

Growth Chart Activity Guide

Lesson 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.

Lesson Objectives

- Students will be able to compare and contrast measurements of different objects using the heights and weights of the seven 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/adhesive to assemble growth chart on wall
- Dry erase markers, pens, or printable growth markers to mark heights on growth chart
- Dairy breed cards

Mounting Procedures

• Growth Chart

- 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.

• Dairy Breed Cards

- Print and cut all 7 dairy breed cards.
- Tape them up around the growth chart in height order from top to bottom, tallest to shortest. While there is always variation in actual breed heights, put them in order by the averages provided.
- Use the cards to make height predictions throughout the program.

Activity Suggestions (continued)

• 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 the height and weight, and have them write her name and age (IE: Daisy 1 Newborn) or use the printable growth markers.
- Add a photo of your calf and her name to the "newborn photo" block.
- Ask students to identify what breed your calf is. Based on that breed, ask students to use the Dairy Breed Cards 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

• Week 3 Activity:

- Share the picture you received of your adopted calf during the birth announcement 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. Use the breed cards to help find the heights. 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 the week you receive the 1 Month Update):

- Ask for a volunteer to chart the calf's height in the latest 1 month 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 (or the week you receive the 2 Month Update):

- 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 how tall they think she might be. They should use their measurement from the 1 month update and what the chart says she will be at six months old based on her breed. Ask a volunteer to chart the calf's height and weight on the growth chart by writing it on or using the printable growth chart markers.
- If she is two months old, how would you estimate how tall she is using those two numbers?

• Week 13 Activity (or the week you receive the 3 Month Update):

- Ask for students to estimate how tall your calf will be in the 3 Month Update. Write their guesses on a white board and then share what the 3 Month Update says her height is and how much she grew. Ask for a volunteer to chart the calf's height from the 3 Month Update on the growth chart by writing it on the chart or using the printable growth chart markers.

• Week 17 Activity (or the week you receive the 4 Month Update):

- Ask for students to estimate how tall your calf will be in the 4 Month Update. Share the information and ask for a volunteer to chart the calf's height from the 4 Month Update on the growth chart by writing it on the chart or using the printable growth chart markers.
- Did anyone's estimate come close to the calf's actual measurement? Use the lesson plan that comes with the 4 Month Update to lead a discussion on your calf's growth.

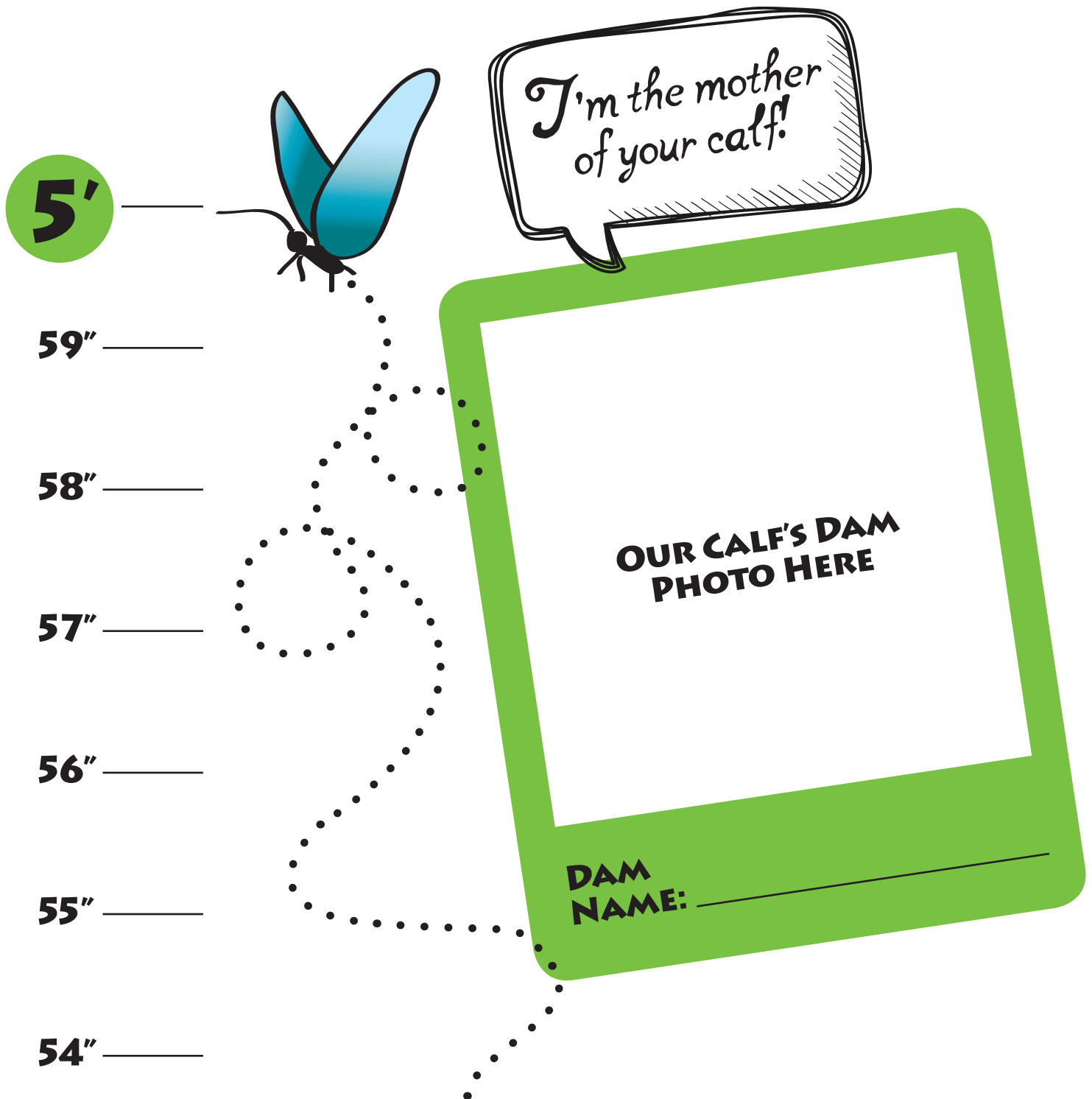
Activity Suggestions (continued)

- **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?

ADOPT A COW

GROWTH CHART ACTIVITY



53" _____

52" _____

51" _____

50" _____

49" _____

4'

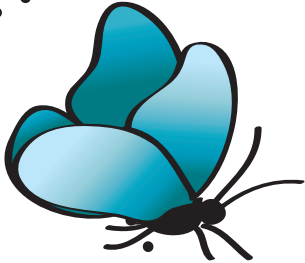
47" _____

46" _____

45" _____

44" _____

43" _____



42" _____

41" _____

40" _____

39" _____

38" _____

37" _____

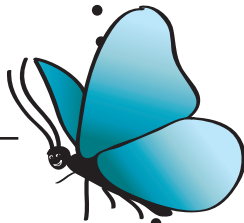
3' _____

35" _____

34" _____

33" _____

32" _____



31" _____

30" _____

29" _____

28" _____

27" _____

26" _____

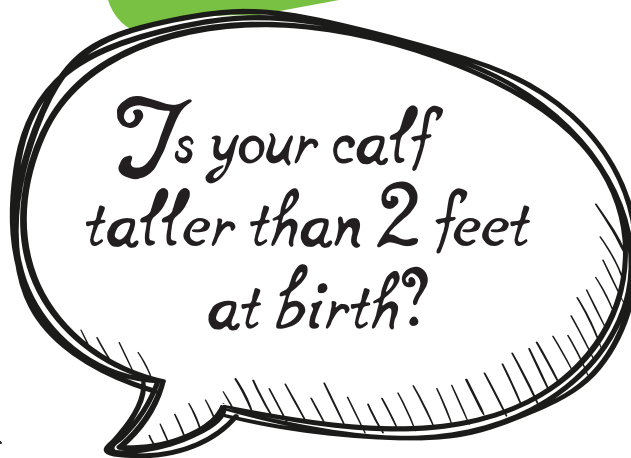
25" _____

2' _____

23" _____

22" _____

21" _____



20" _____

19" _____

18" _____

17" _____

16" _____

15" _____

14" _____

13" _____

1" _____

11" _____

10" _____





Adopt A Cow Growth Chart Markers

Ready to grow along with your Adopt A Cow calf? Cut, tape, track, and discover!

Watch Your Calf Grow

Your Adopt A Cow calf is growing fast, and now you can track every step of the journey!

1. Print this page and cut out each monthly growth marker.
2. Find the month that matches your calf update.
3. Tape the marker onto your chart at the correct height.
4. Compare your calf's height and weight from month to month.
5. Keep adding markers throughout the year to see just how much your calf grows.

By the end of the program, you'll have a colorful timeline showing your calf's journey from a young calf to a growing dairy heifer!

FUN CHALLENGE



Before adding each new marker, make a prediction: How much do you think your calf grew this month? Then compare your guess to the actual height and weight on the marker.



Newborn

Measurements

Height: _____ Weight: _____



1-Month-Old

Measurements

Height: _____ Weight: _____



2-Month-Old

Measurements

Height: _____ Weight: _____



3-Month-Old

Measurements

Height: _____ Weight: _____



4-Month-Old

Measurements

Height: _____ Weight: _____



5-Month-Old

Measurements

Height: _____ Weight: _____



6-Month-Old

Measurements

Height: _____ Weight: _____



7-Month-Old

Measurements

Height: _____ Weight: _____

Jersey

The smallest dairy breed

At Birth: 26 inches and 55 pounds

1 Month Old: 30 inches and 90 pounds

6 Months Old:
42 inches and 300 pounds

Full Grown:
50 inches
tall and
1,000 pounds



Holstein

The largest dairy breed

At Birth: 30 inches and 90 pounds

1 Month Old: 35 inches and 140 pounds

6 Months Old:
48 inches and 450 pounds

Full Grown:
58 inches
tall and
1,500 pounds



Brown Swiss

The oldest dairy breed

At Birth: 29 inches and 85 pounds

1 Month Old: 34 inches and 135 pounds

6 Months Old:
47 inches and 425 pounds

Full Grown:
57 inches
tall and
1,400 pounds



Guernsey

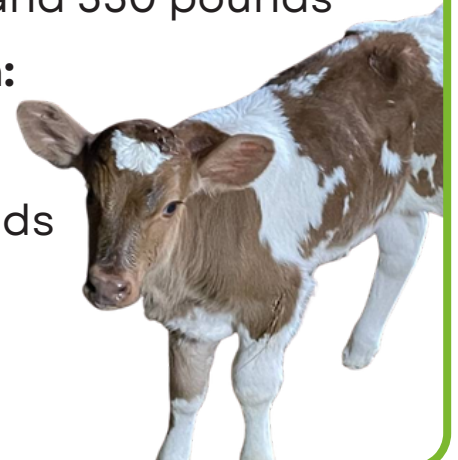
The Golden Guernsey

At Birth: 28 inches and 70 pounds

1 Month Old: 32 inches and 115 pounds

6 Months Old:
45 inches and 350 pounds

Full Grown:
54 inches
tall and
1,300 pounds



Ayrshire

The adaptable dairy breed

At Birth: 28 inches and 75 pounds

1 Month Old: 33 inches and 120 pounds

6 Months Old: 46 inches and 375 pounds

Full Grown: 55 inches tall and 1200 pounds



Milking Shorthorn

America's first dairy breed

At Birth: 29 inches and 80 pounds

1 Month Old: 33 inches and 125 pounds

6 Months Old: 46 inches and 400 pounds

Full Grown: 56 inches tall and 1300 pounds



Red & White Holstein

The newest recognized dairy breed

At Birth: 30 inches and 90 pounds

1 Month Old: 35 inches and 140 pounds

6 Months Old: 48 inches and 450 pounds

Full Grown: 58 inches tall and 1,500 pounds

