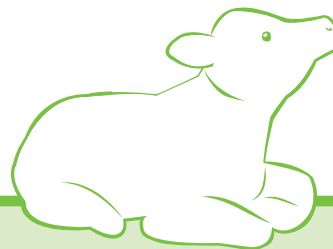
33" \_\_\_\_\_

32" \_\_\_\_\_

A Jersey heifer is about 42 inches tall and weighs about 550 pounds when she reaches a year old. Other breeds are slightly bigger at 12 months old.



Ayrshire and Milking Shorthorn calves will be between 38 – 40 inches tall and weigh about 375 pounds when they are six months old.



A newborn Holstein, Guernsey or Brown Swiss calf should gain about 50 pounds in their first month, making them about 150 pounds and 33 inches at 1 month old.



A Jersey calf is tiny when she is born and will grow to only about 90 pounds and 29 inches when she is one month old.

Ayrshire and Milking Shorthorn calves will weigh about 125 pounds and be about 31 inches tall at 1 month old.



31" \_\_\_\_\_

30" \_\_\_\_\_

29" \_\_\_\_\_

28 \_\_\_\_\_

27" \_\_\_\_\_

26" \_\_\_\_\_

25" \_\_\_\_\_

24" \_\_\_\_\_

23" \_\_\_\_\_

22" \_\_\_\_\_

21" \_\_\_\_\_

Did you know that a newborn calf will be eating solid food – grain or pellets – by the time she is three days old?



The first milk a newborn calf will drink is called colostrum. It's the first milk her mother gives and is filled with antibodies to help her immune system get off to a good start!

20" \_\_\_\_\_

19" \_\_\_\_\_

18" \_\_\_\_\_

17" \_\_\_\_\_

16" \_\_\_\_\_

15" \_\_\_\_\_

14" \_\_\_\_\_

13" \_\_\_\_\_

12" \_\_\_\_\_

11" \_\_\_\_\_

10" \_\_\_\_\_

