Farm to Table Educational Program

Objectives:
Youth will learn how food originates on the farm and goes through processing to reach their table in order for them to build their healthy MyPlate through an interactive mobile teaching unit. The mobile unit will include four interactive stations with each station consisting of a standing display, table covering and interactive educational lesson.

When questioned about where a particular food comes from, children will many times reply “the grocery store” which indicates there is a lack of understanding about where their food originates and the path it takes to get to their table so they can build a healthy plate. The overall goal of the project is to increase the awareness in elementary school age children of the link between food origins, nutrition and health.

Target audience:
The key audience for this program is elementary age students in the Northeast Region of Louisiana. The twelve parishes located in the region include: Caldwell, Catahoula, Concordia, East Carroll, Franklin, Madison, Morehouse, Ouachita, Richland, Tensas, Union and West Carroll. Poverty is significant in Louisiana and is highest among young families and female-headed households. Children in single-parent families are almost five times as likely to live below the poverty level as children in two-parent families (U. S. Census Data). In 2007, 26.2 percent of the population in the Northeast Region fell below the poverty level (U. S. Census Data). According to data from the Office of Family Support, an average of 22.8 percent of the population in the Northeast Region received aid from the Supplemental Nutrition Assistance Program (SNAP – formerly Food Stamp Program) during the 2009 fiscal year.

Established partnerships that will enrich this effort and provide potential audiences include but are not limited to the North Louisiana Agribusiness Council, parish school systems and local schools participating in the Smart Bodies program, the City of Delhi, the City of Rayville, 4-H, West Carroll Chamber of Commerce and the Northeast Region 4-H Leader Board.

Instructional design:
Four educational stations were created that will make up the mobile unit “Farm to Table”. The stations will educate youth about the sequence of steps that occur to get foods from the farm to their table in order for them to build a healthy plate. The stations will be The Delta Farm, Louella’s Dairy Farm, Sam’s Silo and Farmer Pete’s Protein Place as well as a final station, Tiger Cafeteria. Youth rotated through stations every 15 minutes and participated in interactive activities at each station. Each station utilized a lesson plan to teach key concepts related to the station topic, provided an interactive activity and take away educational enhancement item which served to reinforce the knowledge gained once back at school or home. The educational material was presented and then reinforced by the hands-on interactive experience. The educational enhancement item served to further the reinforcement of the knowledge gained.

Editorial development and design of materials appropriate for this audience:
The development of all materials and activities focused on age and grade appropriateness. Design considered the use of primary colors and graphics that were simple, appealing and engaging for a first grade audience. Lessons were written with educational standards and literacy levels in mind for this grade as well. Activities were age appropriate using both fine and large motor skills for the activities. Time at each station was considered and kept to 15 minutes to keep the attention of the students.
Promotion:
An invitation letter was sent to all first grade teachers in the twelve parishes of the Northeast Region along with a promotional flyer.

November 23, 2015

Dear 1st Grade Teacher

A Special Invitation!

The LSU AgCenter would like to invite your 1st grade class to attend and experience the 2016 Ag Alley “Down on the Farm” held at the Ike Hamilton Expo Center in West Monroe on January 13 – 14, 2016. We are very excited about having four new stations related to Farm to Table to offer to your students as well as a special visit to a Mini-Farm just for them. Down on the Farm is designed and created to offer support to school systems as a school enrichment opportunity. Students attending “Down on the Farm” will participate in hands-on exhibits including Delta Farm, Louella’s Dairy Farm, Sam’s Silo, Farmer Pete’s Place, Tiger Cafeteria and the Mini-Farm.

As students go through the stations they will learn how foods from each of the food groups get from the farm to their table and how they can use those foods to build a healthful plate. The Delta Farm station will focus on fruits and vegetables and students will get to make carrot seed tape that they can take home and plant to grow their very own carrots. At Louella’s Dairy Farm students will learn the process of how milk gets from the farm to the table and get a hands-on opportunity to see what it would be like to actually milk a cow.

Sam’s Silo will teach students about the various grain products grown on a farm and students will get the opportunity to change rough rice to white rice through a milling activity. Farmer’s Pete Place will focus on both animal and plant protein foods and students will participate in a protein matchup challenge. The Tiger Cafeteria will bring together everything that students learned at the other stations and focus on building a healthful plate with foods from the farm to their table.

And last but not least, we will be providing your students the opportunity to get up close to common farm animals by a visit to their very own Mini-Farm Barn!

Registration for the event is using an online registration system and you must pre-register your class by visiting this link at Eventbrite by January 4, 2015: https://www.eventbrite.com/e/down-on-the-farm-at-ag-alley-2016-tickets-13024240855. Once at the website you can find additional event details at the bottom of the page for more information. You will be able to choose a date and time that you would like your group to participate. Registration is on a first come-first serve basis and spaces are limited as time slots fill up quickly. To register you must select the number of tickets you need for the number of students in your class. For example, if you have one class of 20 students you would select 20 tickets for the number of students and not one for one class. You can only register 30 students per time slot. If you have more than 30 students you will need to register the remaining students for the next available time slot(s). Once you enter the number of tickets, you need you will need to scroll down and click on the Register button. You will receive an email confirmation with event tickets for each participant attached as a pdf file. There is no need for you to print these tickets. Tours will begin every 15 minutes. The Down on the Farm Ag Alley takes approximately 1 ½ hours to view and is free of charge on Wednesday and Thursday, January 13 – 14, 2016 to scheduled classes only. Teachers who register their class will receive a reminder confirmation from us in January of the day and time of their visit. A teacher packet will also be distributed to teachers at the event. If you have questions, please contact Cathy Agan at (318) 323-2251 or cagan@agcenter.lsu.edu.

We hope you will make plans now to join us on this special day. In order for our agricultural industry to survive, we must continually educate the public on its importance – what better way than to begin with our young people.

Sincerely,

Terri Crawford
LSU AgCenter
Northeast Region

Cathy Agan
LSU AgCenter
Ouachita Parish
From the Farm to the Table

Students will learn how foods get from the farm to their table so they can build a healthy plate through five interactive and unique exhibits.

- Farmer Pete’s Place showcases both plant and animal protein foods and includes a protein matchup challenge.
- Louella’s Dairy Farm highlights dairy foods and provides a hands-on milking experience.
- Sam’s Silo teaches about grain foods and includes an activity to mill rice.
- Delta Farm focuses on fruits and vegetables and an activity to make carrot seed tape.
- Tiger Cafeteria pulls it all together and teaches how to build a healthful plate.
- Mini-Farm gives the opportunity to get up close to farm animals.

Visit our website:  www.LSUAgCenter.com

The LSU AgCenter and LSU provide equal opportunities in programs and employment. This material was funded by USDA’s Supplemental Nutrition Assistance Program
Evaluation Results:
Youth Survey Results of 1st grade Farm to Table Alley
At the conclusion of the program, a random sample of youth (N = 179) completed a posttest using the Qualtrics Survey on iPads to assess their knowledge of healthy food choices and food sources. Youth ranged in age from 6 to 13 with a mean age of 6.6 years old. Youth self-identified as white (60%), black (38%), or other (2%). The group was split almost equally between females (52%) and males (48%). The overall group average on the knowledge of healthy food choices portion of the test was 80.69%. Youth were most likely to recognize carrots as a healthy food choice with 89% of youth identifying it correctly. Youth also recognized strawberries and milk as healthy options with over 80% of youth identifying these options correctly. Over 80% of youth were also able to identify less healthy options like French fries and cupcakes. Youth were asked to identify sources of foods as part of the farm-to-table initiative. The overall group average for this portion of the test was 85.67% indicating that the majority of youth were able to match selected foods with its farm source.

2016 Teacher Survey of 1st Grade Farm to Table Alley
Question 1
I felt my students had a fun educational experience participating in Ag Alley.
- Strongly Disagree – 1
- Disagree – 0
- I don’t know – 0
- Agree – 9
- Strongly Agree – 34

Question 2
As a result of visiting Ag Alley, my students were introduced to MyPlate and the importance of eating a variety of foods.
- Strongly Disagree – 1
- Disagree – 0
- I don’t know – 0
- Agree – 5
- Strongly Agree – 38

Question 3
As a result of participating in Ag Alley, my students have a better understanding of the process of how foods get from the farm to their table.
- Strongly Disagree – 1
- Disagree – 0
- I don’t know – 2
- Agree – 4
- Strongly Agree – 36

Question 4
As a result of visiting the Mini-Farm Station, my students have a better understanding of farm animals.

- Strongly Disagree – 1
- Disagree – 0
- I don’t know – 0
- Agree – 10
- Strongly Agree – 32

Question 5
I plan to use the supporting material received at Ag Alley in my classroom.

- Yes – 35
- No – 0
- Not Sure – 8

Question 6
The information covered at Ag Alley was age appropriate.

- Strongly Disagree – 1
- Disagree – 1
- I don’t know – 0
- Agree – 8
- Strongly Agree - 34

Question 7
Ag Alley was interactive enough to keep my students engaged in the discovery process.

- Strongly Disagree – 1
- Disagree – 3
- I don’t know – 0
- Agree – 13 – Sometimes it’s hard to hear the speaker.
- Strongly Agree – 26

Question 8
What was the most important thing your students gained from this experience?

- Knowledge of different types of protein.
- Better understanding of the farm.
- Hands on – with explanations were great! Very engaging.
- The hands on experience.
- How to eat healthy.
- How food is processed.
• Learned about appropriate diet, where foods come from.
• Where food comes from.
• Content related to state educational standards.
• Real life experiences.
• How important certain food groups are to have a healthy body.
• Loved milking the cow!
• Access to other areas besides the town they live.
• MyPlate/food portion sizes.
• Planting seeds/hulling rice.
• Learning about protein and types of animals.
• Learned how to eat healthy and how foods gets to our table.
• MyPlate and where food comes from.
• Information about food and animals.
• Learning healthy food choices.
• They really liked to milk the cow.
• Learning how to eat better (and healthier)!
• Food groups
Delta Farm Lesson Plan

Key Concepts:
• Students will identify the main parts of plants and make connections between plants and personal food choices.
• Students will understand that gardens and farms provide foods like fruits and vegetables that are important for good health.
• Students will recognize that fruits and vegetables are part of a healthful diet based on the MyPlate guidelines from USDA.

Materials/Equipment Needed:
• Display Unit – “Delta Farm” includes backdrop display and specialized table covering
• 6 foot table
• Food models of fruits and vegetables – carrot, celery, lettuce, apple, broccoli, sunflower seeds (www.enasco.com)
• 2 plastic plates
• Storage baskets for fruits and vegetables
• Artificial fruits and vegetables for display in baskets
• Edible plant parts poster
• MyPlate poster
• Spray bottle (water) – one for each group of 4 students
• Toilet paper (double ply) – 2 to 4 squares for each student
• Carrot seeds
• Ruler – one for each student
• Small bags – one for each student
• Permanent markers – one for each group of 4 students
• Rectangle serving trays – one for each group of 4 students
• Labels printed with instructions for planting seed tape at home

Advanced Preparation:
• Set up backdrop display unit.
• Set up 6 foot table with specialized table covering.
• Set up baskets of artificial vegetables and fruits for display on top of the table.
• Put food models on plates if needed and display on top of the table.
• Print planting instruction labels for the carrot seed tape and affix a label to a bag for each student.
• Fill serving trays with one spray bottle filled with water, toilet paper (torn into lengths of two to four squares), carrot seeds, rulers, small bags with labels, and one permanent marker
Talking Points:
Welcome to Delta Farm. Yummy fruits and vegetables grow on this farm. Fruits and vegetables can also be grown in a garden or even in containers such as pots. Do any of you grow a garden at home? It is fun to grow a garden at home. If you don’t have space to grow a garden, you can plant some fruits and vegetables in pots or in a small raised bed. You will be able to grow food that is good for your body and yummy to eat. We are going to make seed tape so that you can plant your own vegetables at home. (Conduct Carrot Seed Tape activity.)

What are some fruits and vegetables that you like to eat? Fruits and vegetables are important to our health because they contain vitamins and minerals that help keep us healthy. They also contain fiber to help clean out our bodies. Eating a variety of fruits and vegetables of different colors is a healthy habit. MyPlate is a guide for helping us fill our plates with healthful foods. (Show MyPlate poster). As you can see, fruits and vegetables should be part of a healthy diet. They should make up ½ of our plates.

Fruits and vegetables come from plants. What does a plant grow from? (a seed) Just like you have different parts to your body; plants are made of different parts. Plants have six main parts: roots, stems, leaves, flowers, fruits, and seeds. Each of these parts helps the plant do something. Just like your hands help you draw, eat, or brush your hair, a plant has parts to help it live and grow. The roots anchor and support the plant. They also absorb nutrients and water and store excess food produced by the plant. Stems support leaves and flowers. They act as transportation system to move water and nutrients up from the roots and take excess food made by the plant down to the roots for storage. The main job of leaves is to create food and energy from sunlight. Flowers provide plants a way to make new plants. Their bright petals attract insects to help in pollination which helps create new seeds. Fruits are also formed from the flowers of the plants. Fruits contain the seeds. The seeds can be used to grow new plants. Let’s see what it’s like to be a plant. (Conduct Plant Part Role Play.)

Farmers grow fruits and vegetables from seeds or from plants. They are planted in the soil, watered, and fertilized as needed to help them grow. Fruits and vegetables can also be called produce. When the produce is ready to pick, the farmer harvests it. Sometimes this is done by hand such as picking the fruit or vegetable off the tree, bush, or vine it grows on. At other times, it may be done with a machine. After the fruits and vegetables are harvested, they are either sold by the farmer at the farm or a farmer’s market, or they may be shipped to a grocery store or produce distributor. We can then buy the fruits and vegetables to take home and eat.

All of the parts of a plant are important for the growth of the plant. Did you know those plant parts are also important for your growth and health? When we eat fruits and vegetables, we are giving our bodies nutrients to help them grow and stay healthy. The fruits and vegetables we eat come from the main parts of a plant. We can eat all different parts of plants. (Show Edible Plant Parts Poster and point out food models as you discuss parts of the plants we can eat.) Edible roots include carrots, beets, turnips, and radishes. Asparagus and celery are stems. Potatoes are often mistaken to be roots since they grow underground. They are actually enlarged underground stems called tubers. Lettuce, cabbage, and spinach are edible leaves. We eat many fruits from plants. This is the part of the plant that contains seeds. Many of the foods that we consider to be vegetables are actually the fruit of the plant even though they go in the vegetable food group. Cucumbers, green peppers, and squash are examples of vegetables that are the fruit of the plant. Fruits that go in the fruit food group include apples, oranges, bananas, and strawberries. Broccoli and cauliflower are flowers that can be eaten. We can even eat some seeds such as peas in a pod, sunflower or pumpkin seeds.
Activity (Activities):

- **Plant Part Role Play:** Guide students in a role-play activity where they pretend to be a plant.
  
  0 Start by pretending that it is spring, and you are seeds that have been planted in the ground. Let's all curl up small like a seed in our garden. (Have students squat down on the floor and curl their bodies into a small shape.) You are underground. The soil or ground is all around you. Spring rains come down and soften your seed coat so that your roots start to grow into the soil. What part of your body can you use to become roots? Feet and legs are the roots growing out of the seed and pushing down into the soil. Roots are the first plant part to grow out of seeds. Wiggle your toes and begin standing as your roots start growing out of the seed. What part of your body is the stem? Your body is the stem. Wiggle your body. Pop up your head and start growing tall. Stand up tall and straight so that your stem is growing above the ground. What parts of your body could be the leaves and branches? Your arms could be branches, and your hands and fingers could be leaves. Put your arms out away from your body and wiggle your hands and fingers as if they were leaves fluttering in the breeze. Reach toward the sky to catch the sun’s rays. Stand up straight with your head held high and a big smile on your face because your head is a beautiful flower on top of a sturdy stem. Move it back and forth like it is enjoying the sunshine and the breeze.

- **Carrot Seed Tape Activity:** Divide students into groups of 4 children. Give each group a tray filled with a spray bottle full of water, a ruler for each student, a small bag of seeds, toilet paper torn in lengths of two to four squares per student, one permanent marker, and a bag labeled with planting instructions for each student. Children should each write their name on a bag. Students should gently spray the toilet paper and line up the ruler along the toilet paper bottom or top. Place a carrot seed along the middle of the toilet paper. Be sure to space the seeds based on the seed packet’s recommendation. Take each top edge of the toilet paper and fold down 1/3 followed by a gentle tap to secure. Take each bottom edge and fold up 1/3 followed by a gentle tap to secure. If needed, spay again to secure the seed tape. Set trays aside for seed tape to dry. Continue with lesson. When seed tape is reasonably dry, students should roll it around a pen or marker to make a circle and then put in their bag to take home and store until planting.

Summary:

We can eat different parts of plants. It is important to eat a variety of fruits and vegetables. Our bodies need the nutrients from fruits and vegetables to stay healthy. It can be fun to grow fruits and vegetables.

References:

- Farm to You Station Scripts – Oklahoma Cooperative Extension Service (OCES)
- Plant Parts Become Me – Minnesota Garden Guide
- Six Yummy Plant Parts – Oregon State University Extension Service
- Alaska Agriculture Day – Carrot Seed Tape Activity – Alaska Farm to School
- Eating Plants – National Agriculture in the Classroom

Prepared By: Cathy Agan
Budget (Based on 7,000 students)

- Display - $1800.00
- 6 Foot Folding Table - $40.00
- Food Models - $60.00
- Storage Baskets - $50.00
- Artificial Fruits and Vegetables - $100.00
- Serving Trays (7) - $20.00
- 2 Plastic Plates - $2.00
- MyPlate Poster - $20.00
- 7 Spray Bottles - $10.00
- Toilet Paper - $30.00
- Carrot Seeds - $150.00
- Small Paper Bags - $270.00
- Markers - $25.00
- Labels – $250.00
- **Total - $2,827.00**
Delta Farm Display
113.5” x 89.5”
Garden Station Tablecloth
Front Visual Area: 66” x 23”
Farmer Pete’s Protein Place Lesson Plan

Key Concepts:
- Students will learn to identify foods high in protein.
- Students will understand the role a farmer plays in providing protein foods.
- Students will be able to match the farm animal to the protein it provides.
- Students will understand the role protein foods play in building a healthy plate.

Materials/Equipment Needed:
- Display Unit – “Farmer Pete’s Protein Place” includes backdrop display and specialized table covering
- 6 foot folding table
- Stuffed plush farm animals – bull, piglet, white broiler, black and white hen, sheep, goat, fish
- Food replicas of protein foods – grilled chicken breast, chicken nuggets, chicken drumstick, chicken slice, beef cubes, beef tenderloin rounds, grilled strip steak, hamburger, pork chop, bacon, sausage, deli ham, hot dog, turkey slice, deli turkey, peanut butter, almonds, scrambled egg, hard cooked egg, fried egg, tilapia, fish sticks, tuna, shrimp and tofu.

Advanced Preparation:
- Set up backdrop display unit.
- Set up 6 foot table with specialized table covering
- Set up plush farm animals around front table and place food models on top of table.

Talking Points:
Farmer Pete raises all kinds of protein foods on his farm! Animal proteins, plant proteins, here a protein, there a protein, everywhere a protein!! Protein comes from animal sources like beef cattle, chickens, turkeys, pigs, goats, sheep, fish as well as plant sources like soybeans, nuts, sunflower seeds, etc.

Farmers like Farmer Pete raise our protein foods and then ship them to a processing plant for processing. Once they are cut and processed into the foods we eat, they are packaged and shipped to the meat counter at our local food stores, restaurants and schools. We make our purchases at the store by deciding which protein foods are going home with us to help us build a healthy plate.

So why do we need to worry about getting protein on our plate? Protein is a nutrient that helps our bodies with three very important things. One, it helps our bodies to grow. Does anyone have a baby brother or sister? Just think about how much bigger you are now when compared to your baby sibling. Well, you were once a baby too but what happened to your body? You grew!!

The second important thing protein helps our body do is to heal. If you get a cut, you need protein in order for that cut to heal. Our bodies heal by adding protein blocks to the cut. Just like a construction crew builds and repairs buildings, protein does the same thing for our bodies.
And the last important thing protein does for us is it helps us feel full and satisfied. It takes our tummies longer to digest foods from the protein group so we don’t get hungry as soon after eating.

Let’s listen to a poem about my friend Farmer Pete Freans (Read from attached page.)

What does Farmer Pete eat at his meals? Farmer Pete eats meat and where does meat come from? It comes from animals like cows, pigs, fish, chicken, turkeys, sheep, goats, etc. Farmer Pete didn’t just eat hamburgers all day long. He sometimes ate chicken, sometimes fish and sometimes eggs.

What does Farmer Pete eat for dessert? He eats beans, nuts and seeds. Nuts, nut butters and seeds, like beans come from plants and they do give us some good protein. (Show food models for these foods.)

Now, let’s play a matching game and see if you can match up the protein food with the farm animal that provides that type of meat.

It’s important to eat foods from the protein group every day. And it’s a good idea to choose many different foods from this group and not eat the same protein all the time. It’s also important to choose lean proteins and stay away from those higher in fat most of the time. Choosing lean proteins will help keep your heart healthy and pumping strong.

Activity (Activities):

• **Protein Match Up Activity:** Using plush animals, plant graphics on background screen and food models ask kids to tell you which farm animal or plant provides that type of protein. Mix up the foods so you don’t show all those that are provided by same animal in a row.
  
  o Grilled chicken breast, chicken nuggets, chicken drumstick, chicken slice – white broiler
  o Beef cubes, beef tenderloin rounds, grilled strip steak, hamburger – beef cattle
  o Pork chop, bacon, sausage, deli ham, hot dog – pig
  o Turkey slice, deli turkey – turkey
  o Scrambled egg, hard cooked egg, fried egg – black and white hen
  o Tilapia, fish sticks, tuna – fish
  o Sunflower seeds – sunflowers
  o Edamame – soybean field or bag of soybeans
  o Pecans – basket of nuts

• **Growing Energizer Activity:** With your hands, show me how tall you was when you were a baby. Ok, everybody stand up. Wow, look how much you grew. Let’s grow together. Squat down on the floor to about the size you were when you were a baby. When I say the name of a food from the protein group pretend to eat it and grow up just a little bit until I say another protein food. If the food I name is not in the protein food group you don’t grow, just stay where you are. If you try to grow on a food I name that isn’t in the protein group you will have to start from your baby height again. When you are as tall as you can stand, reach your arms and stand on your tiptoes to grow more. Are you read? Let’s grow!
Summary:
So remember that eating lean proteins will give your body the protein which helps you to grow, keeps your heart strong, helps you heal and feel full. So make sure you choose lean proteins most of the time and don’t eat the same proteins all the time. So let’s take the Protein Pledge and repeat each line after me:
When I eat
Foods from
The Protein Group
I give my body
Protein
To build
And keep my body strong. (Make strong arm muscles with this last line.)

References:
• DINE Nutrition Education for Life, Protein Group, Kindergarten – 1st Grade Lesson Plan

Prepared By: Terri Crawford

Budget (Based on 7,000 students)
• Display - $2000.00
• 6 Foot Folding Table - $40.00
• Stuffed plush farm animals - $425.00
• Protein food models - $200.00
• Educational enhancement – Nutrition Nation Sticker Activity - $840.00
• Shipping - $75.00
• Total - $3580.00
Farmer Pete Freans

Twenty-five year old Farmer Pete Freans
Loves to eat his meat and beans.
His favorites are roast beef, pork chops and ham
Followed by turkey, barbequed goat and lamb.
For breakfast, he chooses bacon and eggs,
At lunch he prefers grilled steak and chicken legs.
But dinner’s his favorite meal of them all-
His plate topped with grilled tuna and a single meat ball.
At all his meals towards meat he leans;
But the oddest thing about Farmer Pete Freans
Is that for dessert he only eats nuts and beans.
On Sunday and Monday to me it seems,
He always chooses pinto beans.
Tuesday it’s pecans, Wednesday chickpeas,
On Thursday he inhales sunflowers seeds with ease.
On Friday almonds with lima beans
Is the dessert of choice for Farmer Pete Freans.
But on Saturday Farmer Pete finally takes a reprieve
After a week of eating all that protein,
He gathers all of his friends and shows off his muscles-
That’s how his week ends!
Farmer Pete’s Display
111.5” x 89.5”
Protein Station Tablecloth
Front Visual Area: 66” x 23”
Sam’s Silo Lesson Plan

Key Concepts:
- Students will understand that grains are an important part of our diet.
- Students will identify foods in the Grain Group of MyPlate from USDA.
- Students will be able to distinguish the difference between whole and refined grains.
- Students will discuss where grains grow and that they are harvested, milled, and made into foods.

Materials/Equipment Needed:
- Display Unit – “Sam’s Silo” includes backdrop display and specialized table covering
- 6 foot table
- 4 clear bulk food storage containers
- 4 different bulk grains to display in storage containers on top of table (oats, wheat, rice, corn)
- Food models of grain foods – toasted oats cereal, whole wheat bread, spaghetti, oatmeal, brown rice, white rice, flour tortilla, corn tortilla, and popcorn (www.enasco.com)
- 3 plastic plates
- MyPlate poster (www.enasco.com)
- Whole grain poster (www.enasco.com)
- Mouse pads (2 mouse pads for each group of 2 to 3 students)
- Pieces of 70-100 grit sandpaper (2 pieces for each group of 2 to 3 students)
- Rough rice
- Small plastic bins (example: SKU#:952503 - www.dollartree.com) (1 bin for each group of 2 to 3 students)
- Snack size resealable plastic bags (1 bag for each group of 2 to 3 students)
- 1 gallon size plastic bag filled with flour
- Trash bag

Advanced Preparation:
- Set up backdrop display unit.
- Set up 6 foot table with specialized table covering.
- Set up containers of bulk grains with labels for display on top of the table.
- Put food models on plates if needed and display on top of the table.
- Fill bins with 2 mouse pads, 2 pieces of sandpaper, and a small plastic bag of rough rice in each bin
- Set up trash bags or cans to dispose of rice waste from rice milling activity.
Talking Points:

Welcome to Sam’s Silo! Have you ever heard of a silo before? What is a silo? A silo is used by a farmer to store grains. (Point out the picture of the silo on the display.) Grains are crops grown by farmers. Many of the foods we eat are made from grains. You can see some examples of grains in the bins on the table and some examples of foods made from grains. (Point out bins of grains and food models. Conduct “Grain Food Match Up” by having children help match the food model to the grain in the bin that it comes from.)

Wheat is a common grain that is grown for food. Farmers plant the seeds in the soil, and the seeds grow into plants. They need rain and sunshine to help them grow. When wheat is golden brown, it is ready to be harvested by a machine called a combine. (Point out picture of combine on the display.) After harvest, it is taken to a mill and ground into flour. (Show bag full of flour.) The flour is shipped to grocery stores or made into foods like pasta, tortillas, bread, and cereals.

Besides wheat, there are many other types of grains that we eat. Can anyone name some other grains? Oats, rice, barley, rye, quinoa, and corn are some other grains. Like wheat farmers, other types of farmers grow their grains in fields too. Different types of grains are popular in different parts of the world.

MyPlate is a guide for helping us fill our plates with healthful foods. (Show MyPlate poster.) As you can see, grains should be part of a healthful diet. They should make up about ¼ of our plates. Who can tell me why we need to eat grain foods every day? Grains give us energy to grow and play!

Grains can be refined or whole grains. What is the difference? Whole grains mean that we eat the entire part of the grain seed or kernel. (Show whole grain poster.) This helps us get all of the important nutrients from these grains. Some examples of whole grains are whole wheat bread, whole wheat pasta, brown rice, and popcorn. A refined grain has been milled to remove parts of the grain. This leaves only part of the grain seed or kernel for us to eat. Some examples of refined grains are white bread, white rice, and pasta. When this happens, the grain also loses some of its nutrients and fiber. Our bodies need those nutrients and fiber to stay healthy. We should try to make at least half of the grains we eat be whole grains.

Let’s do an experiment to see how a grain goes from a whole grain to a refined grain. We are going to try our hand at milling rice today. When the farmer harvests rice, it is known as rough rice and looks like this. (Show rough rice.) In order for the harvested rice to be edible, the hulls must be removed. Once the hull is removed, you are left with brown rice, which is a whole grain. (Point out brown rice food model.) White rice comes from milling the brown rice further to remove the rice bran. (Point out white rice food model.) Do you want to see if you can mill rice? Let’s give it a try. (Conduct rice milling activity.)

Activity (Activities):

- **Grain Food Match Up:** Using food models and bins of bulk grains, match the food model to the grain that food comes from.
  - Oats - toasted oats cereal, oatmeal
  - Wheat – whole wheat bread, spaghetti, flour tortilla
  - Rice – brown rice, white rice
  - Corn – corn tortilla, popcorn
• **Rice Milling Activity:** Divide students into groups of 2 to 3 children. Give each group a bin with 2 mouse pads, 2 pieces of sandpaper, and a small bag of rough rice. The students will work in small groups to mill the rice first from rough rice to brown rice and then from brown rice to milled white rice. Have students work in the bins to contain the rice.

  0 Turning rough rice to brown rice: Have the students place one mouse pad in the bottom of their bin. Place several pieces of rough rice on the mouse pad. Lay the second mouse pad on top of the rice. Rub the two mouse pads back and forth until all of the hulls are removed from the rice kernels.

  0 Turning brown rice to milled white rice: Place one piece of sandpaper flat in the bottom of the bin. Place several kernels of brown rice on the sandpaper. Lay a second piece of sandpaper on top of the brown rice. Rub the two sheets of sandpaper together for 3 to 5 minutes. When finished, the students will be able to observe two distinct rice products – milled white rice and rice bran. Rice bran is used as an additive in several different food products.

**Summary:**

Farmers work hard to grow many different types of foods for us. We need foods from all food groups in order to stay healthy. Grain foods give our bodies energy. Whole grain foods are a good source of fiber that our bodies need to work well. There are many types of grains and lots of foods that can be made from those grains.

**References:**

• Farm to You Station Scripts – Oklahoma Cooperative Extension Service (OCES)
• Commodity Fact Sheet – Rice – California Rice Commission

**Prepared By:** Cathy Agan

**Budget (Based on 7,000 Students)**

• Display - $1800.00
• 6 Foot Folding Table - $40.00
• Bulk Food Storage Containers - $50.00
• Grain Food Models - $85.00
• Mouse Pads (12) - $24.00
• Sandpaper - $30.00
• Small Storage Bins (12) - $12.00
• Bulk Grains - $20.00
• 3 Plastic Plates - $3.00
• MyPlate Poster - $20.00
• Whole Grains Poster - $10.00
• Snack Size Plastic Bags - $100.00
• Flour - $5.00
• Total - $2,194
Delta Farm Display
113.5” x 89.5”
Protein Station Tablecloth
Front Visual Area: 66” x 23”
Louella’s Dairy Farm Lesson Plan

Key Concepts:
• Students will learn how milk gets from the farm to their table.
• Students will learn the importance of milk to a healthy plate.
• Students will be able to identify cheese and yogurt as foods made from milk.
• Students will be able to identify milk and dairy foods as a food group on MyPlate.

Materials/Equipment Needed:
• Display Unit – “Louella’s Dairy Farm” includes backdrop display and specialized table covering
• 6 foot folding table
• Louella the Dairy Cow
• Two milking bottles with screw on lids
• Two Gallons of water
• One container of non-dairy creamer
• Funnel
• Two stools
• Two tin milking buckets
• Green plastic table covering
• Piece of green artificial turf grass
• 5 gallon galvanized bucket with mixture of hay, grass and grains
• 12 gallon containers of water
• Dairy food models – milk, cheese slice, cheese cubes, yogurt, flavored milk, butter, ice cream, pudding, various types of milk – whole, reduced fat, low-fat, skim, chocolate
• Paper towels
• MyPlate teaching tool

Talking Points:
Welcome to Louella’s Dairy Farm and let’s say hello to Louella! (Hello Louella) Dairy farms are where farmers raise cows so that we can have milk to drink! Have you ever been to a dairy farm before? How many of you have ever milked a cow?

Dairy cows, like Louella, provide us with a very important agriculture commodity – milk (show food model). Milk is very important for our bodies. Milk is so important that Louisiana made it the state’s beverage! So let’s all give a cheer for milk!! (Cheer, cheer for milk!)

So exactly how does milk get from the dairy farm to you? It follows a process which begins at the farm with the dairy cow. Dairy cows are very large animals. One dairy cow can weight about 1400 pounds. It would take about 28 kids like you to weigh that much!
To be able to produce milk, dairy cows need to eat lots of hay and grains and drink lots of water every day. They then turn that food and water into milk. Cows have a special stomach that allows them to digest these grains so that they can get all of the nutrients they need to make milk. They will eat about 100 pounds of this food each day. (Show bucket of feed mixture.) But they also need to drink twice as much water as the amount of milk they produce. So if they produce 6 gallons of milk they need to drink 12 gallons of water in a day! (Point to display of 12 gallons of water.)

Cows are then sent to the milking barn at least two times a day where they are milked by machines and the milk goes through pipes to a big cold storage tank. The tank collects the milk from the farm and sends it by truck to the dairy plant for processing. At the dairy plant the milk is heated to kill any germs and packaged into containers. It is then shipped to our local grocery stores where we buy it and bring it home to our table. It takes about two days to get milk from the cow on the farm to the grocery store. Milk is also sent to restaurants and schools.

Dairy cows only make white milk. At the dairy plant they sometimes add chocolate or strawberry flavoring to some of the milk. (Show chocolate milk food model.)

Milk is also used to make other foods. Let’s see if you know these other foods. (Show other food models – cheeses and yogurt.) Other foods such as pudding, ice cream and butter are also made from milk but they are sometimes foods, not all the time foods like milk, cheese and yogurt. (Show food models.)

Milk and foods made from milk are so important to our good health that they have a special place on MyPlate. (Point to blue circle on my plate teaching tool.) This tells us that milk or an all the time milk product like yogurt or cheese, should be a part of every meal.

Who should drink milk? Milk is good for everyone. At your age you should have 2 servings of milk or all the time dairy products every day.

Do you know why our bodies need us to drink or eat dairy foods every day? Dairy foods are important because they provide us with the mineral calcium that helps us build strong bones and teeth.

Now that you learned about the important reasons to drink milk and eat foods made from milk, let’s have you put your milking skills to the test. We are going to demonstrate how to milk Louella and then you will get a chance to take a turn.

Activity (Activities):

• Students are shown how to milk Louella the Dairy Cow and then each child is given the opportunity to milk her.

• Extra activity – Milk from Farm to Table Song (sung to the tune of the Farmer in the Dell)

  o The farmer milks the cow, the farmer milks the cow
     Hi, ho, the diary oh, the farmer milks the cow.
  o The trucker drives the milk, the trucker drives the milk
     Hi, ho, the dairy oh, the trucker drives the milk.
  o The grocer sells the milk, the grocer sells the milk
     Hi, ho, the dairy oh, the grocer sells the milk.
  o We all buy the milk, we all buy the milk
     Hi, ho, the diary oh, we all buy the milk.
  o We all drink the milk, we all drink the milk
     Hi, ho, the dairy oh, we all drink the milk.
References

- Farm to You Station Scripts, Oklahoma Extension Service
- Make It a Dairy Day Lesson Plan, LSU AgCenter
- Dairy Unit, Alabama Ag In the Classroom

Prepared By: Terri Crawford

Budget

- Display - $2000.00
- 6 Foot Folding Table - $40.00
- Life-size wooden model cow for milking supplies - $300.00
- 3 calf nursing bottles - $15.00
- 14 gallons of water - $14.00
- Non-dairy creamer - $3.00
- Artificial turf - $100
- Galvanized bucket - $15.00
- Green plastic table covering - $1.00
- Educational enhancement – Milk Moustache - $245.00

- Display and Supplies - $2733.00
- Shipping - $67.00
- Total - $2800.00
Louella's Dairy Farm Display
113.5” x 89.5”
Protein Station Tablecloth
Front Visual Area: 66” x 23”
Tiger Cafeteria Lesson Plan

Key Concept:
- Understand where food comes from and use MyPlate to make healthy food choices.

Key Outcomes:
Students will be able to:
- Identify the 5 food groups on MyPlate.
- Name food items in each of the 5 food groups on MyPlate and understand how they went from farm to plate.
- Identify benefits from foods in each of the 5 food groups on MyPlate.

Station Description:
Each student will be given a pair of MyPlate glasses at the Tiger Cafeteria. There are 5 different pairs of glasses representing each of the 5 food groups. Be sure that within the group all 5 pairs of glasses are given to students. At the Tiger Cafeteria, students will magically turn into the piece of food indicated on their glasses (for pretend). At this station, students will discuss MyPlate and will be given a brief overview of how their foods got on the tray in the Tiger Cafeteria.

Materials/Equipment Needed:
- Tiger Cafeteria Display
- Cafeteria Tray
- Food Models: 2 slices of bread, lettuce leaf, head of lettuce, cheese slice, broiled fish patty, apple, glass of milk, carrots
- MyPlate Silly Glasses
- Magic Wand

Script
(An empty tray should be on the table with food models ready to be placed on the tray as you talk about each one.) Welcome to the Tiger Cafeteria! One of the best parts of the day is when you get to visit the cafeteria and see what’s for lunch. You may have lots of tasty things to eat. Where did all of that food come from? We may buy food from a grocery store, but food doesn’t grow in stores! Just how does all of that food get on your tray or in your lunchbox?

Today, we are going to learn where food comes from before it gets in the store and then ends up on our lunch tray or in our lunchbox in the cafeteria. We have a little problem though. Look at our tray! It is empty. It just will not do for a cafeteria to be out of food. We are going to have to find out where we can find some food and how to get it on our tray. Do you think you can help us? (Allow students to respond.)
Oh, thank you for volunteering. I think you will all work out just fine to turn into some yummy food. Let me wave my magic wand and then 1-2-3 POOF, you will all magically turn into some food!

(Wave wand and pass out MyPlate glasses for the kids.) Each of you has just been given a pair of MyPlate glasses and you are going to pretend to turn into that piece of food. Look at your glasses to see which food you are about to become. Now, on the count of 3, everyone put on your glasses . . . 1-2-3 POOF! You are now whatever food is on your glasses and will help us fill our lunch tray.

Each of you has been turned into a food from one of the five main food groups. Can you tell me what those groups are? (Wait for responses. Point to the food groups on MyPlate.)

- Grain Group
- Vegetable Group
- Fruit Group
- Dairy Group
- Protein Group

• Raise your hand if you have on bread glasses. On MyPlate, what food group is represented by bread? (Grains) That’s right you are a Grain. (Point to the Grain section on MyPlate.) Grain foods like bread fill us up and give us energy to keep going.

Thank you bread! We now have some food on our lunch tray. (Place 2 slices of bread on the tray.) Let’s see how you grew into some bread and ended up on our tray. A farmer planted seeds in spring, and by summer they had grown into tall wheat with fat, ripe grains at the top of every stalk. The farmer cut the wheat with a giant combine and sent it to a flour mill. The miller ground the grains into flour, and trucks took the flour to a bakery. The baker mixed the flour with water, sugar, and yeast and then kneaded it into a soft, squishy dough. The dough was baked in a very hot oven, and out came fresh loaves of bread ready to send to the store.

What other foods do you like to eat that belong in the Grains group? (Have students respond, one at a time.)

• Raise your hand if you have on lettuce glasses. On MyPlate, what food group is represented by lettuce? (Vegetables) Yes, you are a Vegetable. (Point to the Vegetable section on MyPlate.) Vegetables have lots of fiber and vitamins and minerals that help keep us healthy.

Thanks lettuce; we really needed you to go with this bread. (Show head of lettuce.) Our lettuce started out as seeds growing in a field on a vegetable farm. As the lettuce grew, it soaked up water and nutrients from the soil. When the heads of lettuce were ready, the farmer harvested the lettuce by cutting the heads away from the stems. The lettuce was stored in a cooler and then packed into trucks to travel to grocery stores or distribution centers. It can then be washed, cored, and the leaves of lettuce can be added to our bread. (Place lettuce on top of one of the slices of bread.)

What other foods do you like to eat that belong in the Vegetable group? (Have students respond, one at a time.)

• Raise your hand if you have on cheese glasses. On MyPlate, what food group is represented by cheese? (Dairy) Yes, you are a Dairy product. (Point to the Dairy section on MyPlate.) Dairy foods are bone builders. They also help our teeth grow strong.

Thank you, cheese. What a great addition to our tray! (Put cheese on top of lettuce on bread.) Our cheese was once milk that came from a cow. A farmer milked the cows, and a tanker from the dairy came to collect the milk. In the dairy, cheese makers warmed up the milk and added bacteria to make it turn sour and thick. Then they added a substance that animals use to digest milk called...
rennet, and it changed into bits called curds, floating in whey. The cheese makers drained off the whey, chopped up the rubbery curds, added some salt, and pressed it into blocks. The blocks were stored for months until the cheese was ripe and ready to eat. Trucks brought the cheese to the store where we can buy it and add a slice to our lunch.

What other foods do you like to eat that belong in the Dairy group? (Have students respond, one at a time.)

- Raise your hand if you have on fish glasses. On MyPlate, what food group is represented by fish? (Protein) Yes, you are a Protein. (Point to the Protein section on MyPlate.) Protein foods are “bodybuilders”. They help us grow.

Guess what, we can add the fish to our bread along with our cheese and lettuce to make a delicious fish sandwich! (Place fish on top of cheese and add other slice of bread on top to make a sandwich.) You have heard about all kinds of farm animals like cows, chickens, and pigs that farmers raise for protein foods, but did you know that some farmers raise fish? Aquaculture is what fish farming is called. Aquaculture is the raising of fish and shellfish on special farms. Aquaculture can take place in the ocean, in bays, ponds, in greenhouses, and even in buildings. Farmers raise fish such as catfish and trout or shellfish like shrimp and clams. Farmers harvest or catch the fish, and then they are kept cold. Trucks bring the fish to fish markets, and grocery stores. Sometimes the fish are processed into products like fish sticks or patties like the one we put on our sandwich.

What other foods do you like to eat that belong in the Protein group? (Have students respond, one at a time.)

- Raise your hand if you have on apple glasses. On MyPlate, what food group is represented by apples? (Fruits) Yes, you are a Fruit. (Point to the Fruit section on MyPlate.) Just like vegetables, fruits are full of fiber and vitamins and minerals that make our bodies work well and stay well.

I think an apple will go great with our fish sandwich. (Add an apple to the tray.) Last spring the apple trees in the orchard were full of flowers. In summer, tiny apple buds grew from each flower stalk. The buds kept growing, and by autumn the trees were full of ripe apples. Pickers climbed into trees and filled their bins with apples. A truck took some of the apples to grocery stores, produce markets, and farmer’s markets. Some of the apples were taken to be processed into applesauce or apple juice. We can buy the apples, wash them, and have them for lunch!

What other foods do you like to eat that belong in the Fruit group? (Have students respond, one at a time.)

Look at our lunch tray now! Do we have foods from all five food groups on MyPlate? (Allow students to respond – yes, we do.)

Our foods may come from fields, from farms, from orchards, from groves, from dairies, and from fish hatcheries. That’s how the farmer helps us create delicious trays of foods that are good for us. So many people helped bring the foods to our trays – farmers and bakers, cheese makers, pickers, packers, and truck drivers. Now it’s up to our stomach to let the food do the job that food does – helping us grow taller and stronger and keeping us healthy. We need foods from all five MyPlate food groups every day. Let’s add a glass of milk to drink and some carrots to go with our sandwich, and I think it will be lunch time!