Youth Edition

From Farm to Table

With

Dairy and Beef

What is Agriculture?

Agriculture is the science or practice of farming. This involves cultivating the soil, producing crops, raising livestock and in varying degrees, the preparation and marketing of the resulting products. Florida 4-H and Cooperative Extension at the University of Florida have used the research of the College of Agricultural and Life Sciences to improve agricultural production practices of Florida producers. As a result of this research-based education, our nation's farmers are producing food and fiber for much of the world. Agriculture is the United States largest industry, but consider this interesting fact: Less than two out of every 100 people in the US are involved in farming.

Could you be one of the two out of 100 farmers? You can help support farmers by simply being an Agricultural Activist.

Developed by: Lana Cardwell

Acknowledgements

Special thanks goes to my advisor, Dr. Andrew Thoron for his guidance through my years at the University of Florida.

Special thanks to the UF/ IFAS Charlotte County Extension Services for their support and encouragement.

Special thanks to my family for the love, guidance, and support.

This project book was created for my non-thesis project through the University of Florida, College of Agricultural

This Book Belongs to: _____

4-H Age (as of September 1,___): _____

School or Club: _____

County: _____

Start Date: _____

End Date: _____

Teacher or 4-H Leader: _____

County 4-H Agent: _____

From Farm to Table Mission:

The Farm to Table youth program of the UF/IFAS Charlotte County 4-H Organization is an extension-based educational product that encourages participants to form a foundation of appreciation for agriculture in their lives while utilizing a learn-by-doing approach. A diverse and under-served audience will be ages 8-12. The expertise and resources of the University of Florida and the land grant university system will be the guiding light in the development of this program. The purpose of these non-formal educational lessons is to introduce and expose Florida youth residents to the process of food production which focuses on *'Fresh from Florida'* produce, dairy, and beef products. Participants will be considered a new generation of agricultural stakeholders and decision makers.

From Farm to Table Program Values:

- 4-H professionally developed educational material that includes a youth project lesson book and a leader/ adult guiding lesson book.
- Education and growth in the Florida agricultural industry.
- Participant success in forming their own foundation of agricultural awareness.
- To be administered in an approved safe and inclusive learning environment by caring adults in a diverse, non -discriminatory, equal opportunity manner.

Learning Principles:

- Based on the three stages of experiential learning in order to guarantee cognitive learning transfer is acquired. Pre-Trip Stage (administration, instruction, topic content, vicarious exposure), Trip (role of participants, role of organizer), and Post- Trip (debriefing activity, culminating Activity) (Myers and Jones, p.1, 2004).
- Experiential Learning Model will be the core component of the entire program. Participants will experience the activity, share what is learned/ experiences, process the experience into cooking and consumerism, generalize the experience to their everyday lives, and apply what was learned throughout this project (Norman and Cantrell, p.1, 2006).
- Cooperative learning for youth targeted by the development of life skills- head (thinking/ managing), heart (relating/ caring), hands (giving/ working), and health (living/ being) (Mcintosh and Monroe, p.1, 2014).
- Youth will be exposed to real-life learning experiences to enhance learning and transfer.

Program Description:

The From Farm to Table 4-H Program is a six-lesson youth workshop that provides tools for the education, experience, and awareness of Florida agriculture. This program is to inform youth that their food is not grown in a store. Specific emphasis is placed on the Experiential Learning Method, the Life Skills Model and the 4-H slogan, learn-by-doing. To achieve this goal, a project book guideline that youth can have to keep and help guide themselves and their families in smart consumerism, will be included. The project book guideline is designed to be used in any Florida county with emphasis on product knowledge, ingredient identification, cooking basics, recipe reading and configuring, beef product knowledge and by-product knowledge, and exposure to a farm visit/ farmer visit. Grocery store tour to purchase ingredients will be optional. A guidebook will be included for 4-H leaders/ volunteers to utilize in future programs such as this one.

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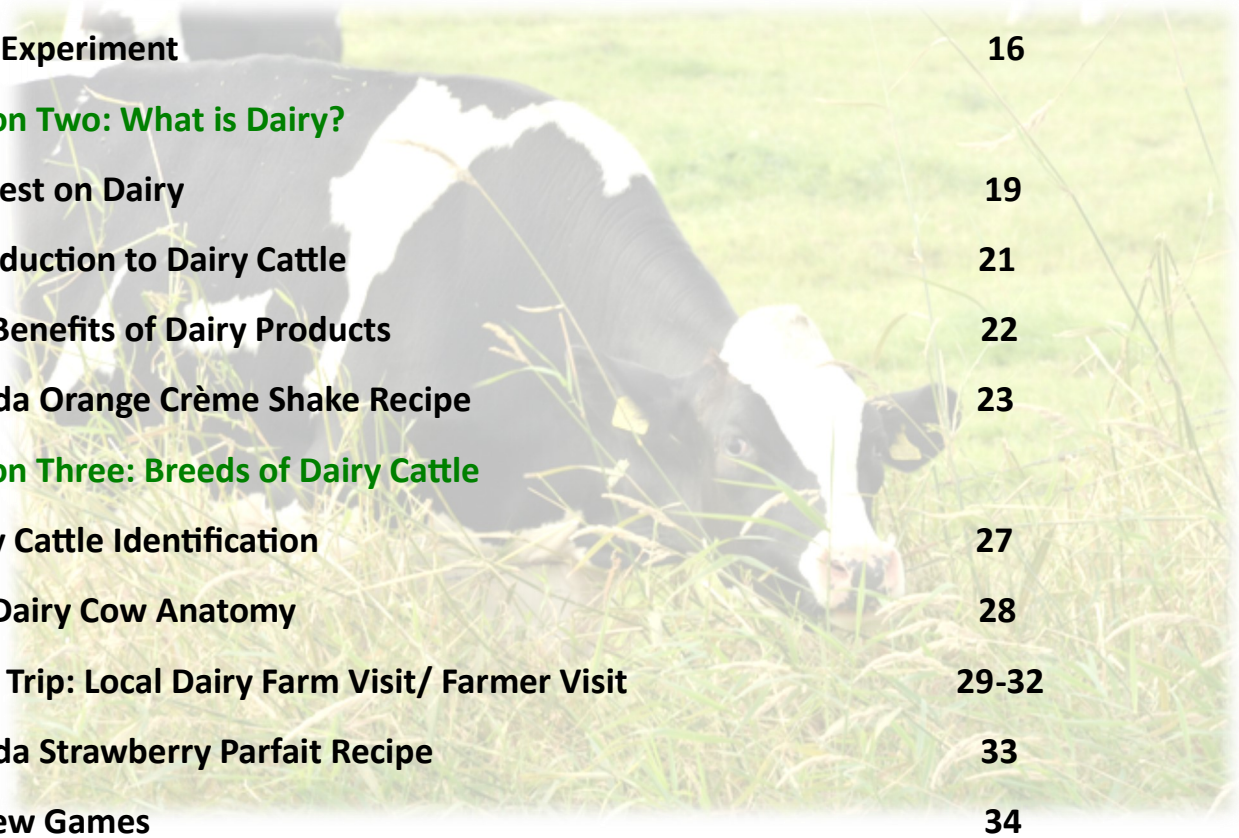

Photo Credit: Canva

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From Farm to Table with Beef and Dairy Objectives

1. **Kitchen Safety, Handwashing, MyPlate**
   a. **Objective 1:** Identify kitchen supplies needed and their specific use in the kitchen.
   b. **Objective 2:** Given specific ingredients for future recipes, compare and contrast the nutritional components of each recipe.

2. **What is Dairy?**
   a. Objective 3: Describe the importance of Florida Dairy Cattle in relation to food products.
   b. Objective 4: Identify the common Florida Dairy breeds and their specific qualities.
   c. Objective 5: Use the recipe instructions to create a dairy infused food.

3. **The Dairy Cow Anatomy**
   a. Objective 6: Complete the dairy cow identification worksheet; identify the anatomy usage of each part.
   b. Objective 7: Experience and then identify the purpose of that particular farm/ farmer/ virtual visit.
   c. Objective 8: Use the recipe instructions to create a dairy infused food.

4. **The Introduction to Beef Cattle**
   a. Objective 9: Identify and Explain the reason why beef cattle is raised.
   b. Objective 10: Define the beef cuts of meat.
   c. Objective 11: Interpret the history of Florida Beef Cattle utilizing a timeline.
   d: Objective 12: Use the recipe instructions to create a beef produce infused food.

5. **Breeds of Beef Cattle/ By-Product Exploration**
   a. Objective 13: Identify the common Florida beef breeds.
   b. Objective 14: Explore and utilize the worksheet to identify and experience beef by-product usage.
   c. Objective 15: Use the recipe instructions to create a beef by-product infused food.

6. **Similarities and Differences of Beef and Dairy**
   a. Objective 16: Utilize the project book to explore and identify the similarities and differences of beef and dairy cattle. Depict what you found on page 45 of the project book.
   b. Objective 17: Reflect and complete the participant feedback survey.

Lesson One:

Kitchen Safety, Handwashing, Nutrition, Basic Supplies

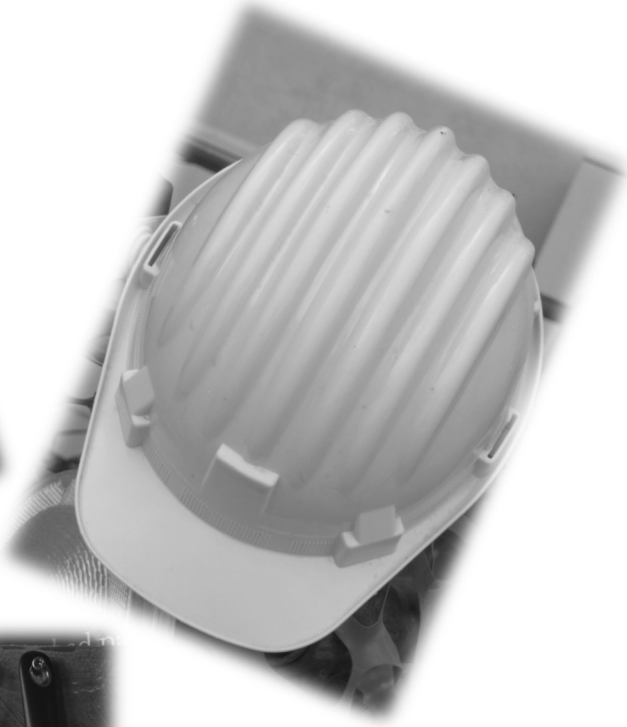


Photo Credit: Canva

As a Result of Completing This Lesson, You Will be able to:

1. **Learners will know how to differentiate nutritional ingredients from non-nutritional ingredients.**
2. **Learners will be able to utilize the correct supply in order to enhance their cooking experience.**
3. **Learners will be skilled in understanding and selecting of nutritional food products.**

My Allergies

Name: _____

Food Allergy: _____

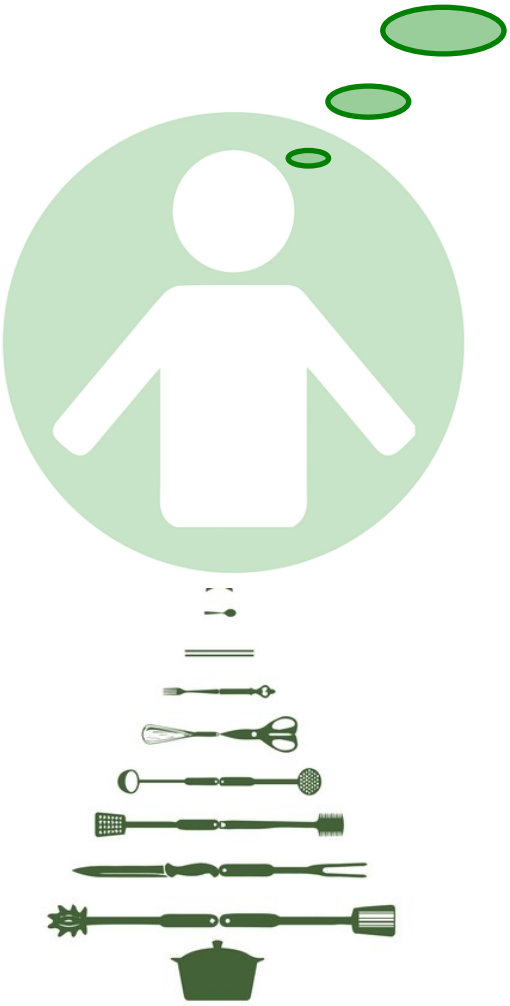
Parent/ Guardian Contact Information: _____

Parent/ Guardian Signature: _____

Teacher/ Leader Signature: _____

Let's Think About Kitchen Safety!

Photo Credit: Canva



1. **Kitchen Appliances:** Please do not touch unless instructed otherwise by an adult.
2. **Knife Usage:** Do not carry knives. Knifes never leave the cutting board. Only use knives to slice food products.
3. **Pot Holders:** Always use when food is expected to be warm or hot. Only use for food products.
4. Hair needs to be up and off of the shoulders.
5. Shirt sleeves need to be rolled up past the elbow.
6. Aprons will be worn at all times in the kitchen.
7. Closed toe shoes only allowed in the kitchen.
8. No eating or drinking while preparing food.
9. Wash Hands before touching food products; or wear gloves during food preparation.
products.
10. All spills need to be cleaned up immediately.

How to Properly Wash your hands

What is the right way to wash your hands?

Follow the five steps below to wash your hands the right way every time.

1. Wet your hands with clean, running water (warm or cold), turn off the tap, and apply soap.
2. Lather your hands by rubbing them together with the soap. Be sure to lather the backs of your hands, between your fingers, and under your nails.
3. Scrub your hands for at least 20 seconds. Need a timer? Hum the "Happy Birthday" song from beginning to end twice.
4. Rinse your hands well under clean, running water.
5. Dry your hands using a clean towel or air dry them.

Steps are provided by the Center for Disease Control and Prevention or better known as the CDC

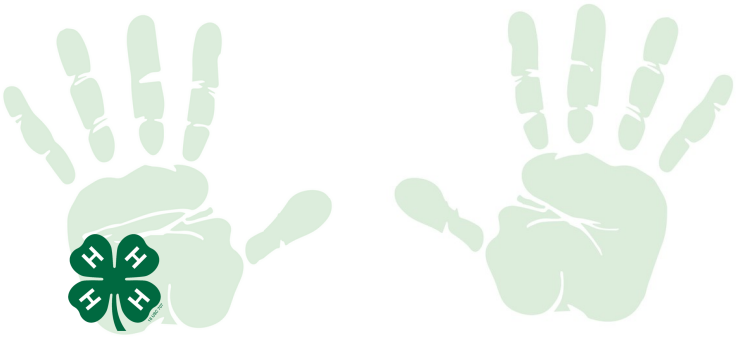


Photo Credit: Canva

When should you wash your hands?

According to the Center for Disease Control (CDC):

-Before, during, and after preparing food

-Before eating food

-Before and after caring for someone who is sick

-Before and after treating a cut or wound

-After changing diapers or cleaning up a child who has used the toilet

-After using the toilet

-After blowing your nose, coughing, or sneezing

-After touching an animal, animal feed, or animal waste

-After touching garbage

Kitchen Supply List

Draw a line to the picture

Measuring Cups

Bowls

Knives

Cutting Board

Dry Measuring Device

Apron

Blender

Spoons

Cups

Mixing Spoons

Rubber Spatula

Baking Sheet

Paper towels

Plates

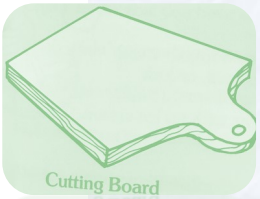
Soap

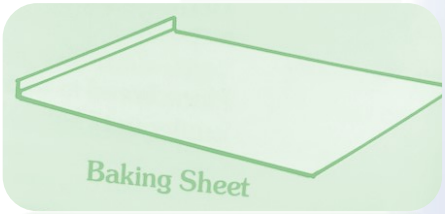
Pot Holders

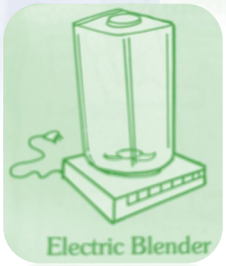
Liquid Measuring

Rolling Pin

Plastic Spatula

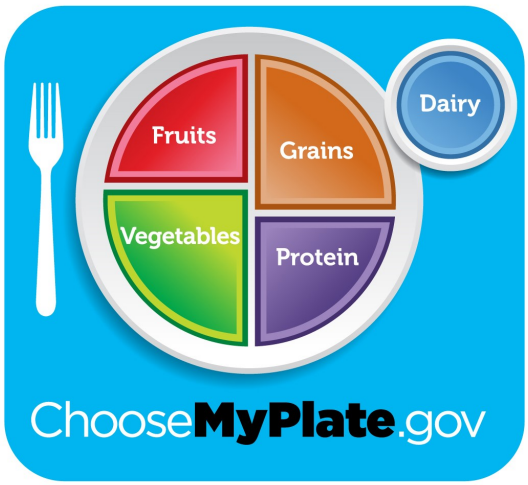






MyPlate: **Write your lunch items in the appropriate box and then write the Farm source.**

Remember Food is not grown at a store!



Fruits

Grains

Vegetables

Protein

Dairy

What foods contain dairy?

All milk products and many other foods made from milk are considered part of the dairy food group. Most Dairy food choices should be fat-free or low-fat. Foods made from milk that retain their calcium content are included in the dairy food group. Foods made from milk that have little to no calcium, such as cream cheese, cream, and butter, are not a beneficial dairy product.

What foods contain protein?

All foods made from meat, poultry, seafood, beans and peas, eggs, processed soy products, nuts, and seeds are considered part of this group.

Retrieved from Choosemyplate.gov

The Nutrition Facts Label

Look for It and Use It!

Information you need to make healthy choices throughout your day

Found on all packaged foods and beverages

Use it to compare foods!

Choose the foods that are high in nutrients to get more of, and low in nutrients to get less of.

If you consume more calories than you burn, you gain weight.

400 calories or more per serving is high; **100** calories per serving is moderate.

Calories

Check the serving size on food packages. The information listed on the Nutrition Facts Label is based on **one** serving. Servings are shown in common measurements like cups, ounces, or pieces.

One package may contain more than one serving! If you eat multiple servings – you're getting "multiples" on calories and nutrients, too.

Serving Size & Servings Per Container

2SERVINGS=CALORIESX2

Nutrition Facts

Serving Size 1 package (272g)
Servings Per Container 1

Amount Per Serving	
Calories 300	Calories from Fat 45
	% Daily Value*
Total Fat 5g	**8%**
Saturated Fat 1.5g	**9%**
Trans Fat 0g	
Cholesterol 30mg	**10%**
Sodium 430mg	**18%**
Total Carbohydrate 55g	**18%**
Dietary Fiber 6g	**25%**
Sugars 23g	
Protein 14g	
Vitamin A	80%
Vitamin C	35%
Calcium	6%
Iron	15%

* Percent Daily Values are based on a 2,000 calorie diet. Your Daily Values may be higher or lower depending on your calorie needs:

	Calories:	2,000	2,500
Total Fat	Less than	65g	80g
Saturated Fat	Less than	20g	25g
Cholesterol	Less than	300mg	300mg
Sodium	Less than	2,400mg	2,400mg
Total Carbohydrate		300g	375g
Dietary Fiber		25g	30g

Nutrients

Nutrients To Get More Of

Get 100% DV of these:

- Calcium
- Dietary Fiber
- Iron
- Vitamins A & C

Nutrients To Get Less Of

Get less than 100% DV of these:

- Cholesterol
- Saturated Fat
- Sodium

TIP Sugars and *Trans* Fat are nutrients to get less of, but they have no %DV. Use grams to compare!

To meet these goals, eat a variety of foods, including:

- fruits and vegetables
- whole grains
- fat-free or low-fat milk/ milk products
- lean meats and poultry
- eggs
- seafood
- beans and peas
- soy products
- unsalted nuts and seeds

%DV

When comparing nutrients in foods, use %DV.

%DV = Percent Daily Value

5% DV or less per serving is low

20% DV or more per serving is high

%DV is based on **"Daily Values"** – the amounts of nutrients recommended for Americans aged 4 and older to eat every day.

Nutrition Facts Read the Label

FDA

www.fda.gov/nutritioneducation

Percent Daily Values on the **Nutrition Facts Label** are based on a 2,000 calorie diet; however, your Daily Values may be higher or lower depending on your calorie needs. Calorie needs vary according to age, gender, and physical activity level. Visit **www.choosemyplate.gov** to find your caloric needs.

Milk Experiment

Feeding a Pepper Plant, Milk

Purpose: To determine the effects of "watering" a pepper plant with different types of milk.

Hypothesis: (form your own hypothesis)

Materials:

1. Four 10 cm tall pepper plants (or another produce bearing plant)
2. Whole, Low Fat, Fat Free Milk, and Water
3. 406 cm measuring tape
4. 500ml beaker
5. Lab or outdoor location

Procedure:

1. Feed three plants with 50ml of one type of milk each day (whole, low fat, and fat free milk), and feed the fourth plant water as a control.
2. Record observations daily.

Observations

Lesson Two:

What is Dairy?

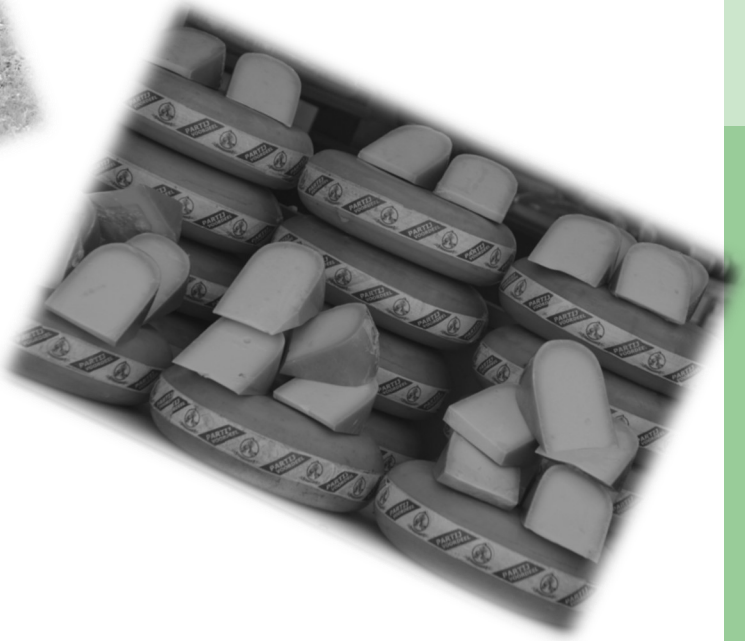


Photo Credit: Canva

As a Result of Completing This Lesson, You Will be able to:

1. **Learners will be able to identify and describe specific breed characteristics.**
2. **Learners will be skilled at defining dairy's role in their diet.**
3. **Learners will be skilled at creating a dairy product in the kitchen by utilizing recipe instructions.**

Dairy Pre-Test

1. Calcium helps to build what parts of the body? 1. 2. 3.
2. About how many dairy cattle does Florida have?
3. How many stomach compartments does a cow have?
4. How many bones does the human body have?
5. How many gallons of water does an average cow drink every day?
6. How much food does an average cow eat a day?
7. True or False: Cows cannot smell very well.
8. True or False: Cows can see color.
9. What does allelomimetic mean?
10. How does a cow get to be the boss of the herd?
11. True or False: Holstein cows have different markings from one another.
12. True or False: Cud chewing helps cows to digest their food.
13. True or False: USDA helped cure CBPP.
14. True or False: You can show dairy and beef cattle in 4-H.
15. True or False: You can ONLY get calcium from milk.
16. True or False: You can ONLY get protein from Dairy products.
17. What would you like to learn about Dairy products and cattle?

Florida Dairy Cattle

There are about 123,000 dairy cattle in the sunshine state, also known as your home state– Florida!

Cows are not native to Florida, they were brought over by pilgrims because of the English law that required one cow per five passengers. The Contagious Bovine Pleuropneumonia (CBPP) was a disease introduced to cattle in 1843 but was later cured in the 1890's thanks to the USDA.

Florida has six different dairy cattle breeds: Ayrshire, Brown Swiss, Guernsey, Holstein, Jersey, and the Milking Shorthorn. Each of these breeds have their own origin, color, size, temperament, and production.

Cows have four stomach compartments, the Rumen, Omasum, Reticulum, and the abomasum. Cows are ruminants which means they regurgitate their food from the first compartment of the stomach: the Rumen and re-chews the recently ingested food in order to better digest it. Cows can drink an average of 35-40 gallons of water a day. They consume an average of 90-95 pounds of feed per day. Cows may smell up to 4 miles away and can see in color! Cattle are allelomimetic, which means they follow the leader. In order to become the LEADER, cows will physically push and shove in order to be in the lead.

Machines are used in order to milk the 123,000 dairy cattle in Florida that produce about 2.34 billion pounds of milk a year. These milking machines were invented in 1894 which can now milk more than 100 cows per hour! Computers are also utilized to keep track of the quality and quantity of milk. Dairy cows can produce 6-8 gallons of milk per day and are usually milked 2-3 times per day. Depending on the breed, dairy cows can weigh up to 1400 pounds. Dairy cows have a life expectancy of 20 years.

Identification tags are used to keep track of the cows activities and health in the DHIA records keeping system. A Holsteins spots are like a human fingerprint or a snowflake because no two cows have exactly the same pattern of spots.

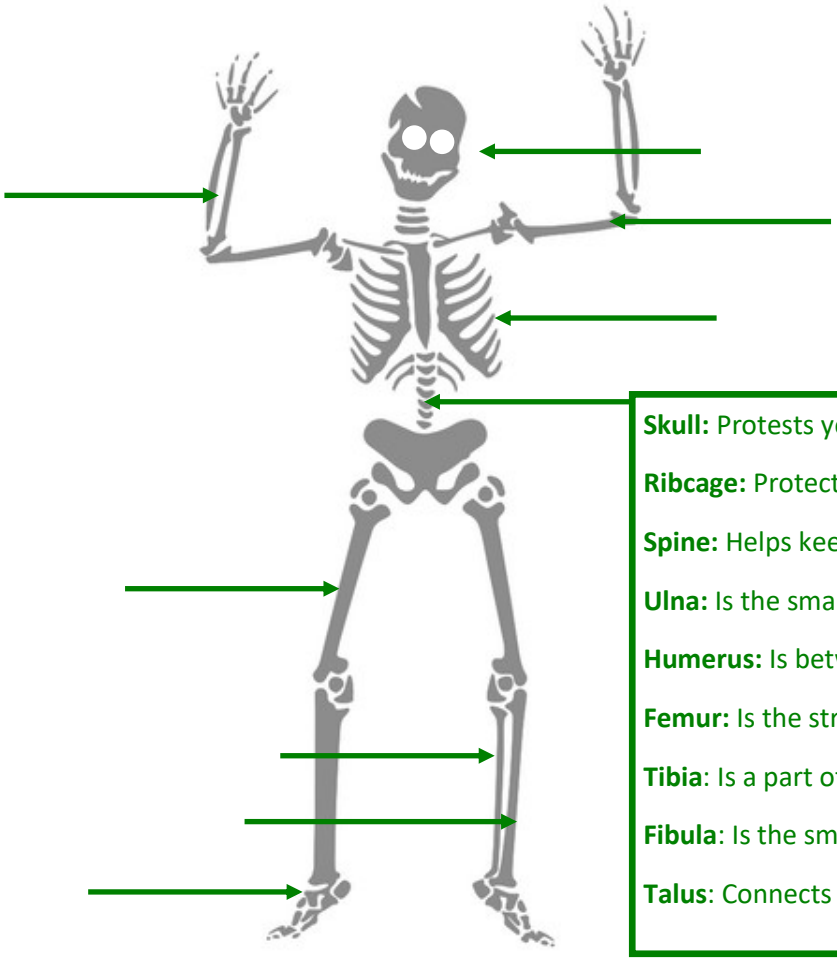
A cow family consists of a bull, a dairy cow, and a calf. Can you name the different breeds in the pictures below? A cow will carry her calf for 9 months.

Can you find the new baby calf?

The Benefits of Dairy Products

Florida dairy cattle are raised for their milk. The calcium found in milk helps to build the heart, teeth, and the 206 bones of the human body.

Can you name some of the major bones in a human body?



Skull: Protests your:

Ribcage: Protects your:

Spine: Helps keep your back:

Ulna: Is the smallest part of the:

Humerus: Is between:

Femur: Is the strongest:

Tibia: Is a part of:

Fibula: Is the smaller part of:

Talus: Connects to the:

- Vitamin A: helps your 
- Protein: grows your tissues and muscles
- Potassium: helps with blood pressure and movement
- Vitamin D: Deposits calcium into and 
- Vitamin B-12: Produces  blood cells
- Carbohydrates: Produces energy for muscles
- Niacin/ Riboflavin: Produces energy for cells
- Phosphorous: Produces energy to cells and strength to bones
- Water: Regulates body  and carries nutrients/ oxygen to cells

Photo Credit: Canva

Fresh From Florida Orange Dream Shake

Serving Size: 5 Cups

Photo Credit: Canva

You Will Need:

An Ice Cream Scoop or large Spoon

Serving Cups

Liquid Measuring Cup

Electric Blender

Ingredients:

6 ounces of Fresh From Florida Orange Juice

3 large scoops of vanilla ice cream

3 cups of cold milk

Can you CIRCLE the dairy products in this recipe?

Directions:

1. **Spoon or pour orange juice into a blender container.**
2. **Put scoops of ice cream in blender.**
3. **Pour milk over ice cream.**
4. **Put top on blender. Hold top with hand.**
5. **Press BLEND button and let mix until smooth and frothy.**
6. **Carefully pour into glasses. Serve immediately.**

Recipe retrieved from Freshfromflroida.com

Dairy F___mers are i__po__tant. Wi__hout them, __ou would __ot be __ble to find __a__ry pr__duct__ e__sil__. Let's show ou__ s__pport by ma__ing t__em feel appreciated!

_ _

Lesson Three:

Florida Dairy Cattle

Photo Credit: Canva

As a Result of Completing This Lesson, You Will be able to:

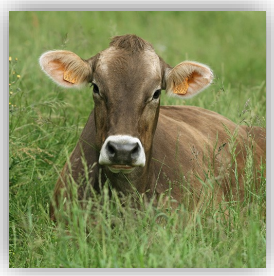
1. **Learners will be able to identify the importance and reasons why farms/farmers exist.**
2. **Learners will be able to identify each bones usage and importance**
3. **Learners will be skilled at creating another dairy product in the kitchen by utilizing recipe instructions.**

Florida Dairy Breeds

Holstein: The most common breed in Florida, Holstein cows originally came from Holland. Holsteins are typically black and white with clearly defined markings. They are noted for high milk production and their large size. The mature weight of a Holstein is around 1,500 pounds, and they can produce up to 2,600 gallons of milk each year.

Milking Shorthorn: These cows originated in England. The Milking Shorthorn is an average sized breed with mature cows weighing nearly 1,250 pounds. Their color is either red, red and white or roan. Shorthorns are known for high levels of fertility, grazing efficiency and are highly suitable for many different environments. They are also popular among farmers for their durability, longevity and ease of calving.

Ayrshire: Ayrshires are strong and robust cows with distinctive red and white markings that originated in Ayrshire, Scotland. They are regarded as a medium sized breed and can grow to a mature weight of approximately 1,200 pounds. The breed can efficiently produce large quantities of high quality milk, and is known for their grazing abilities.



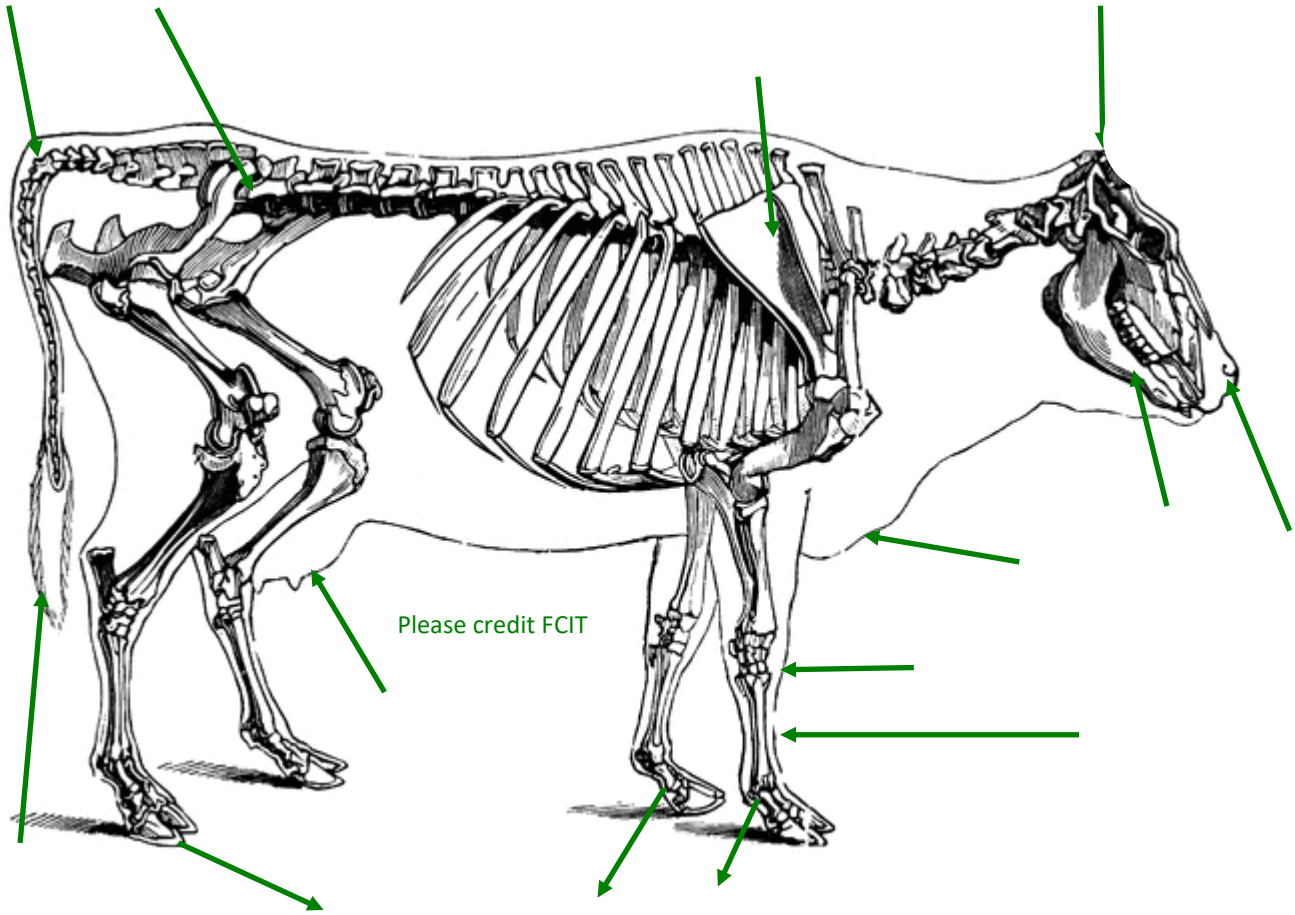
Brown Swiss: The Brown Swiss is the oldest of the pure dairy breeds. They are native to Switzerland and their color is solid brown which can vary from light to dark. Brown Swiss cows are strong and vigorous, but with a velvet-like coat. They have strong legs and milking persistency and can quickly adapt to different environments which makes them prepared for Florida summers.

Guernsey: These are a shade of fawn with clearly defined white markings that originated on the Isle of Guernsey (off the coast of the British Isles). They are known for their golden yellow pigmentation and great size and strength. A mature Guernsey cow typically weighs around 1,100 pounds.

Jersey: This breed originated on the island of Jersey (off the coast of the British Isles). Their color is a beautiful shade of fawn or cream with black muzzles. Jerseys are the smallest in body size of all dairy breeds but they mature quickly and are noted for producing the highest level of milkfat among dairy animals which makes them popular among cheese and ice cream makers.

Photos and descriptions provided by Florida Dairy Farmers

Dairy Cow Anatomy



Lets see some **COLOR**

Match the Numbers to the parts of the Dairy Cow

1. Poll
2. Tail Head
3. Hip
4. Pastern
5. Jaw
6. Udder
7. Hoof
8. Switch
9. Heel
10. Dew Claw
11. Shoulder Blade/ Withers
12. Knee
13. Muzzle
14. Dewlap

1. **Yellow**
2. **Red**
3. **Black**
4. **Blue**
5. **Purple**
6. **Brown**
7. **Green**
8. **Pink**
9. **Orange**
10. **Red**
11. **Yellow**
12. **Blue**
13. **Green**
14. **Brown**

Farmer/ Farm Visit/ Virtual Tour

"For generations, Florida's more than 130 dairy farming families have remained true to their values and committed to producing a fresh supply of wholesome, quality milk. These hardworking men and women are caretakers of their cows, stewards of the land and leaders in their communities."
Florida Dairy Farmers, 2017

Below you will find a list of Farmers on the board of the *Florida Dairy Farmers* Association! Find these counties on the map located on page 29.

Rex Run Dairy: Was originally established in the 1960's by John and Nancy Mims. They have 200 Jersey Dairy Cows. They also own Cypress Point Creamery which produces different types of cheese. Located in Hawthorne, Florida.

Lake Branch Dairy: Was originally founded in 1991 by Kevin Moore. They have over 2200 dairy cows. Located in Bowling Green, FL.

Milking R Dairy: Founded in the 1930's by Sutton and Kris Rucks. They have over 1200 dairy cows. Located in East Okeechobee, FL.

Alliance Dairies: Originally founded in 1990 by Jan Henderson and Ron St. John. They have over 6,000 acres and 5,800 dairy cows. Located in Trenton, FL.

CR Melear Dairy: Founded in the 1970's by Tommy and Kara Watkins. They have dairy cattle on over 7600 acres. Located in Zolfo Springs, FL.

V&W Farms: Was founded in the 1920's by a distant relative to Joe Wright. These 1200 dairy cows are pasture based on more than 1335 acres. Located in Avon Park, FL.

Milk-A-Way Dairy: Originally founded by Johan Heijkoop's father in Holland, has 1300 dairy cows. Located in Webster, FL.

Shenandoah Dairy: Originally founded in 1987 by James and Carol Henderson. There are over 3700 dairy cows on 2750 acres. Located in Live Oak, FL.

Larson Dairy Inc.: Originally founded in 1942 by Louis Larson. This is the largest dairy family in Florida with over 10,000 dairy cows. Located in Okeechobee, FL.

Lussier Dairy: Founded by Matt Lusier. This farm has over 600 cows with 80% Holsteins and 20% Holstein/ Jersey Cross. Located in Hawthorne, FL.

M&B Dairy: was founded over 30 years ago by Dale McClellan. This dairy farm has over 700 dairy cows. Located in Lecanto, FL.

Tower Dairy: Was started in 1951 by Jeff and Sammy Busciglio. They have over 100 Holstein and Jersey dairy cows on 250 acres of land. Located in Tampa, FL.

Butler Oaks and B-4 Dairy: Founded in the 1930's by a relative of Ben and Bob Butler. They have over 1500 acres and 2,000 dairy cows. Located in Lorida, FL.

HC. Dairy Farms: .Was established over 100 years ago by a distant relative of Freda Pirkle- Caney. There are over 400 Holsteins on 79 acres of land. Located in Lakeland, FL.

Fieser Dairy: Founded in the 1980's by Gerald Fieser. This farm consists of 700 dairy cows and 21,500 acres of preserved land (20% of land is for wildlife habitat). Located in DeLeon Springs, FL.

Cindale Farms: Was founded in 1994 by Cindy and Dale Eade. It is now ran by Meghan and Brad Austin. They raise Jersey and Jersey/ Holstein crosses on a 467 acre farm. Located in Marianna, FL.

North Florida Holsteins: Established in 1980 by Don Bennink. Located in Bell, FL.

Burnham Farms Inc.: Originally established in Texas by Douglas, Randy, Aubrey, and Wanda Burnham. This farm has 560 acres that 1200 dairy cows call home. This is a pasture based farm. Located in Okeechobee, FL.

Farm Visit/ Farmer Visit/ Virtual Field Trip Preparation Check List

Where:

When:

What I need:

Activities Planned:

Permission Slip Signed:

Questions that I have:

My Group:

Find the Dairy Farms of Florida! Descriptions are on **Pages 27-28**.

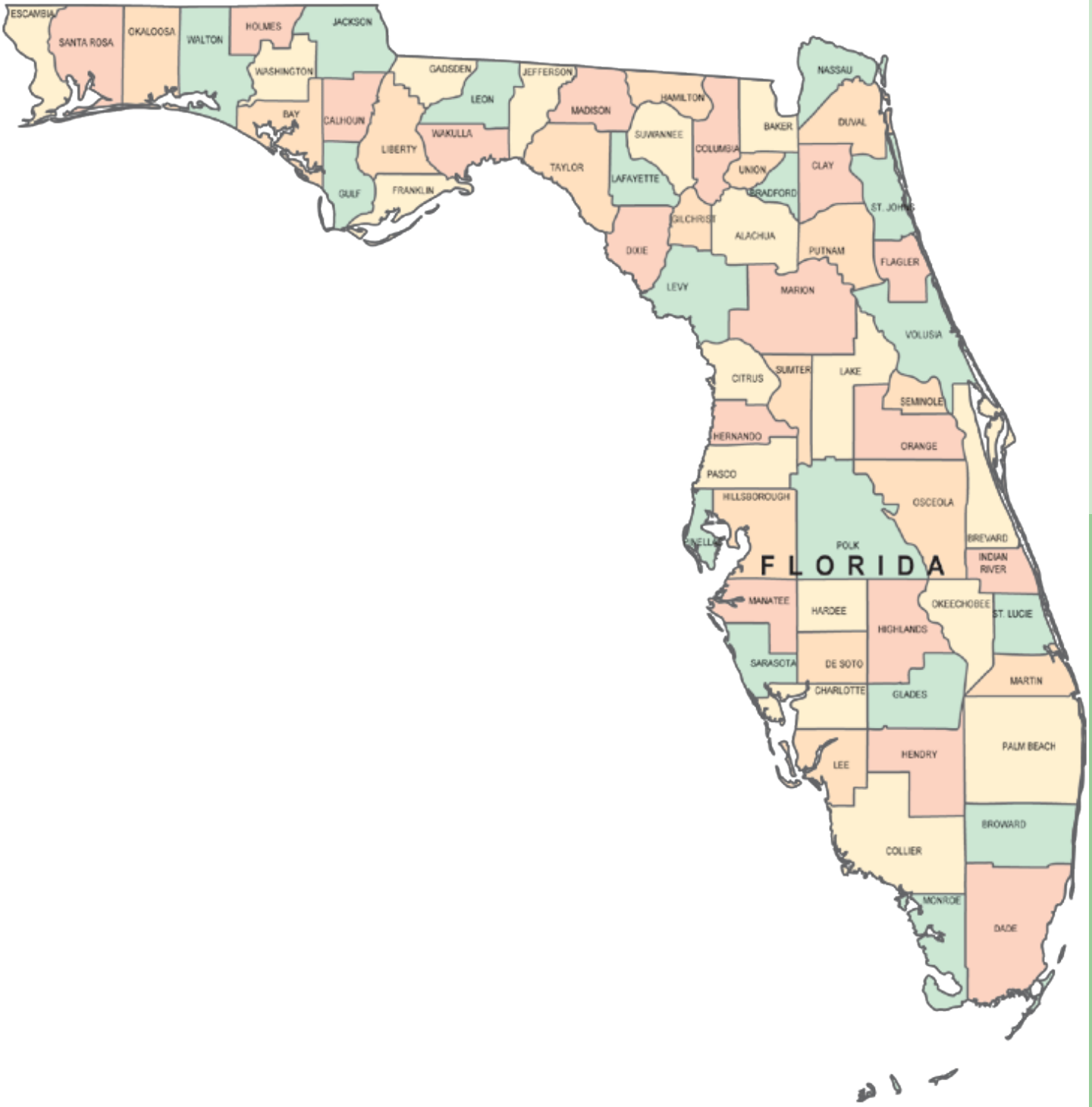


Photo Credit: http://www.dmvflorida.org/florida-county-map.shtml

Farm Visit/ Farmer Visit Report

Date:

Location:

What I saw:

What I learned:

Picture or Drawing:

Questions I still have:

Fresh From Florida

Strawberry Parfait

Ingredients:

- 2 cups fresh Florida strawberries, rinsed, hulled and sliced
- 8 ounces low-fat cream cheese, whipped
- 2 tablespoons natural Florida sugar
- 1/2 cup low-fat vanilla yogurt
- 4 graham crackers, crushed
- 1 lemon, juiced
- 4 sprigs fresh mint for garnish

Photo Credit: Canva

Can you CIRCLE the dairy products in this recipe?

Directions:

In a medium-sized mixing bowl, combine whipped cream cheese, sugar and lemon juice. Fold the yogurt into the cream cheese mixture. In four wide-mouth glasses, evenly layer cream cheese mixture, strawberries and crushed graham crackers. Garnish with sprigs of fresh mint. Serve chilled.

See more at: http://www.freshfromflorida.com/Recipes/Desserts/Florida-Strawberry-Parfait#sthash.sjbLe1cb.dpuf

Don't Get Zapped!

You have finished the Dairy Portion of this Project Book!

Now let's see what you have learned!

1. Separate into teams of 3.
2. You will have 5 minutes to answer as many questions as you can!
3. Going clockwise and without looking, draw a popsicle stick out of the cup and answer the question.
4. If answered correctly, hold on to your popsicle stick to be counted at the end of the game.
5. If you draw a ZAP! Popsicle stick, you MUST return ALL of your popsicle sticks to the cup.
6. At the end of 5 minutes, whoever has the most popsicle sticks in their hand, gets a prize!

GOODLUCK!

Dairy Cattle Breed Stomp Gain

1. Separate into teams of 2.
2. Line your team up shoulder to shoulder. One team on the left and another team on the right.
3. Pictures of dairy cattle breeds will be placed on the floor by your teacher or leader.
4. Going in order, the first person from each group will find the beef breed mentioned and place their foot on the picture.
5. Whoever gets there first, their team will receive a point.
6. This game will continue until the last person on each team has competed.
7. The team with the most points, win.
8. The leader or teacher may rearrange the photos in between turns or for a new game!

GOODLUCK!

Dairy Post-Test

1. Calcium helps to build what parts of the body? 1. 2. 3.
2. About how many dairy cattle does Florida have?
3. How many stomach compartments does a cow have?
4. How many bones does the human body have?
5. How many gallons of water does an average cow drink every day?
6. How much food does an average cow eat a day?
7. True or False: Cows cannot smell very well.
8. True or False: Cows can see color.
9. What does allelomimetic mean?
10. How does a cow get to be the boss of the herd?
11. True or False: Do Holstein cows have different markings from one another?
12. True or False: Cud chewing helps cows to digest their food.
13. True or False: USDA helped cure CBPP.
14. True or False: You can show dairy and beef cattle in 4-H?
15. True or False: You can ONLY get calcium from milk.
16. True or False: You get protein from Dairy products?
17. What would you like to learn about Dairy products and cattle?

From Farm to Table

With

Dairy

Completion Certificate

I Certify that

_____

Has completed all requirements of the

'From Farm to Table with Dairy' Program

_____

Leader/ Teacher Signature

_____

Date

Place Photo Here

Lesson Four:

Introduction to Beef Cattle

Photo Credit: Canva

As a Result of Completing This Lesson, You Will be able to:

1. **Learners will be able to understand and explain the reason why beef cattle are raised.**
2. **Learners will be able to identify the importance behind the beef industry and its influence on Florida's history.**
3. **Learners will be skilled in identifying the whereabouts of certain cuts of meat on a beef cows body.**
4. **Learners will be skilled in creating their first beef infused food and review with the rest of the class while utilizing recipe instructions.**

Pre-Test on Beef Cattle and Products

1. True or False? Cattle are only used for meat and the rest of the body is wasted after slaughter.

2. True or False? Beef cows eat meat.

3. True or False? There is a cow in my marshmallow.

4. There are __ different Beef cuts.

5. What is a by-product?

6.

7. The two colors that Angus cattle can be are:

8. 1. 2.

9. Beef cows were domesticated _____ years ago.

10.True or False? Different breeds have different traits.

11.Is it important that cattle graze?

12.True or False? A feedlot is known as a grain-based diet to help them gain weight.

13.What are Rangelands?

14.

15.An Average American consumes about ___ pounds of beef each year.

16.True or False? Humans need protein which beef can provide.

17.Beef cattle plays a significant role in Florida's _____?

18.True or False? Beef cows are a ruminant animal?

19.

20.True or False? Humans also have four compartments in their stomach.

21.Florida has it's own unique breed of beef cattle. What are they known as?

What are beef cattle raised for?

There are two primary reasons beef cattle are raised— meat and by-products. There are many different breeds of beef cattle in Florida but the main ones are Black Angus, Red Angus, Charolais, Hereford, Limousin, Santa Gertudis, Belted Galloway, Brahman, Texas Longhorn, Cracker Cattle and many more. Humans have selectively been breeding cattle for desirable traits for over 10,000 years. Humans consume approximately 67 pounds of beef a year. The United States alone devours over 50 billion hamburgers a year!

The beef industry is very important for Florida's economy and human health. Since beef contains complete proteins with balanced amino acids, this is a great source for humans to build muscle, nerves, and organ tissue. Beef is also a good source of zinc, iron, B-12, and protein. Cows are able to convert plant cellulose into a high-quality source of food for humans.

Beef cattle are also very important in maintaining the land. They are ruminants and digest foods that humans cannot. They are beneficial in pastures and rangelands where they can eat grass in areas where it would be very difficult to grow other produce.

The beef cattle that are raised for beef production will spend four to six months at a feedlot where they are fed a grain diet to help them gain weight. This is known as the "finishing stage". Once market weight is reached, they will go to a processing facility. An average beef cow will weigh 1200 pounds when finished and will produce 520 pounds of meat. Once all the meat is used, the rest of the cow will be used for by-products such as medicine, paint, adhesives, soap cosmetics, detergents, and many other useful products. As much as 99% of the beef cow will be used.

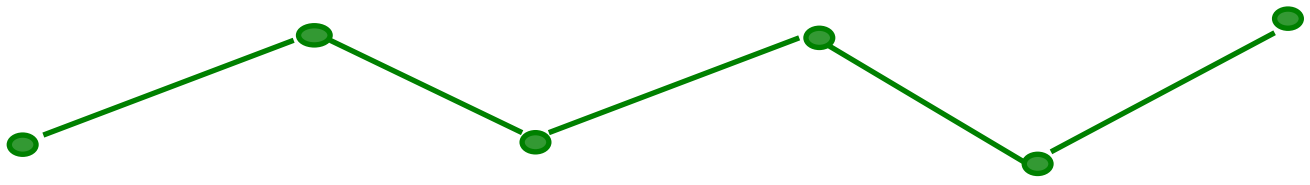
History of Florida Beef Cattle

Florida's cattle industry is one of the oldest and largest in the United States. The men and women who have worked with cattle were known as "cowmen" before the 1800's. After the 1800's they were called "cow hunters" because they would hunt their cattle on vast amounts of land. These cattle workers were also known as "Florida Crackers" because of the sound of the cattle whip when they would round-up their herd. Today, you may know them as "cowboys".

The first breed of cattle brought to the Florida, was the Andalusian/ Caribbean cattle. After cattle were first introduced by Spanish settlers in 1521, it wasn't until 1565 when cattle farming was introduced to St. Augustine, FL. When the United States took possession of Florida (1821), it was described as land of great vast wilderness with wild cattle. These wild cattle were referred to as "Cracker Cattle", a mix of Spanish and British cattle breeds. Could you imagine being a cowman in the 1800's where there were bears, panthers, coyotes, and severe heat?

The Florida Cracker Cattle got its shape from natural causes. They lived in an environment that is not the best for cattle. This breed is tolerant to heat, resistant to parasites and diseases, and can survive on the low quality forage found in Florida. The development of the famous Florida Brahman breed wasn't until the 1900's. This breed is very popular in Florida today because of their heat tolerance. It wasn't long after the 1900's until crossbreeding occurred in cattle. Florida's beef industry continued to grow thanks to the revolution of railroads which could transfer cattle easily. Ranches were formed all over Florida and towns developed around the ranches. The cattle industry helped to employ blacksmiths, shoekeepers, and cowboys. Florida played a significant role in the Civil War by providing meat and leather to soldiers.

Florida cattle ranchers are known for being "stewards of the land" because of their role as caretakers of acreage. Land used for cattle production is a great place for bird and wildlife populations to thrive.



Fill out the timeline using the information above.

Color the beef cuts the color of the word

There are **ten** main beef cuts in one cow. These are the Chuck, Rib, Short Loin, Tenderloin, Sirloin, Round, Shank, Flank, Plate, and Brisket. The **Chuck** is where you will find the chuck eye roast, boneless top blade steak, boneless arm pot roast, boneless mock tender roast, under blade pot roast, flanken-style ribs, cross rib, pot roast, 7-bone roast, blade roast, and short ribs. The **Rib** is where you will find the rib roast, large end rib roast, small end rib steak, small end rib eye roast, and back ribs. The **Short Loin** is where you will find the top loin steak, boneless T-bone steak, porterhouse steak, tenderloin roast, and the tenderloin steak. The **Tenderloin** is where you get tenderloin. **Sirloin** is where you get top sirloin steak, sirloin steak, tenderloin roast, tenderloin steak, and beef tri-tip. **Round** is where you get round steak, top round roast, top round steak, bottom round steak, top roast cap off, eye round roast, tip steak, and boneless bump roast. **Shank** is where the shank cross cut is found. **Flank** is where the flank steak and flank steak rolls are found. The **Plate** is where skirt steak is found. Lastly, the **Brisket** is where you can find whole brisket, brisket, point half, corned brisket, and flat half.

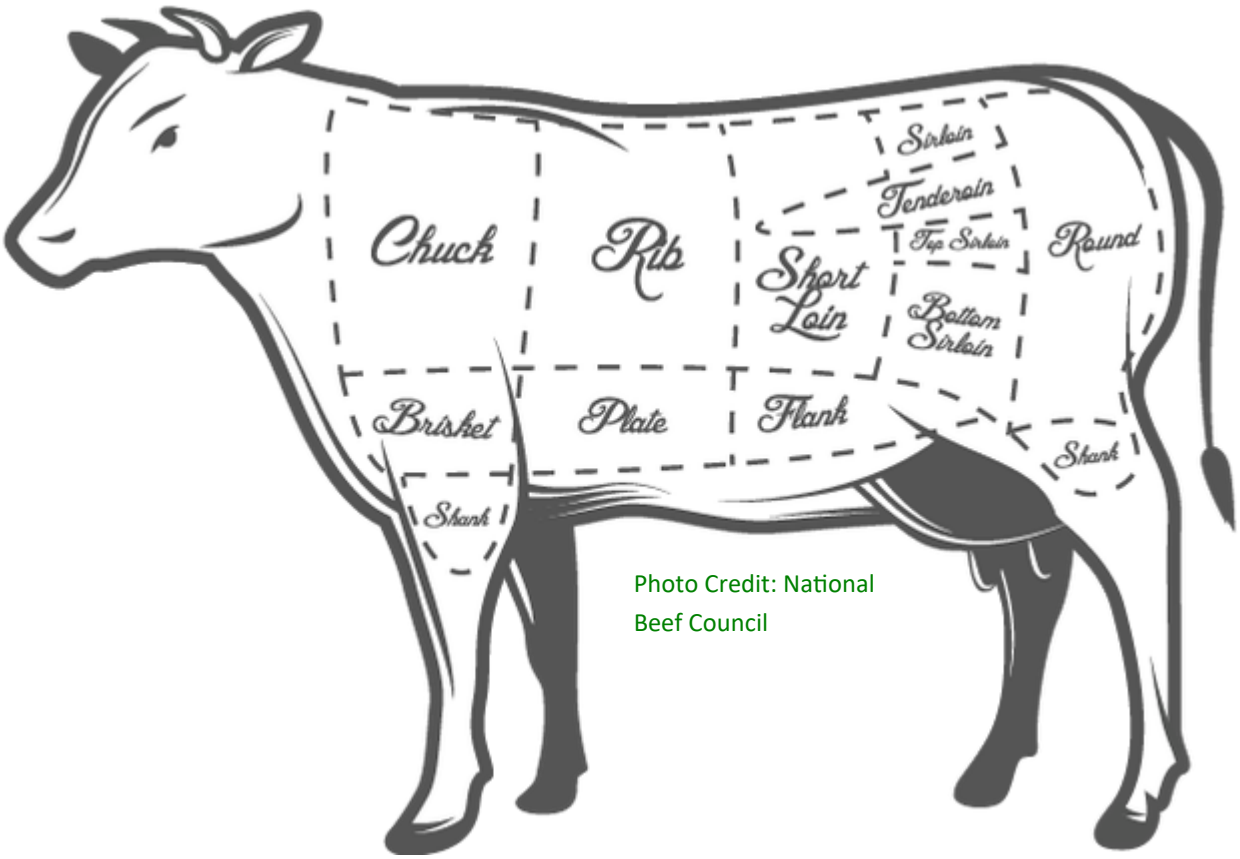


Photo Credit: National Beef Council

The Benefits of Beef Products

According to the National Beef Council (2012), beef products provide 10 essential nutrients for the human body. These nutrients are **Iron** (lungs and oxygen), **Choline** (nervous system), **Protein** (muscles), **Selenium** (protects cells), **Vitamins B6 and B12** (brain function), **Zinc** (immune system), **Phosphorus** (bones and teeth), **Niacin** (energy and metabolism), **Riboflavin** (converts food into fuel).

Can you find these nutrients in the puzzle below?

V U Z S N B N L N C B Z X R N
S O J Y N I I U B W K I A R B
Z B I S E I T Q K U D N E I Q
W T W T H R M A D N E C X B Z
O L O P I C M A C C W R L O K
D R K E H V B C T C H D M F G
P A N O P O W P T I H E Y L M
I T Q Z A Y S K D N V S N A E
S N I A C I N P Q R P Z E V N
M U I N E L E S H Q H O Y I I
C S C W S A E Z S O M R B N L
V Y X V M J V X B P R I P J O
O O T I M R N C N P P U R G H
E E U T T V J T G J Z L S O C
N U B D M H V L D Y P I E Z N

CHOLINE
IRON
NIACIN
NUTRIENTS
PHOSPHORUS
PROTEIN
RIBOFLAVIN
SELENIUM
TEN
VITAMINS
ZINC

Beef Burrito

INGREDIENTS

Photo Credit: Canva

12 ounces Ground Beef (96% lean)
1 medium red bell pepper, chopped
1 small onion, finely chopped
2 teaspoons ground ancho chile powder
1/2 teaspoon ground cumin
4 eggs, beaten
2 tablespoons water
1 tablespoon finely chopped fresh cilantro
1/4 teaspoon salt (optional)
1/3 cup reduced-fat shredded Mexican cheese blend or shredded Cheddar cheese
4 medium spinach or plain flour tortillas (10-inch diameter),

Can you CIRCLE the beef products in this recipe?

INSTRUCTIONS FOR BEEF BREAKFAST BURRITO

1. Combine Lime-Cilantro Cream ingredients in small bowl, if desired. Set aside.
2. Heat large nonstick skillet over medium heat until hot. Add Ground Beef with bell pepper, onion, chili powder and cumin; cook 8 to 10 minutes, breaking into small crumbles and stirring occasionally. Remove from beef mixture from skillet; keep warm.
3. Combine eggs, water and 1 tablespoon cilantro in medium bowl. Spray same skillet with cooking spray. Pour into skillet; cook over medium heat 2 to 3 minutes or until scrambled, stirring occasionally. Season with salt, if desired. Stir in beef mixture and cheese; cook 1 minute or until heated through, stirring occasionally.
4. Spoon beef mixture evenly in a row across center of each tortilla, leaving 1-inch border on right and left sides. Fold right and left sides of tortilla over filling. Fold bottom edge up over filling and roll up; cut diagonally in half. Serve with Lime-Cilantro Cream and salsa, as desired.

Cooking times are for fresh or thoroughly thawed Ground Beef. Ground Beef should be cooked to an internal temperature of 160ºF. Color is not a reliable indicator of Ground Beef doneness.

Recipe provided by http://www.beefitswhatsfordinner.com/recipe.aspx?id=3907#NutritionalTab

Lesson Five:

Products of Beef Cattle

As a Result of Completing This Lesson, You Will be able to:

1. **Learners will be able to identify the characteristics of different beef breeds of cattle and their usage.**
2. **Learners will be skilled in identifying products made from beef by-product.**
3. **Learners will be skills in creating a beef by-product food and review with the rest of the class while utilizing recipe instructions.**

Common Florida Beef Cattle Breeds

Black Angus: Solid black polled breed that originated from Scotland. The U.S. has the most Black Angus over any other breed. They are known for their high quality carcasses.

Red Angus: A solid reddish-brown breed. The color of this breed breaks down to a recessive gene.

Charolais: This is a large breed that is solid white from France. They are known for their fast growth rates and lack of coloring.

Hereford: This breed is a red color with a distinct white face. These cattle have both polled and horned bloodlines. They are docile, great mothers, and foragers. They are the second most popular in the U.S.

Limousin: This breed is large muscled, red/ gold coloring. They originated from Limousin and Marche, France.

Photo Credit: Canva

Brahman: This breed is very heat tolerant. It is known for its resistance to disease, and hardiness.

Cracker Cattle: This is a small framed breed with unique coloring. The Florida Cracker is a breed of cattle developed in the state of Florida, and named for the Florida Cracker culture in which it has kept.

Texas Longhorn: This breed originated in Texas. They are breed of cattle known for its characteristic horns. They are also known for their heat tolerance, drought tolerance, and unique coloring.

Did you know?

That 99% of the Beef Cow is used? Circle each product with the color of the column below.

Photo Credit: Canva

Hide and Hair:

- Baseball Gloves
- Car Upholstery
- Drum Heads
- Leather Coats
- Violin Strings
- Shoes
- Felt Hats
- Luggage
- Wallets
- Leather Watchbands
- Rawhide Softballs

Bones and Horns:

- Bone China
- Ice Cream
- Piano Keys
- Candies
- Knife Handles
- Vitamin Capsules
- Chewing Gum
- Lipstick
- Wallpaper Paste
- Comb
- Photo Film

Glands and Organs:

- Asphalt
- Cosmetics
- Fertilizer
- Insulation
- Medicines
- Paint
- Plastic
- Soap
- Tires

How many by-products do you have in your home?

Edible:

___: Oleo Margarine

___: Oleo Shortening

___: Chewing Gum

___: Sausage Casings

___: Blood Sausage

___: Ice Cream

___: Yogurt

___: Candies

___: Flavorings

___: Marshmallows

___: Mayonnaise

___: Cake Mixes

___: Pasta

___: Imitation Sea-food

___: Deep-fry Batters

Household:

___: Candies

___: Cellophane

___: Ceramics

___: Cosmetics

___: Crayons

___: Deodorants

___: Detergents

___: Insecticides

___: Insulation

___: Freon

___: Perfumes

___: Paints

___: Plastics

___: Show Cream

___: Shaving Cream

___: Soaps

___: Textiles

___: Pet Foods

___: Floor Wax

___: Bandages

___: Wallpaper

___: Sheet Rock

___: Emery Boards

___: Glues

___: Paint Brushes

___: Leather Sporting Goods

___: Luggage

___: Boots and Shoes

___: Combs

___: Piano Keys

___: Photographic Film

Transportation:

___: Hydraulic Brake Fluid

___: Airplane Lubricants

___: Runway Foam

___: Machine Oils

___: Viscious Fluids

___: Steel Ball Bearings

___: Car Polishes and Waxes

___: Car Upholstery

___: Antifreeze

___: Tires

___: Glue

___: Asphalt

One Hide of a Beef Cow can make:

144 Baseballs

20 Footballs

18 Volleyballs

12 Basketballs

12 Baseball Gloves

Photo Credit: Canva

Please ask an adult to help you with this activity.

How many products total in your home?

How many beef products have you used today?

Don't Get Zapped!

You have finished the Beef Portion of this Project Book!

Now let's see what you have learned!

1. Separate into teams of 3.
2. You will have 5 minutes to answer as many questions as you can!
3. Going clockwise and without looking, draw a popsicle stick out of the cup and answer the question.
4. If answered correctly, hold on to your popsicle stick to be counted at the end of the game.
5. If you draw a ZAP! Popsicle stick, you MUST return ALL of your popsicle sticks.
6. At the end of 5 minutes whoever has the most popsicle sticks in their hand gets a prize!

GOODLUCK!

Beef Breed Stomp Gain

1. Separate into teams of 2.
2. Line your team up shoulder to shoulder. One team on the left and another team on the right.
3. Pictures of beef cattle breeds will be placed on the floor by your teacher or leader.
4. Going in order, the first person from each group will find the beef breed mentioned and place their foot on the picture.
5. Whoever gets there first, their team will receive a point.
6. This game will continue until the last person on each team have competed.
7. The team with the most points, win.
8. The leader or teacher may rearrange the photos in between turns or for a new game!

GOODLUCK!

Farm/ Farmer Visit/ Virtual Tour

Below you will find a list of Beef Cattle Farmers. Please utilize their contact information for visits or webcam talks!

Johnsons Farm LLC: Lowline Angus beef cattle. This farm was founded in October 2013 by Allen Johnson. This farm offers grass fed beef cattle and offers community partnership opportunities. Located in West Bradenton, FL.

Olivor Heritage Farms: This family owned farm was named after owners, John and Chrysti's grandsons. They offer grass-fed beef cattle. Located in Dover, FL.

Lake Circle Ranch: Owners, Dr. William LaRosa and wife, Dorothy raise grass-fed Barzona Cattle. They founded this farm in Tarpon Springs in 1977. Located in Brooksville, FL.

Pastene Prime Wagyu: This is a family operated farm, founded in 1973 and owned by the Siverson family. They raise Wagyu cattle which originated in Japan. Located in Summerfield, FL.

Fifth Generation Farms: This farm was founded over 100 years ago and is still family owned. They raise black angus which are grass-fed. Located in Lake City, FL.

Arrowhead Beef, LLC: Offers grass-fed beef. Owners George Fisher and Tim Pellizzetti founded this farm in 2010. Located in Chipley, FL.

Cognito Farm: Offers grass-fed beef and was originally founded in 2006 by Jerry and Sam Williams but is now owned by the Griffs family. Located in Starke, FL

Deseret Ranches: This ranch offers many different breed of beef cattle: Angus, Brahman, Simmenta, Red Poll, and South Devon Cattle. It was founded over 60 years ago by Farmland Reserve Inc. and now has over 42,500 beef cows. Located in St. Cloud, FL.

Cypress Cattle and Produce: Offers grass-fed beef and was founded in 1923. Located in Freeport, FL.

Adams Ranch: Offers grass-fed beef cattle and a single bloodline of cattle that they founded known as " The Adams Ranch Braford". This type of mixed breed is Brahman and Hereford. This ranch was founded in 1937 and is still family owned to this day. Located in Fort Pierce, FL.

Williamson Cattle Company: This farm consists of over 8,000 Brangus Cattle. This family also has cattle ranches in Alabama and Texas. Originally founded in the 1940's by Frank John Williamson, it is now operated by Frank Sonny Williamson and his son, Frank Wes Williamson. Located in Okeechobee, FL.

Sampson Family Farm: Jeff and Jane Sampson raise Black Angus on their family owned and operated farm which was founded over 30 years ago. Located in Live Oak, FL.

Three Suns Ranch: This family owned and operated ranch consists of grass-fed Cracker Cattle, Mixed breeds of Angus/ Brahma and Brahma/ Hereford, they also raise Bison. One of the only ranches left in Florida that raise, harvest, and package their own meat under the U.S.D.A inspection. Established in June 2012. Located in Punta Gorda, FL.

Rosy Tomorrows Heritage Farm: Owners Rosie and Gary O'Dell King raise grass-fed Texas Longhorns on their ranch. Rosie is also the founder of Slow Food Southwest Florida. Located in Fort Myers, FL.

Strickland Ranch: Raise Cracker Cattle, Angus, Brangus, Brahman, Charolais, and Serepols. Owner Renee Strickland is well known for exporting beef cattle to other countries as well as traveling to other countries to learn about Agriculture. This ranch is family owned since 1938. Located in Myakka City, FL.

Legends Natural Beef: This family owned farm have grass-fed Beefmaster and Santa Gertudis beef breeds. It is family owned and operated.Located in Dade City, FL.

The Dam Ranch: Family owned and operated. Owners Steve and Kathy offer a co-op option for their grass fed beef. Located in Bradenton, FL.

Farm Visit/ Farmer Visit/ Virtual Field Trip Preparation Check List

Where: _____

When: _____

What I need: _____

_____

_____

Activities Planned:

_____

_____

_____

Permission Slip Signed:

_____

Questions that I have:

_____

_____

_____

_____

My Group:

_____

_____

Find the Beef Producers of Florida! Descriptions are on Pages 53-54.

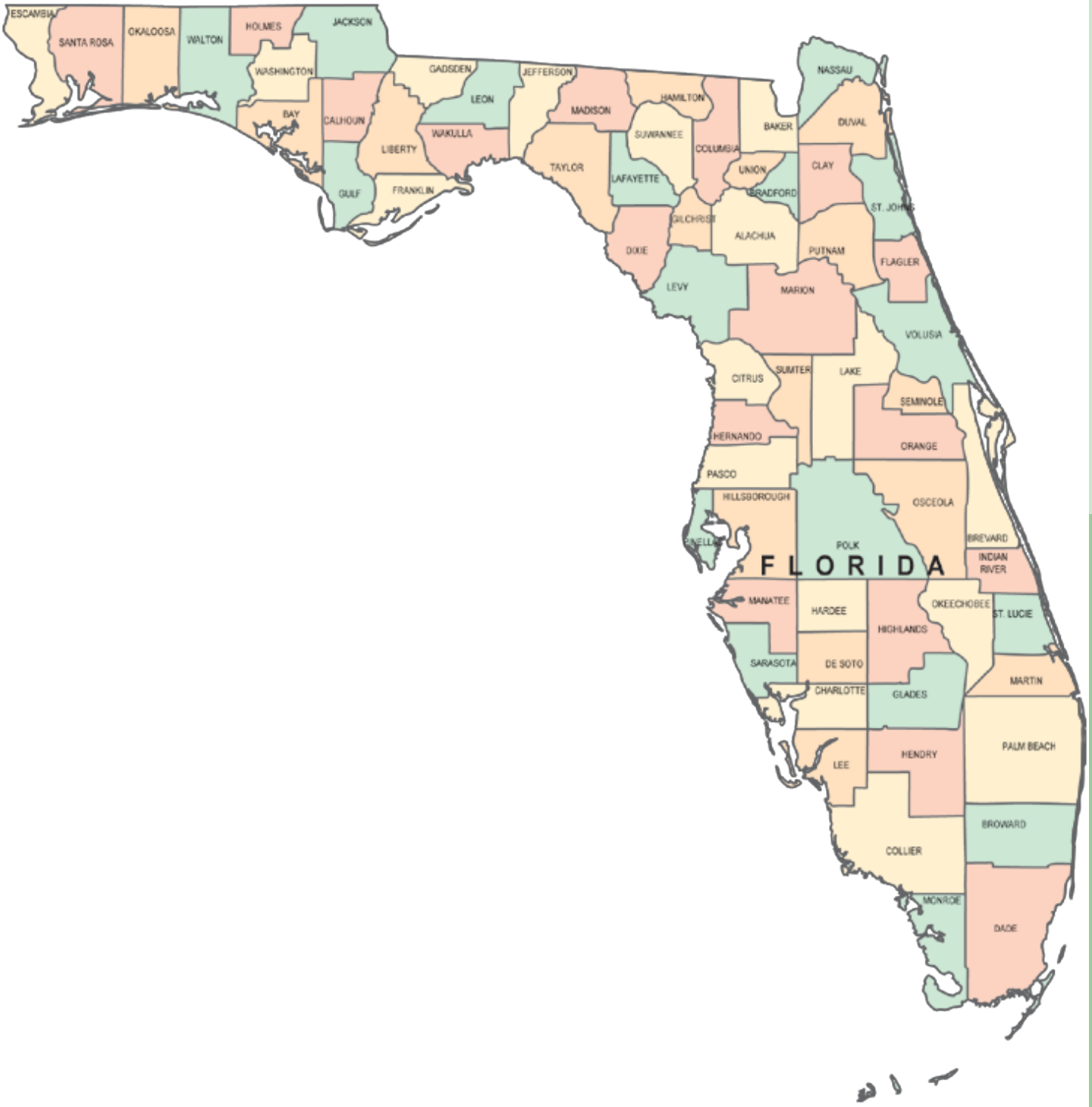


Photo Credit: http://www.dmvflorida.org/florida-county-map.shtml

Farm Visit/ Farmer Visit Report

Date:

Location:

What I saw:

What I learned:

Picture or Drawing:

Questions I still have:

Ice Cream in a Bag

Serving Size: One

Ingredients:

Ice Cubes
1 cup half and half
1/2 cup Kosher salt
2 tablespoons sugar
1/2 teaspoon vanilla extract
1 pint-size plastic bag
1 gallon-size plastic bag
Any of your favorite ice cream mixings

Can you CIRCLE the beef products in this recipe?

Directions:

1. Combine the half and half, sugar and vanilla extract in the pint-size bag. Seal the bag tightly, so that none of the liquid will leak out.

2. Fill the gallon-size plastic bag halfway with ice cubes. Sprinkle Kosher salt over the ice cubes.

3. Insert the pint-size bag filled with ingredients into the bag of ice and salt. Seal the gallon-size plastic bag. If the bag begins to leak, don't hesitate double bagging it to reduce the mess.

4. Shake the bag for 5-10 minutes until the ice cream mixture begins to harden. Feel the small bag to determine the consistency of your ice cream. Once satisfied with the consistency, remove the small bag from the bag of ice.

5. Open the small plastic bag and add any desired mixings that you want. I added raspberries to mine. Feel free to eat the ice cream right out of the bag or, if you prefer, scoop it into a bowl.

Post-Test on Beef Cattle and Products

True or False? Cattle are only used for meat and the rest of the body is wasted after slaughter.

True or False? Beef cows eat meat.

True or False? There is a cow in my marshmallow.

There are __ different Beef cuts.

What is a by-product?

The two colors that Angus cattle can be are:

1. **2.**

Beef cows were domesticated _____ years ago.

True or False? Different breeds have different traits.

Is it important that cattle graze?

A feedlot is known as a grain-based diet to help them gain weight.

What are Rangelands?

An Average American consumes about ___ pounds of beef each year.

True or False? Humans need protein which beef can provide.

Beef cattle plays a significant role in Florida's _____?

Beef cows are a ruminant animal?

True or False? Humans also have four compartments in their stomach.

Florida was ranked ___ in the nation in beef cattle production.

From Farm to Table

With

Dairy

Completion Certificate

I Certify that

_____

Has completed all requirements of the

'From Farm to Table with Dairy' Program

_____

Leader/ Teacher Signature

_____

Date

Lesson Six:

Dairy and Beef

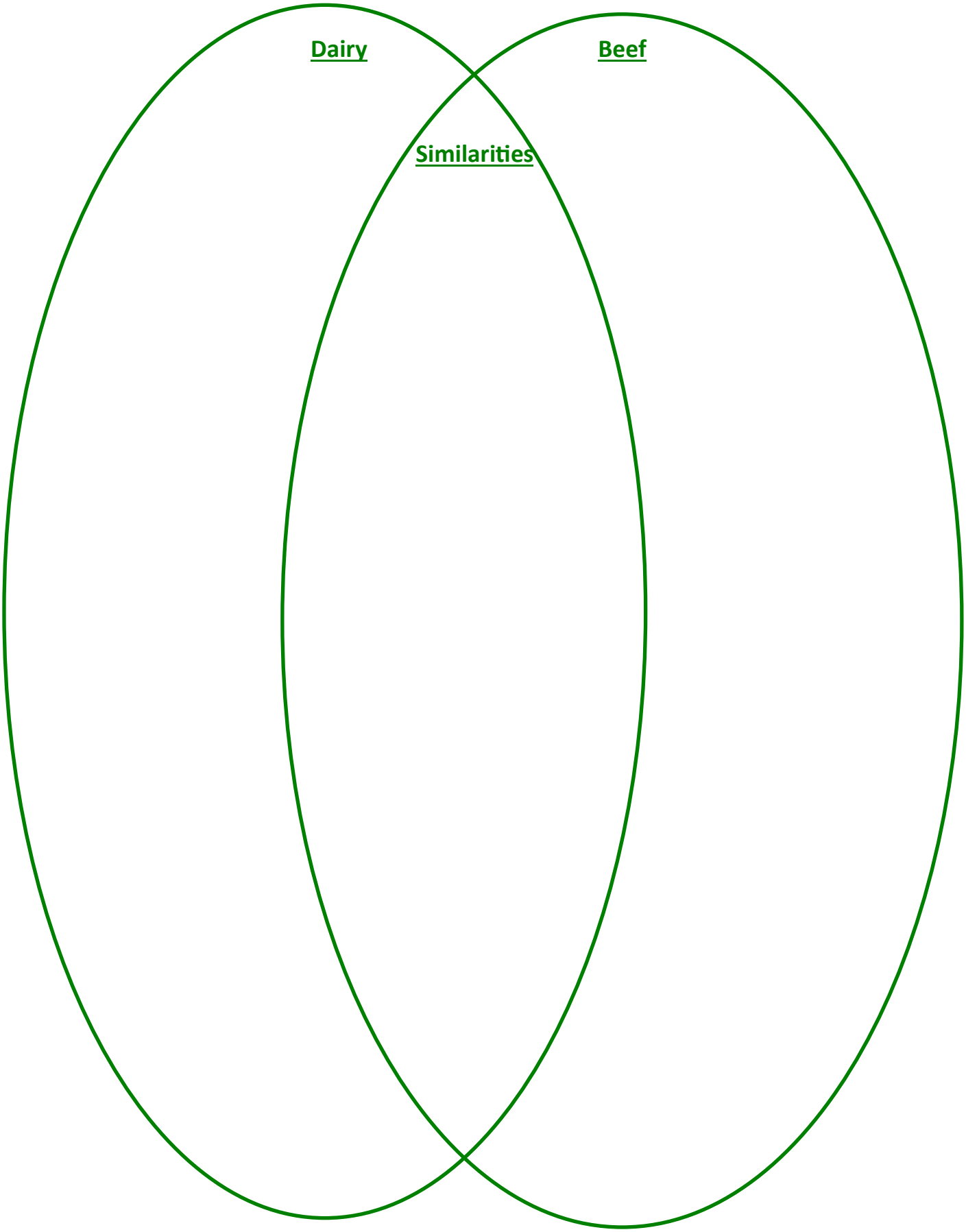
Similarities and Differences

Photo Credit: Canva

As a Result of Completing This Lesson, You Will be able to:

1. **Learners will be able to quickly identify the differences and similarities of dairy and beef cattle**
2. **Learners will be skilled in identifying the needs of these livestock animals.**
3. **Learners will be skilled at reflecting their opinion and experience of participating in this program. This will help future programming.**

Dairy and Beef Similarities and Differences



Showing Cattle in 4-H

Florida 4-H animal science programs provide the opportunity for youth to raise and show their cattle. The 4-H beef project can be selected from a breeding or market aspect. Breeding animals allow you to start your own herd while market animals produce meat products and by-products for people. Dairy cattle are usually raised and exhibited in their own class. This program allows youth to learn basic principles of animal science by owning, caring for, and keeping records on their animals.

Interested in showing Beef Cattle?

Below are guidelines for you to get started:

- Know your beef breeds
- Select your animal
- Identify parts of the animal and cuts of meat
- Train your calf to lead
- Feed your animal
- Learn to show your animal
- Groom your animal
- Learn about all the different beef by-products
- Determine quality grades of cattle
- Recognize a healthy animal

For more information, visit http://florida4h.org/programs/Beef

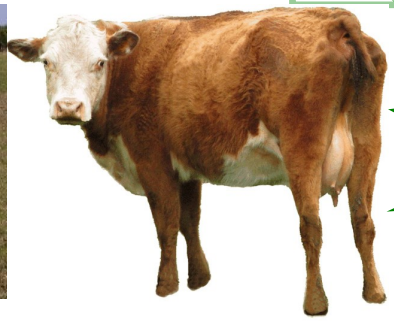
Interested in showing Dairy Cattle?

Below are guidelines for you to get started:

- Know your dairy breeds
- Identify parts of the animal
- Learn how to select & evaluate your animal
- Recognize the characteristics of a healthy animal
- Develop a feeding schedule and regularly feed your animal
- Demonstrate multiple showmanship techniques
- Learn to groom and fit your animal
- Keep records of expenses
- Show your animal at a county or state fair.

For more information, visit http://florida4h.org/programs/Dairy_cattle.pdf

Photo Credit: Canva

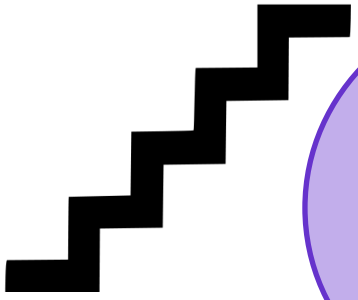


Which cow is healthy?
Which cow is unhealthy?
Why?

Fun Facts and Figures with Beef and Dairy cattle and products

Photo Credit: Canva

Mosquitos are attracted to Cows more than humans.



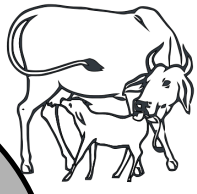
Cows clean their noses with their tongue.

You can lead a cow upstairs, but not downstairs.

A cow has four compartments with-in their stomach: Rumen, Reticulum, Omasum, and the Abomasum.

Most dairy cows give produce more milk while they listen to music.

Cows can smell up to 6 miles away!



Cows are pregnant for 9 months like humans.

Cows befriend and hold grudges against other cows.

From Farm to Table Program Participant Feedback (Give to teacher/leader)

Name: _____ Dates Involved: _____

Leader/ Teacher Name: Which parts of the book did you complete?

_____ _____

The review of participants will help to improve future programs. Please complete the survey below.

Overview:

Please rate the following categories by circling:

1-poor, 2-Below Average, 3– Average, 4– Good, 5– Excellent

Dairy Lessons: 1 2 3 4 5

Dairy Recipes: 1 2 3 4 5

Farm/ Farmer Visit: 1 2 3 4 5

Beef Lessons: 1 2 3 4 5

Beef Recipes: 1 2 3 4 5

Farm/ Farmer Visit: 1 2 3 4 5

All Activities: 1 2 3 4 5

Length of the program: 1 2 3 4 5

Length of the lessons: 1 2 3 4 5

I would like to learn more about: _____

Areas for improvement: _____

Any other comments: _____

_____

Glossary of Terms

Abomasum: Is the fourth compartment in a cows stomach. This is known as the true stomach, it is comparable to a humans stomach where digestion is completed.

Agriculture: The art or science of cultivating the soil, producing crops, and raising livestock and in varying degrees the preparation and marketing of the resulting products.

Amino Acids: Organic compounds containing amine and carboxyl functional groups, along with a side chain specific to amino acid.

Blacksmith: An occupation for someone who creates objects from wrought iron or steel by forging the metal, using tools to hammer, bend, and cut.

Bull: Male cow used for breeding, beef, or other processed items.

Calcium: An important nutrient in milk and other dairy products, necessary for strong bones and teeth.

By-Products: an incidental or secondary product made in the manufacture or synthesis of something else.

Calf: A baby cow.

Career: A profession for which one trains and which is undertaken as a permanent calling.

Cheese: The fresh or ripened product resulting from the coagulation of the milk protein, which is called casein. This process produces curds, which can be eaten immediately after draining the liquid or can be stored to make aged cheese.

Consumer: A person who used goods or services to satisfy his/her needs.

Cow: Female animal about two years old which has had a calf and can now be milked.

Cud: The regurgitated (burped up) mouthful of feed a cow chews on during the digestive cycle.

Desirable: Wanted or wished for as being an attractive, useful, or necessary course of action.

Environment: The surroundings or conditions in which a person, animal, or plant lives or operates.

Forage: Food such as grass or hay for cattle, horses, fodder.

Glossary of Terms

Heifer: A young cow that has not produces a calf.

Hypothesis: A supposition or proposed explanation made on the bases of limited evidence as a starting point for further investigation.

Market Weight: The optimal weight that beef cattle should typically weigh in between 18-22 months when they are sent to a processing facility to be harvested.

Milk: Liquid source of nutrition for mammals, one of the best sources of calcium, protein and other vitamins.

Mineral: Any naturally occurring substance that is neither vegetable nor animal.

Nutrient: To function, the human body must have nutrients. The nutrients known to be essential for human beings are proteins, carbohydrates, fats, oils, minerals, vitamins, and water.

Nutrition: Nourishing or being nourished; the series or processes by which an organism takes in and assimilates food for promoting growth and replacing worn or injured tissues.

Observation: The action or process of observing something carefully or in order to gain information.

Omasum: This is the third stomach and is known as the manypiles. This compartment grinds the food.

Parasites: An organism that lives in or on another organism (host) and benefits by deriving nutrients at the hosts expense.

Plant Cellulose: Plants contain cellulose, an important structural component of the primary wall of green plants.

Producer: A person who produces (to bring forth, manufacture, bear, or yield the product) goods and services. A farm operation or producer produces milk to be sold to the processor.

Processing Facility: Commercial operation that manufactures, packages, labels, or stores food for human consumption.

Glossary of Terms

Protein: One or more chains of amino acids that are essential in the diet of animals for the growth and repair of tissue and can be obtained from foods such as meat, fish, eggs, milk, and legumes.

Reticulum: This is the second stomach or "honeycomb" which receives food after it has been rechewed as cud.

Rumen: This is the first stomach and is also known as the paunch or storehouse. It is the largest chamber, and in a mature cow can take up 80% of the stomach capacity. Food will passes the Rumen where it is broken down by million of microorganisms that live in the cows rumen.

Robust: Strong and healthy.

Shoe keeper or shoe smith: One who shoed horses.

Tolerance: The ability or willingness to tolerate something, in particular the existence of options or behavior that one does not necessarily agree with.

Udder: The "bag" under the cow where the milk is held.

USDA: Is known as the United States Department of Agriculture. This is the U.S. federal executive department responsible for developing and executing federal laws related to farming, agriculture, forestry, and food. It aims to meet the needs of farmers and ranchers, promote agricultural trade and production, work to assure food safety, protect natural resources, foster rural communities and end hunger in the United States and internationally.

Vitamin: A complex organic substance found in most foods and essential, in small amounts, for the normal functioning of the body.

Yogurt: A mixture of milk, skim milk and/or cream and friendly bacteria, often blended with fruit or other flavorings.

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Notes

My Story

I pledge my Head to clearer thinking, my Heart to greater loyalty, my Hands to larger service, my Health to better living, for my Club, my Community, my Country, and my World.

Florida 4-H Mission, Vision, Motto, and Slogan

Mission: The UF/IFAS Extension 4-H Youth Development Program uses a learn-by-doing approach to help youth gain the knowledge and skills they need to be responsible, productive citizens. This mission is accomplished by creating safe and inclusive learning environments, involving caring adults, and utilizing the expertise and resources of the University of Florida and the nationwide land grant university system.

Vision: Florida 4-H aspires to be the leading youth development program that creates positive change in youth, families, and communities.

Motto: To make the Best Better

Slogan: Learn By Doing