Arkansas farm to YOU

Station 2: To the Market
Grades 4-6
Script for grades 4-6:

Hello and welcome to my Market! Each kind of food takes a different journey from the farm to where it is purchased. Today we are following milk and rice as they both travel from the farm to the grocery store. We will start with milk.
Cows are milked in the part of a barn called a milking parlor. Every day, twice a day. Some dairies even milk 3 times a day. The milk is pumped to a big tank where it is stored and kept cool and clean.
Each day it is picked up by a large truck that takes it to a processing plant. At the processing plant it is tested to make sure it is good, clean and safe and then heated to 165 degrees for 15 seconds. This is called pasteurization. This kills any bacteria that might be in the milk. Then, it is put into milk jugs or cartons, or made into cheese or yogurt.
Now we’re going to discover how rice gets from the farm to your plate.

In Arkansas, rice is planted in the spring and harvested in the late summer or early fall when it turns golden brown.

Once ready to harvest, a combine comes through and removes the tops of the stalk which is known as the grain of the rice plant.

*Show students bag of rice.*
The farmer will then take the rice to the grain elevator or coop where they will clean and mill it to remove the hull. Then it is taken to the processor to get it ready to eat and then to the store.
When foods are put into packages it is also labeled with different kinds of information. Why do we need food label information? *To help us make healthy food choices.*

The clues you need to make healthy food choices are found on the label. Let’s use these magnifying glasses to investigate some of the clues. *Ask students to look for the following information on the container and pause for a few seconds for answers.*

Find the Nutrition Facts label. It looks like this. *Refer to the Nutrition Facts label on the flip chart.*

How many servings are in the container?

How many grams of sugar are in one serving?

How many are in chocolate milk?

What percentage of the daily recommendation for calcium is in one serving? *Pause briefly for response.*

Percent daily values give you clues to if a food is high or low in a nutrient. Less than 5% means it’s low and more than 20% means it’s high.

Is the milk high or low in calcium?
**Nutrition Facts**

Serving Size 1 cup 245g (245 g)
Servings per container 16

| Amount Per Serving |  
|---------------------|-------------------------|
| Calories            | 125                     |
| Calories from Fat   | 41%                     |
| Total Fat           | 5g                      |
| Saturated Fat       | 3g                      |
| Trans Fat           |                         |
| Cholesterol         | 20mg                    |
| Sodium              | 127mg                   |
| Total Carbohydrate  | 12g                     |
| Dietary Fiber       | 0g                      |
| Sugars              |                         |
| Protein             | 9g                      |

**Daily Value**

| Vitamin A           | 100%                    |
| Calcium             | 31%                     |
| Iron                |                         |

*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 per gram: |  
|--------------------|-------------------------|
| Fat19              | Carbohydrate 4          |
| Protein 4          |                         |
Find the list of ingredients. What is the first ingredient?

*Pause briefly for response.*

The ingredient listed first is the one you are getting the most of in the food item.

The more ingredients listed, the more a food is processed. A lot of ingredients may be a clue the food contains added fat and sugar. These would be foods you want to eat less often.

Congratulations – you have learned how to use food labels to make healthy food choices. Your next stop is a Healthy Café and other places where you can make healthy food choices.
### Nutrition Facts

Serving Size 1 cup 245g (245 g)
Servings per container 16

| Amount Per Serving | Calories 125 | Calories from Fat 41
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Fat: Carbohydrate: Protein 9:4:4
Station 3: Healthy Cafe
Grades 4-6
Script for grades 4-6:

Welcome to the Healthy Café where you can choose a variety of food. What does variety mean? Having a lot of different things.

What does eating a variety of foods mean? Eating foods from all the food groups.

Different food groups provide different nutrients. Fruits and vegetables with different colors also provide different kinds of nutrients. When you are in the school cafeteria it is your responsibility to choose a variety of foods.

Please divide into two groups. The group challenge is to work together to make a MyPlate that includes all the food groups. Be sure each student gets to pick a food item. The goal is to fill the plate with a variety of food from each food group.

After the students have completed the activity, ask them to check their work by asking the following questions.

Is each food group represented on MyPlate?
Is half of the plate filled with fruits and vegetables?
Did you pick a lean protein food?
Did anyone choose a protein food that isn’t from an animal?
Do you have a grain? Is it a whole grain?
Did you remember a dairy food? Is it fat-free or low-fat milk, cheese or yogurt?
Having a rainbow of colors on your plate is another good clue you have variety.

Which food groups have a wide variety of different colors?
*Fruits and vegetables.*

In the school cafeteria choose at least one fruit and one vegetable, or even more, every day.

What are some other times you can choose fruits and vegetables to eat?

*Snacks, breakfast, dinner or when eating out, choose salad or fruit instead of French fries*

Why is it important to eat a variety of foods?
*To get all the nutrients you need to be strong and healthy.*

The next time you are in the cafeteria be sure to choose a variety of food to eat. Look for the MyPlate symbols and choose a food from each food group. If there is a new fruit or vegetable, be sure to try it. You might like it!
ChooseMyPlate.gov
Good work! You have discovered the importance of variety for strong and healthy bodies.

In the next part of Farm to You, you will learn how your body turns food into nutrients needed for good health. You will go to the mouth and then slide through the esophagus to the stomach. From the stomach you will travel through the small intestines, muscles, bone and then pop out onto the skin. **Point to each organ on the flip chart as it is mentioned.**

We will also talk about other choices that effect health.
Station 4: The Mouth
Grades 4-6
Script for grades 4-6:

Welcome to the mouth! You are here in the body. The mouth gives us clues about how foods taste. If you don’t take care of your mouth think of all the wonderful tastes you will miss.
You are here.
Your mouth has several types of tissues that have different jobs important for good health.

Why are healthy gums important?
They protect the bones that hold teeth in our mouth.

What does the tongue do?
Helps taste food, helps us talk and helps us swallow.

What are the different flavors we taste?
Sweet, salty, sour and bitter.
Which food group contains foods that help build healthy teeth?  
*Dairy foods.*

What is an important nutrient in dairy foods that makes teeth hard?  
*Calcium.*
Vitamin C rich foods help keep gums healthy. A clue you might not be getting enough Vitamin C is if your gums bleed, especially when you brush your teeth. Can you name some foods rich in Vitamin C?

*Citrus fruits, tomatoes, broccoli, cabbage, bell peppers, mango, strawberries and spinach.*
What does good hygiene mean?
*Keeping your body clean.*

What is an important hygiene habit that will keep your mouth healthy and your breath fresh?
*Brushing and flossing teeth everyday.*

*Ask for 2 students to help you demonstrate flossing teeth. Have each student hold an end of the rope. Have the students gently move it up and down between the tooth stools.*
Besides drinking plenty of milk, eating fruits and vegetables, and brushing and flossing your teeth there is one more thing you must do to keep your mouth healthy. What do you think it is? Don’t smoke. That’s right - Be tobacco free!

What does that mean? Don’t smoke or use smokeless tobacco.

*Show diseased (smoker’s) mouth model.*
This is what a tobacco’s user’s mouth looks like inside.
*Gently push lips away from teeth and show gum disease and tooth decay. Also point out sores on the tongue and lip.*

What other kinds of disease is related to smoking? Smoking causes lung diseases like lung cancer and emphysema. *Emphysema puts holes in the lungs and makes it very hard to breathe.*

Diseased lungs make it very hard to breathe. Let's keep our lungs and mouth healthy by not smoking.
CIGARETTES

SNUS

SNUFF

TOBACCO
Once again, you have discovered clues to keep your mouth and teeth healthy. Can you tell me what they are?

*Drink milk/eat dairy foods.*
*Eat fruits and vegetables.*
*Brush your teeth.*
*Don’t use tobacco products.*

As you go to the next section of the Farm to You adventure, wrap your arms around yourself and squeeze.
Station 5: The Stomach
Grades 4-6
Welcome to the stomach. The stomach is where food is digested into nutrients you are here in the body (point to the highlighted stomach). You were just squeezed through a tube that connects the mouth to the stomach.

Does anyone know what it is called?

*The esophagus*
You are here.
Show the 10” plastic tubing to illustrate the esophagus. Place one end at the bottom of your neck, letting it extend to the top of your abdomen.

The esophagus is about 10 inches long in an adult and about ¾ inch in diameter.

How long do you think it takes food to go through the esophagus? Pause briefly for one or two responses. Food passes quickly through the esophagus in about 4 to 6 seconds. Liquid and soft foods move even faster.

Refer to the MyPlate and graphic of a child's body on exhibit walls during the following dialogue.

Foods in the same food group have similar kinds of nutrients. Let’s investigate beginning with grains. The main ingredient in grains is carbohydrates. Carbohydrates give body cells energy. Why is this so important? Because we are using up energy all the time, we even use energy to think and to sleep.

Vegetables and fruits are good sources of vitamins A and C. Vitamin A is important for eye health, especially night vision and skin health. Vitamin C helps builds collagen, which helps cuts and scrapes heal.

Milk and dairy products are good sources of calcium. Why is calcium important? Calcium helps keep bones & teeth strong and healthy.

Meat, beans, nuts and eggs are part of the protein food group in MyPlate.

Why is protein important? Pause briefly. Protein builds and repairs body tissues.
Esophagus and Stomach
An important clue that many people miss is listening to their stomach to know when they have eaten the right amount of food.

A few ways you can make sure you’re eating the right amount of food is to compare your food to the size of these items (refer to deck of cards, baseball and computer mouse). You can use the deck of cards to compare your meat serving. Next time you order a hamburger look to see if the meat is about the size of these cards.

Show students the deck of cards and the hamburger patty side by side.

You can use the computer mouse to compare to your potatoes.

Show students the computer mouse and potato side by side.

Lastly, a baseball is about the size of a serving of fruit or vegetable.

Show students a baseball and a piece of fruit or 1/2 cup serving of vegetable side by side.

Now let’s try and fill this plate with correct size portions, using the deck of cards, computer mouse and baseball technique that we just discussed. Have one student pick a food to fit in the portion plate. Discuss if it is the correct serving size.

If you get full before you eat this amount of food, it’s okay to stop eating. And, if you are still hungry, it’s okay to eat a little more. The important thing is to eat slowly and listen to your stomach to know when you have eaten the right amount of food.

How do you know when you have eaten the right amount of food for you?

Stop eating when you start to feel full, not when you feel stuffed.
Let’s be sure you got some of the important clues:

Food is digested into what in the stomach? *Nutrients*.

If you can’t see at night what should you eat more of? *Vitamin A* or *fruits and vegetables*.

If your gums bleed when you brush your teeth what should you eat more of? *Vitamin C* or *fruits & vegetables*.

What part of your digestive system gives you clues to control food intake? *Stomach*.

Congratulations! You have discovered clues about how food is digested into nutrients that help your body be healthy. Next you will learn how these nutrients get to where they need to be.
from esophagus
to small intestine

stomach
Station 7: The Muscles
Grades 4-6
Welcome to the muscles! Does anyone know how many different muscles we have in our bodies? 636.

Muscles need food to grow and to have energy to work. Here you will uncover clues to help you give your muscle’s what they need to help you grow and go.
*Flex left arm and place right hand on bicep muscle.*
Flex your left arm and place your right hand on top of the muscle. Straighten and bend your arm. Do you feel the muscle moving? What is the name of the muscle? *Bicep muscle.*

Now feel the muscle on the bottom or your arm above your elbow. Do you know what it is called? *Triceps muscle.*
**Show muscle replica** - This is what 1 pound of muscle tissue looks like.

**Show fat tissue replica** - And this what a pound of fat tissue in our body looks like. We need to exercise so we gain muscle instead of fat tissue. Notice the fat tissue replica looks larger than the same weight of muscle. Muscles fibers are made of proteins that make the muscle fibers contract, so we can move more.

Which food group provides high quality protein? *Meat and dairy, or foods from animal sources.*

Muscles also need energy to move. Which nutrient provides the most energy in our diets? *Carbohydrates.*

Which foods provide carbohydrates? *Grains, fruits and vegetables.*

Carbohydrates give us energy the same way that gasoline makes a car go. If we don’t eat enough, we don’t have energy to go. If we eat too much, the extra energy is stored as fat. There are two types of carbohydrates. Do you know what they are? *Simple and complex.*

Complex carbohydrates are the good carbs. Foods that contain complex carbohydrates provide energy and they also provide vitamins and minerals to help your body use the energy. Which food groups provide complex carbohydrates? *Whole grains, fruits and vegetables.*
Besides food, what else do muscles need to be strong and healthy? 
*Exercise or physical activity.*

For muscles to stay strong and healthy we need to be physically active for 60 minutes per day. We are going to do some exercises to help muscles build strength and flexibility.

*Ask students to stand. Give each a stretchband. Instruct students to wrap each end around their hands once. Put other end under foot, and do bicep curls. Next ask students to put one arm over head and reach behind back with other arm and do tricep extensions. When finished collect stretchbands.*

This type of exercise is resistance exercise, but you also need to make sure you’re getting aerobic exercise. Aerobic exercise causes you to breathe harder than usual. Can you think of some aerobic exercises? *Running, biking, swimming, basketball, skating and dancing.*

What are some things you can do to increase physical activity? *Pause for response.*

What two nutrients are especially important for muscles? *Protein and carbohydrates* 
Why is exercise important for muscle health? *Exercise strengthens muscles and keeps them flexible.*
Arkansas farm to YOU

Station 8: The Bones
Grades 4-6
Welcome to the bone station. Here you will learn the clues to help you build strong and healthy bones.

Building bones is a big job because our bodies have 206 different bones.  
*Refer to the skeleton on the flip chart.*

Bones are long, short, thick and thin. Over half of our bones are in our hands and feet. Do you know where the smallest bone in your body is?  
*Ear.* It’s a tiny bone called a stirrup  
Do you know what our largest bone is?  
*The femur or our thighbone*
What nutrient builds strong bones? *Calcium.*

About 99% of the calcium in our body is in the bones. The other 1% is in the blood and muscles.

Do any of you ever have muscle cramps? *Briefly pause for show of hands.*

Muscle cramps are a clue you may not be getting enough calcium.

Bones act like a calcium bank for the blood and muscles. When you get enough calcium in your diet, specialized cells called osteoblasts use the calcium to build bone tissue.

When calcium is low in your diet (such as when you don’t drink enough milk), special bone cells called osteoclasts dissolve bone tissue so that the calcium can move into the blood and muscles.

*Show osteoporotic side of small bone model in the following dialogue.*

When bones dissolve more than they grow, we get holes in our bones. This condition is called osteoporosis.

*Compare the osteoporotic side of the bone model to the healthy side. Point out the healthy bone has more connections and fewer and smaller open places. Calcium helps build the connections.*

Which kind of bone do you think breaks more easily?

*Osteoporotic bones, or the bone with fewer connections.*
How much milk does it take each day to keep bones strong?
*Three servings. Show the milk carton, slice of cheese and yogurt blocks.*

Do all three servings have to be milk? *Pause for responses.*

No – you can mix and match. It’s okay to have 2 glasses of milk and a slice of cheese, or 1 glass of milk and a piece of cheese and carton of yogurt.

Do you think this can of soda is good for building strong connections in bones? *Pause for responses.*

No is right. What nutrient is it lacking?
*Calcium.*

We should drink milk instead of soda to get enough calcium.
What other health habit is needed for strong bones?
*Exercise or physical activity.*

To grow stronger bones also need weight-bearing exercise. Weight-bearing is any activity you do on your feet that works your bones and muscles. What are examples of weight-bearing exercise you enjoy? *Pause for one or two responses. Correct responses include running, riding bike, skateboarding, soccer, swimming, dancing, etc.*

Now let’s practice a weight-bearing exercise. Can you all stand up and spread out, we’re going to do some Calcium Jacks. These are jumping jacks while spelling calcium. *Lead group in jumping jacks while they spell calcium together.*

You have one more stop on your Farm to You adventure. Carefully slip through the hand bones on the wall for your next stop.
Station 9: The Skin
Grades 4-6
Welcome to the final destination of Farm to You. Your job here is to find ways to keep our skin healthy. The skin is actually one of the largest organs in the human body. It’s main jobs are to protect our other organs and help regulate our body temperature.
We take care of skin from both the inside and outside.

What is one way you can take care of your skin from the inside? *Eat fruits and vegetables.*

What are two vitamins fruits and vegetables provide? *Vitamin A and vitamin C.*

Do you remember the jobs vitamins A and C do in the body? *Vitamin A helps keep skin smooth. Vitamin C helps heal cuts and scratches.*

Eating Arkansas grown fruits and vegetables like strawberries, blackberries, watermelon and tomatoes will help us get enough vitamins A and C.

Vitamin C doesn’t stay in our bodies for very long, so you must eat fruits and vegetables every day.
Don't forget your fruits & veggies

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We also need to take care of the outside of our skin. How are the kids in this picture protecting their skin? *Wearing helmets and knee and elbow pads.*

That’s right. Remember to wear a helmet and knee and elbow pads anytime you are doing an activity where you could fall. If you do scrap or cut your skin, what foods can help you heal faster? *Fruits and vegetables.*
Which of these persons is protecting their skin from the sun?
*The person wearing the hat and sunglasses.*

If you are outside when the sun is hot remember to wear a hat and to use sunscreen lotion.
Another way to protect our skin is to keep it clean. Does anyone see any germs around here? *Refer to hand graphic on wall with “green bacteria”.* Can you see germs on your hands? *No*

We can see stuff like dirt, but we can’t see germs. Can you help me with an experiment to see how easy it is to get germs on our hands and why it is important to wash our hands as we discussed?

*Divide students into 2 groups. Apply 1 squirt of Glo-germ (pretend germs) on the hands of students in group ONE and ask them to shake hands with group TWO who didn't get Glo-germ. Allow a few seconds for each student to place hands under the blacklight to see the fluorescent germs. Ask students to sit down after their turn at the light.*

Did everyone have germs on their hands? *Yes*

How did the germs get on their hands? *The germs moved when students shook hands.*

When should you wash your hands? *Before eating, after using the restroom, after playing with pets, etc.*

What do you need to wash your hands thoroughly? *Warm water, soap and rubbing.*

How long should you wash your hands? *20 seconds or about the time it takes to sing “Happy Birthday.”*

There were three ways to help you keep your skin healthy. What are they? *Eat fruits and vegetables.  Protect skin from sun, scraps and cuts.  Wash hands or keep skin clean.*

Thank you for your hard work during the Farm to You adventure.