Scripts

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Exhibit Station Scripts

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Suggestions for station presenters

The station scripts provide the key concepts and outcomes for each station, and the information and activities for students. There are two versions of the scripts — one for kindergarten through second-grade students and one for third- through fifth-grade students. Please use the grade-appropriate scripts.

Here are a few tips:

• Have fun — the more animated and engaging you are, the more the students will learn and remember.

• Prepare in advance so you can maintain eye contact with the students as you ask them questions and engage them in the activities.

• Unless the script indicates otherwise, ask the students to sit down when they first come to the station. Encourage the students to handle the props gently.

• Ask the students to walk between the stations. It will make each presenter’s job easier if the students are respectful of the exhibit and if the experience has a learning tone.

• Bring a bottle of water so you can keep your voice working.

• Remember that students only have five minutes at each station.
**Farm K-2**

**Key concepts**
- Our food comes from farms.
- Farmers grow plants and raise animals for our food.

**Outcomes**
- Students will be able to see that food comes from farms.
- Students will be able to explain that farmers grow plants and raise animals for our food.

**Student activity**
- Students will see a pizza farm and listen to a farmer talk about foods he or she grows or raises on the farm.

**Props**
- Stand-up cutouts of Fred Farmer, cows and pig
- Artificial plants
- CD player
- Farmer Rap CD
- Wheat kernels

*Note: Please do NOT walk, stand or sit on the pizza graphic.*

**Tell students:** Welcome to the pizza farm. Please sit down on the floor in front of the pizza slice so you can begin your adventure. We are so glad you are visiting the farm today!

Raise your hand if you like pizza.

**Ask students:** Did you know that farmers spend a lot of time growing pizza?

**Tell students:** There are no pizza plants, but farmers like our friend Fred Farmer raise most of the ingredients used to make pizza.

*Point to the wheat plant.*

**Tell students:** Fred Farmer plants tiny seeds to grow wheat. Look at the wheat plant — it is done growing and ready to be cut. Farmers use big machines called combines to harvest or cut the wheat and separate the wheat kernels from the plant.

*Show the container of wheat kernels and allow students to feel them.*

**Tell students:** The wheat kernels are then sent to a mill that grinds the wheat into flour.
Ask students: **Which part of the pizza is made from wheat?**

Tell students: That’s right — pizza dough is made from flour, which is made from wheat.

Check out those tomato plants over there. Fred Farmer’s neighbor grows tomatoes.

Ask students: **Which part of the pizza is made from tomatoes?**

Tell students: Pizza sauce is made from crushed tomatoes. Now, you know you can’t have pizza with just crust and sauce.

Ask students: **What does every pizza need?**

Respond: Cheese

Ask students: **What is cheese made from?**

Respond: Cheese is made from milk.

Ask students: **Where does the milk come from?**

Respond: Milk comes from special cows called dairy cows. The black and white cow here is a dairy cow.

Ask students: **Where do dairy cows live?**

Respond: Dairy cows live on the farm. Fred Farmer’s neighbor across the road has a dairy farm. His dairy cows give us milk to make cheese.

Tell students: This other cow is called a beef cow. It gives us a popular pizza topping.

Ask students: **Which pizza topping do we get from beef cattle?**

Respond: Hamburger comes from beef cattle.

Ask students: **Where do beef cattle live?**

Respond: Yes, the farm.

Tell students: Now, raise your hand if you like pepperoni or sausage on your pizza.

*Point to the animal figures.*
Ask students: Which of these animals do these toppings come from?

Respond: Pepperoni and sausage come from pigs.

Ask students: Where are pigs raised?

Respond: The farm

Ask students: Who likes to put vegetables on their pizza?

Tell students: Fred Farmer’s neighbor also grows vegetables like green peppers, spinach and broccoli. Maybe next time you eat pizza, you can try putting on a new vegetable.

Ask students: Have you ever thought about adding fruit to your pizza?

Tell students: Farmers in Hawaii and California grow pineapples like the one you see here. The golden yellow fruit inside is delicious and really adds pizzazz to a pizza.

Ask students: Where do all of our pizza ingredients come from?

Respond: That’s right — all of our pizza ingredients come from farms.

Ask students: Who grows plants and takes care of animals on the farm?

Respond: Farmers grow plants and take care of animals so you have enough food to eat to grow and have energy to play!

I’m so glad you all got to visit and find out how pizza really comes from farms! Next time you eat a slice of pizza, think of Fred Farmer and the pizza farm.

Play Farmer Rap CD. Have students stand and copy these actions along with the following lyrics:

Snap in time to the music Farmers are wonderful. Farmers are great.

Pretend to eat pizza Farmers grew the pizza that I just ate.

Twist around Growing lots of wheat that is ground into flour.

Flex your bicep Growing all the veggies that give me lots of power. Caring for the animals that give us milk and meat.

Rub your tummy Farmers grow the pizza that I like to eat.

Ask students to walk to the next station to continue their adventure.
Farm 3-5

Key concepts
• Our food comes from farms.
• Missouri farmers grow plants and raise animals for our food.

Outcomes
• Students will be able to see that food comes from farms.
• Students will be able to explain that Missouri farmers grow plants and raise animals for our food.

Student activity
• Students will help the presenter match the pizza ingredients with the plant or animal they come from.

Props
• Stand-up cutouts of Fred Farmer, cows and pig
• Artificial plants
• Picture cards of pizza ingredients
• Wheat kernels

Note: Please do NOT walk, stand or sit on the pizza graphic.

Tell students: Welcome to Food Power Adventure where you will discover what you need to eat and do to grow and go! Please sit down on the floor in front of the pizza slice so we can get started.

Ask students: Why is your first stop at the farm?

Tell students: That’s right — most of our food comes from different kinds of farms. Almost all of the pizza ingredients you see here are grown on farms in Missouri.

Activity: Students will match pictures of the pizza ingredients to the plants or animals they came from. Spread picture cards of animals and plants on the floor in front of the students.

Tell students: I am going to name different pizza ingredients and let’s see if you can match them with the plant or animal they come from. Please raise your hand if you know the answer. Let’s start with the crust of the pizza.

Ask students: What is pizza crust made of?

Respond: Wheat is correct.
Tell students: Wheat comes from little seeds. Once it grows tall, combines cut the wheat and separate the wheat kernels from the stalks.

Show students the container of wheat kernels and allow the students to feel them.

Tell students: The wheat kernels are then sent to a mill that grinds the wheat into flour. The flour is used to make the pizza crust dough.

Place the wheat stalk picture next to the wheat plant.

Ask students: Who grows wheat and where does it grow?

Respond: Farmers grow wheat and there are many farmers in Missouri who grow wheat.

Tell students: Next is the pizza sauce.

Ask students: What is pizza sauce made from?

Respond: That's right, tomatoes.

Tell students: Tomatoes come from seeds, too. After tomatoes are picked they are sent to a factory that crushes and cooks the tomatoes to make them into sauce.

Place the picture of the sauce in front of the tomato plant.

Ask students: Who grows tomatoes and where do they grow?

Respond: That's right — many Missouri farmers grow tomatoes on their farms.

Tell students: Now for the cheese.

Ask students: What is cheese made from?

Respond: Milk

Ask students: Where does milk come from?

Respond: Cows — and not just any cow. Cows that produce milk are called dairy cows. The black and white cow is a dairy cow.
Place the picture of the cheese in front of the dairy cow.

Ask students: Where do dairy cows live?

Respond: Dairy cows live on farms right here in Missouri.

Tell students: The other cow that you see is a different type of cow.

Ask students: Do you know what pizza topping we get from the other cow?

Respond: This is a beef cow and we get hamburger from beef cattle.

Place the picture of hamburger in front of the beef cow.

Ask students: Where do beef cattle live?

Respond: Lots of beef cattle live on farms here in Missouri. In fact, Missouri is the second largest cattle-raising state in the country.

Ask students: Who eats pepperoni or sausage on their pizza?

Ask students: What animal do these ingredients come from?

Respond: That's right — sausage and pepperoni come from pigs.

Place the picture of pepperoni in front of the pig.

Ask students: Where do pigs live?

Respond: The farm

Ask students: Has anyone ever tried pineapple on their pizza?

Tell students: The golden yellow fruit adds pizzazz to pizza.
Ask students: Do you know where pineapple is grown?

Respond: On farms in Hawaii and California.

Ask students: Who eats mushrooms on their pizza?

Show picture of pizza with mushrooms on it.

Ask students: In what food group do mushrooms belong?

Respond: Mushrooms are a fungus that belongs in the vegetable group.

Ask students: Where do mushrooms grow?

Respond: Wild mushrooms grow in Missouri forests, but there are also some farmers who grow mushrooms right here in Missouri.

Ask students: What are some other vegetables that are good on pizza?

Tell students: You could try broccoli, onions, spinach or peppers.

Ask students: Who grows vegetables and where do they grow?

Respond: Farmers in Missouri.

Tell students: Great job. You have found that farmers raise or grow almost all of the pizza ingredients.

Please stand up and move to the next station to find out what happens to food when it leaves the farm.
Food Packaging and Labeling K-2

Key concept
• Food is packaged and labeled.

Outcome
• Students will be able to sequence the path milk takes from the farm to purchase.

Student activity
• Students will put picture cards in the path milk takes from farm to purchase.

Props
• Milk from Cow to You picture cards
• ½ pint white milk carton
• ½ pint chocolate milk carton

*Show the students the Milk from Cow to You picture cards as you discuss the process of getting milk from the farm to the grocery store.*

**Tell students:** Please sit down in front of me.

**Ask students:** Do you know what happens to milk before you drink it?

**Tell students:** Milk goes through many steps before you drink it. Let’s start at the beginning.

**Ask students:** Where does milk come from?

**Respond:** That’s right — milk comes from dairy cows.

*Hold up the picture of cows grazing on the farm.*

**Tell students:** Remember, dairy cows live on a farm.

*Hold up the picture of cows in the milking parlor.*

**Tell students:** Two times a day, farmers milk the dairy cows. Farmers use machines to do the milking.

*Hold up the picture of the milk truck.*

**Tell students:** A special refrigerator truck then comes to the farm to pick up the milk. The truck keeps the milk cold until it gets to the dairy.

**Ask students:** What do you think happens at the dairy?
Hold up the picture of milk testing.

Tell students: After the milk arrives, the dairy tests the milk to make sure it is safe to drink.

Hold up the picture of milk packaging.

Tell students: After testing the milk, the dairy puts it into cartons and jugs.

Ask students: What do you think happens to the milk after it is in cartons and jugs?

Hold up the picture of cartons and jugs in the store.

Tell students: That’s right — the cartons and jugs go in a truck to places where you and I buy milk.

Hold up the picture of drinking milk.

Tell students: Then we buy the milk, take it home and drink it.

Activity: Give each child a Milk from Cow to You photo card. They will place their cards in order on the table from the farm to you.

Tell students: Now I’m going to give each of you a picture and we’re going to see if we can put them in order from the farm to you.

Have students order the pictures on the table.

Ask students: What is happening in the pictures?

Tell students: The pictures show how milk comes from the cow on the farm and becomes ready for you to drink.

Ask students: Where can you buy milk every day?

Tell students: That’s right — you can buy milk in the cafeteria every day at lunch.

Hold up the milk carton.

Ask students: Do you see the type of milk your school cafeteria sells? Can you point to the type of milk your cafeteria sells?

Acknowledge the students’ answers and repeat the types of milk sold in the school cafeteria.
Ask students: How did you know what was inside the carton?

Tell students: That’s right — we know that this is a carton of milk because that is what it’s label says. The dairy put labels on the packages. Labels tell us about the food inside the package. They help us make decisions about which foods to choose.

Put the chocolate and white milk cartons in front of the students. Point to one carton of milk.

Ask students: Raise your hand if you would choose this milk for your lunch.

Point to the other carton of milk.

Raise your hand if you would choose this milk for your lunch.

Tell students: Very good, you recognized the types of milk in the carton because of the labels. So, you have just used the food labels to help you choose your milk. Now you are going to find out what you need to do before you eat any food.
Food Packaging and Labeling 3-5

Key concepts
• Food is packaged and labeled.
• Food labels provide information about the food you buy.
• Food labels can help us make healthy food choices.

Outcomes
• Students will be able to identify different parts of the food label.
• Students will be able to explain how food labels can be used when making food choices.

Student activity
• Students will inspect a food package label on a milk carton.

Props
• Eight ½ pint milk cartons

Tell students: Welcome to the packaging and labeling station. Here you will use labels to learn more about your food.

Ask students: What happens to milk after it leaves the farm?

Respond: That’s right — milk is taken to a dairy. The dairy can use it to make cheese, yogurt and ice cream. Milk and all of these foods get packages and labels.

Ask students: Why do we need labels on our food?

Tell students: Food labels tell us what is in the food package, and let us compare and choose foods.

Give each student a milk carton. Point to the Central Dairy milk label banner.

Tell students: The front of the package tells us the food’s brand name and the contents of the package.

Ask students: What is the brand name of this milk?

Tell students: Central Dairy

Point to the nutrition facts label banner.

Tell students: On the side of the package is the nutrition facts label. Everyone find it on your milk carton.

Point to each section of the nutrition facts label banner as you mention them.
Ask students: What brand of milk do you have?

Tell students: The front of the package will also tell us what kind of milk is in the carton. This Central Dairy milk is chocolate milk.

Ask students: What kind of milk do you have in your carton?

Tell students: The nutrition facts label has three basic parts. The top part of the label is the serving information. It tells us the serving size for the milk and the number of servings in the container.

Ask students: What is a serving size of milk?

Tell students: One serving of milk is 1 cup.

Tell students: If your carton of milk has one serving, raise your hand. (All students should raise their hands).

Ask students: How many cups of milk do you need every day?

Tell students: You need 3 cups of milk every day. It’s easy to remember — drink 1 cup at breakfast, 1 at lunch and 1 at dinner.

Point to the amount per serving information on the label banner.

Tell students: The next section of the nutrition facts label tells us about certain nutrients in one serving of milk. Find the number of calories on your milk label.

Point to the calories on the label banner.

Ask students: Which type of milk has the fewest calories?

Tell students: Skim milk has the fewest calories.
Find the amount of total fat on your milk label.

Point to the total fat on label banner.

Tell students: Skim milk does not contain any fat which is the difference between it and 1 percent, 2 percent and whole milk. One percent, 2 percent and whole milk each contain animal fat. Too much animal fat is not good for your heart. The fat also makes 1 percent, 2 percent and whole milk higher in calories.

Tell students: The chocolate milk is made from skim milk so it does not contain animal fat.
Ask students: So what do you think makes the chocolate milk higher in calories than the other types of milk?

Tell students: Sugar — chocolate milk has sugar added to it which increases the calories.

Ask students: Do you think that means you shouldn’t drink chocolate milk?

Tell students: No, if chocolate milk is the only type of milk a person will drink, it is better to drink chocolate milk than no milk at all. All types of milk contain an important nutrient that helps build strong bones.

Ask students: What is one important nutrient we get from milk to build strong bones?

Tell students: We get calcium from milk. The last section on the nutrition facts label tells us the amount of certain vitamins and minerals — like calcium — that are in a food.

Tell students: If your milk has 30 percent of the daily requirement for calcium, raise your hand. (All students should raise their hands.)

Ask students: Do all these different types of milk have the same amount of calcium?

Tell students: Yes, all of these milks have the same amount of calcium. No matter what type of milk you drink, they can all help you build strong bones.

Ask students: How can you use the information you just learned about reading food labels?

Tell students: That’s right — you can use food labels to make healthy food choices.

Now you are ready to move on to the next station!
Hands K-2

Key concepts
• Germs are invisible and can cause illness.
• Washing hands correctly will remove germs.

Outcomes
• Students will know the important times to wash their hands.
• Students will be able to explain why hand washing is necessary to remove germs.
• Students will be able to properly time their hand washing by singing a song.

Student activity
• Students have germs stamped on their hand and rap while they pretend to wash the germs off their hands.

Props
• Germs stamp
• Florescent stamp pad
• Black light
• Soap
• CD player and CD with hand-washing song
• Poster of hand-washing song words

Ask students: Do you see any germs around here?

Respond: Germs are always around, especially on our hands. But germs are so small we usually can’t see them.

Activity: Stamp each student’s hand with the germ stamp and invisible ink. Have two students at a time look at the stamp on their hands under the black light.

Ask students: Do you see anything on your hand?

Tell students: Let’s use a special light to look at your hands. Although you cannot see the germs without the special light, they are still on your hands. Real germs are the same way. Although you might not be able to see them, they are on your hands.

Ask students: How do you think you get germs on your hands?

Tell students: We get germs on our hands when we play outside, touch our pets, use the restroom, cough, sneeze or blow our nose, or when we touch someone’s hands with germs on them.
Ask students: Why do you want to get rid of the germs on your hands?

Tell students: Because germs can make you sick.

Ask students: How can you get rid of germs on your hands?

Tell students: You wash them with soap and warm, running water. Washing your hands helps get rid of the germs that could make you sick. To get rid of germs: wet your hands with warm water, use soap, scrub your hands for 20 seconds, rinse your hands with warm water and dry your hands.

Ask students: Do you think using hand sanitizer gets rid of germs as well as washing your hands with soap and warm water?

Tell students: Using sanitizer does not get rid of germs as well as washing your hands. Using hand sanitizer is OK when you don't have any other choice for cleaning your hands — like when you are on a field trip or having a picnic in the woods. But the best way to get rid of germs is to wash your hands with soap and warm water.
Activity: Play the hand-washing song and mime the correct hand-washing process. See the rap lyrics below.

**Tell students:** I have a song that might help you remember how long to wash your hands with soap before you rinse and dry them off. Let's all practice washing our hands.

**Hand-Washing Song**

You gotta' wash your **hands** and
you gotta' wash 'em **right**.
Don’t **give** into **germs**
with-**out** a **fight**.
Use **water** that's **warm**
and **lots** of **soapy** **bubbles**.
**These** are the **weapons**
for **preventing** **germ** troubles.
Don’t **cut** your time **short**, your **fingers** — get **between**.
It **takes** 20 **seconds**
to **make** sure they’re **clean**.
Gotta’ **wash…gotta’ wash**
gotta’— **wash** — your — **hands**.
Gotta’ **wash…gotta’ wash**
gotta — **wash** — your — **hands**.

**Note:** Words and syllables in bold carry the stronger beat.

*Source: Operation Risk Curriculum, Michigan State University Board of Trustees*

**Ask students:** When should you wash your hands?

*Point to the pictures on the banner as you say each item.*

**Tell students:**
Before eating
After using the restroom
After coughing, sneezing or blowing your nose
After playing with animals
After playing outside

Now that you know when and how to wash your hands, you are ready to go to the variety cafeteria and learn about different foods.
Hands 3-5

Key concepts
• Germs are invisible and can cause illness.
• Washing hands correctly will remove germs.

Outcomes
• Students will know the important times to wash their hands.
• Students will be able to explain why hand washing is necessary to remove germs.
• Students will be able to properly time their hand washing with a hand-washing song.

Student activity
• Students have a germ stamped on their hand and sing while they pretend to wash the germs off their hands.

Props
• Pictures of actual germs
• Germ stamp
• Florescent stamp pad
• Black light
• Soap
• CD player and CD with hand-washing song
• Poster of hand-washing song words

Ask students: Do you see any germs on your hands?

Respond: Germs are always around, especially on our hands. But germs are so small we usually can't see them. We need to use a microscope to see what germs look like.

Show students the germ pictures.

Tell students: This is what germs look like through a microscope.

Ask students: How do we get germs on our hands?

Tell students: We get germs on our hands when we play outside, play with our pets, when we cough, sneeze or blow our noses, use the restroom, or when we touch someone's hands with germs on them. Let's see how easily you can spread germs. I am going to give you a special stamp on the back of your hand and we are going to pretend it is a germ. After I give you the stamp, look at your hands.
Activity: Stamp each student’s hand with the germ stamp and invisible ink.

Ask students: Do you see anything on your hand?

Tell students: Just like germs, the stamp I gave you is invisible. Touch where I stamped your hand. Now let’s look at your hands using a special light. Look at your stamped hand first and then your other hand.

Have two students at a time look at their hand under the black light.

Tell students: Although you cannot see the pretend germ stamp without the special light, they are still on your hands. Real germs are the same way. Although you might not be able to see them, they are on your hands.

Ask students: Did the germs spread to your other hand?

Tell students: Real germs spread in a similar way. Since we can’t see them, real germs can spread without your knowledge.

Ask students: Why do you want to get rid of the germs on your hands?

Tell students: Because germs could make you sick.

Ask students: How can you get rid of germs on your hands?

Tell students: You wash them with soap and warm, running water. Washing your hands helps get rid of the germs that could make you sick. To get rid of germs: wet your hands with warm water, use soap, scrub your hands for 20 seconds, rinse your hands with warm water and dry your hands.

Ask students: Do you think using hand sanitizer gets rid of germs as well as washing your hands with soap and warm water?

Tell students: Using sanitizer does not get rid of germs as well as washing your hands. Using hand sanitizer is OK when you don’t have any other choice for cleaning your hands, like when you are on a field trip or having a picnic in the woods. But the best way to get rid of germs is to wash your hands with soap and warm water.
Activity: Play the hand-washing song and mime the correct hand-washing process.

Tell students: I have a song that may help you remember how long to wash your hands with soap before you rinse and dry them off. Let’s all practice washing our hands.

Hand-Washing Song

You gotta’ wash your hands and
you gotta’ wash ‘em right.
Don’t give into germs
with-out a fight.
Use water that’s warm
and lots of soapy bubbles.
These are the weapons
for preventing germ troubles.
Don’t cut your time short,
your fingers — get between.
It takes 20 seconds
to make sure they’re clean.
Gotta’ wash...gotta’ wash
gotta— wash — your — hands.
Gotta’ wash...gotta’ wash
gotta — wash — your — hands.

Note: Words and syllables in bold carry the stronger beat.
Source: Operation Risk Curriculum, Michigan State University Board of Trustees

Ask students: When should you wash your hands?

Point to the pictures on the banner as you say each item.

Tell students: Before eating
After using the restroom
After coughing, sneezing or blowing your nose
After playing with animals
After playing outside

Now that you know when and how to wash your hands, you are ready to go to the variety cafeteria and learn about different foods.
Variety Cafeteria K-2

Key concepts
- We need to choose a variety of healthy foods to eat.
- Choosing foods of different colors and from different food groups are two ways to get variety.
- Recognize that foods fit into different groups.

Outcomes
- Students will be able to tell why we need to eat a variety of foods.
- Students will be able to explain that choosing foods of different colors provides variety.
- Students will be able to classify foods into the correct MyPlate groups.

Student activity
- Students will place magnetic food pictures into the correct groups on the MyPlate icon.

Props
- Magnetic MyPlate icon
- Magnetic food pictures
- Hand clapper
- Food stickers

Tell students: Welcome to the variety cafeteria. Please have a seat.

Ask students: What does variety mean?

Respond: Variety means having a lot of different things to choose from and here in the variety cafeteria it means having a lot of different foods you can choose.

Ask students: Why do we need to eat a variety of foods?

Respond: When we eat a variety of foods, we get everything our bodies need to grow and go.

Ask students: How do we know if we are eating the right variety of foods?

Do you see anything that might help us choose a variety of healthy food?

Tell students: That's right — MyPlate can help us choose a variety of healthy foods. You might remember seeing MyPyramid. Now we have MyPlate, which puts food into five different groups and tells us how much to eat from each group. When we eat from each food group, we get a variety of foods.
Ask students: Can you name the five different food groups?

Tell students: The five food groups are: the grain group, the vegetable group, the fruit group, the milk group, and the protein or meat and beans group.

Give each student a food picture.

Tell students: We have lots of foods at the variety cafeteria. I need to know if we have a good variety.

Ask students: Can each of you help me figure out whether I have a variety of food?

I am going to name each food group. If you have a food picture that belongs in that group, raise your hand. I will ask you to tell us what food you have and then you can put your food picture into the correct group on the plate.

If students have difficulty with this activity, have them match the MyPlate food group color with the color on the border or background of their food picture. After each student places their picture on the MyPlate use the hand clapper to softly clap for each student.

Point to each group on the MyPlate icon display as you discuss it.

Tell students: The orange group is the grain group. It contains foods made out of grains like oats, rice, corn and wheat.

Ask students: In the pizza station, what did you learn is made from wheat?

Tell students: Pizza crust is made from wheat. So are bread, bagels, cereal and muffins. When you choose a food in this group, try to make at least half your choices a whole grain, like whole-wheat bread.

Raise your hand if you have a grain food. Tell us what food you have and place it on the orange section of the plate.

Tell students: The green group is the vegetable group. It contains great veggies like sweet potatoes, carrots and broccoli.

Raise your hand if you have a vegetable. Tell us what food you have and place it on the green section of the plate.

Tell students: The red group is the fruit group. It includes wonderful fruits like strawberries, watermelons and oranges.

Raise your hand if you have a fruit. Tell us what food you have and place it on the red section of the plate.
Tell students: Notice how the fruit and vegetable groups cover half the plate. MyPlate tells us we should fill half our plates with fruits and vegetables.

Tell students: The blue circle is the dairy or milk group.

Ask students: Can you think of some foods made out of milk?

Tell students: Milk, cheese and yogurt are all in the dairy group.

Raise your hand if you have a food from the dairy group. Tell us what food you have and place it in the blue circle near the plate.

Tell students: The purple group is the protein group. This group includes meats, like beef and pork; poultry, like chicken; and fish, eggs, beans and nuts, like peanut butter.

Raise your hand if you have a food from the protein group. Tell us what food you have and place it on the purple section of the plate.

Ask students: Do we have a variety of foods?

Tell students: Yes, we have foods from each food group, so we have a variety of foods.

Ask students: What do you notice about the colors of the foods you put on MyPyramid? Are there many different colors?

Tell students: Yes, there are lots of different colors, which tells us we have a good variety of food. Having a variety of foods is important so your body can get everything you need to grow and go.

Tell students: You all did a wonderful job in the cafeteria.

Give each student a food sticker.

Ask students: Now we are going to become the food on our sticker and find out what happens to us when we are eaten.

Tell students: When the whistle blows, walk into the mouth to continue the adventure!
Variety Cafeteria 3-5

Key concepts
• We need to choose a variety of foods to eat.
• Choosing foods of different colors and from different food groups are two ways to get variety.

Outcomes
• Students will be able to tell why we need to eat a variety of foods.
• Students will be able to explain that choosing foods of different colors and from different food groups could help provide a variety.

Student activity
• Students will create a lunch meal and evaluate it based on the number of food groups it contains. Students will make recommendations for meal improvements.

Props
• MyPlate icon on magnetic place mat
• Magnetic food pictures
• Food stickers

Give each student a sticker as the group enters the station. Ask the student to place the sticker on his or her shirt.

Tell students: Welcome to the variety cafeteria. Please have a seat.

Ask students: What does variety mean?

Tell students: Variety means having a lot of different things. Here, variety means having a lot of different kinds of food.

Ask students: Why do we need to eat a variety of foods?

Tell students: When we eat a variety of foods, we get everything our bodies need to grow and go.

Ask students: What is one important nutrient we get from milk to build strong bones?

Tell students: Milk gives us calcium to build strong bones.

Ask students: Do we get everything our bodies need from milk?

Tell students: No, milk doesn’t have everything our bodies need. For example, milk does not have any iron we need for healthy blood. We need food from all the food groups — a variety of foods to get everything we need.
Ask students: How do we know if we are eating the right variety of foods? What can we use as our guide?

Tell students: MyPlate can help us choose a variety of healthy foods. You might remember seeing MyPyramid. Now we have MyPlate, which puts food into five different groups and tells us how much to eat from each group to stay healthy.

Tell students: I need your help in planning a lunch that has variety. The meal needs to have something from each food group. I am going to ask some of you to select a food and add it to the plate. Once we are done building the meal we will see if the meal provides the variety our bodies need.

Ask students: Raise your hand if your food sticker is from the grain group.

Select one of the students. Tell the student to pick out a food from the grain group and put it on the correct part of the plate.

Tell students: Try to make sure that at least half the grain foods you choose each day are whole grains like whole-wheat bread.

Ask students: Raise your hand if your food sticker is from the vegetable group.

Select one of the students. Tell the student to pick out a vegetable that would go well with the food already on the plate. Put the food or drink selected on the correct part of the plate.

Ask students: Raise your hand if your food sticker is from the fruit group.

Select one of the students. Tell the student to pick out a fruit that would go well with the foods already on the plate. Put the food or drink selected on the correct part of the plate.

Tell students: Notice that half the plate contains fruits and vegetables. MyPlate reminds us to fill half your plate with fruits and vegetables.

Ask students: Raise your hand if your food sticker is from the dairy group.

Select one of the students. Tell the student to pick out a food from the milk group that would go well with the foods already on the plate. Put the food or drink selected on the blue circle.

Ask students: Raise your hand if your food sticker is from the protein group. The protein group includes meat, like beef and pork; poultry, like chicken; fish, eggs, beans and nuts, like peanut butter.

Select one of the students. Tell the student to pick out a food from the protein group and put it on the correct part of the plate.
Tell students: A healthy meal starts with more fruits and vegetables, and smaller portions of grains and protein. When you fill your plate at meal time, remember MyPlate and use it as a guide for choosing the appropriate portion sizes of different foods. Don’t forget to include dairy.

Ask students: Did the meal we made provide a food from each food group? Did the meal provide a good variety?

Tell students: Another way to tell if a meal has a lot of variety is to look at the colors of the food. Choosing different colors of food is another good way to choose a variety of food.

Ask students: Did the meal we planned provide a variety of colors?

If the answer is no:

Ask students: What changes could you make to the meal to include more variety?

Tell students: Good ideas! Thanks for your help in adding variety.

Ask students: What are two ways we can choose a variety of foods?

Respond: By choosing foods from all of the different food groups and choosing different colors of food.

Ask students: Why is variety important for your body?

Respond: So your body can get everything it needs to grow and go.

Tell students: Congratulations! You have found out how to increase your variety.

Now you’re going to go into the mouth and find out what happens to food when you eat.
Mouth K-2

Key concepts
• Digestion begins in the mouth.
• The tongue, teeth and saliva help digest food.
• Taste buds and saliva allow us to taste food.
• Taking care of our teeth keeps them healthy and strong.

Outcomes
• Students will be able to state how their tongue, teeth and saliva start digestion.
• Students will be able to identify the location of their taste buds and esophagus.
• Students will be able to name two things they can do to properly care for their teeth.

Student activity
• Students will experience the digestion of a small cracker.

Props
• Tooth stools
• Hand sanitizer
• Esophagus model
• Small food model
• Plastic gloves
• Small crackers – oyster or goldfish
• Giant toothbrush

Tell students: Welcome to the mouth — have a seat on the teeth or tongue.

Squirt hand sanitizer onto each student’s hands and tell them to clean their hands.

Tell students: We need to clean our hands for the activity in this station.

Ask students: Is using hand sanitizer the best way to clean our hands?

Tell students: No, washing our hands with soap and water is the best way to clean our hands. But since we don’t have running water in the mouth station, we will use the hand sanitizer.

Ask students: What is digestion?

Tell students: Digestion is when the body breaks food down into tiny pieces so it can fit into our bloodstream for our entire body’s use.

Turn your arm over and look at your wrist.

Ask students: What are those blue lines on your wrist?
**Tell students:** Those blue lines are your blood vessels or veins. They carry blood to all parts of the body — from the tips of your fingers to the tops of your toes.

**Ask students:** Do you think a whole apple could fit through your blood vessels?

**Tell students:** No — whole foods cannot fit through our blood vessels. They have to be broken down into much smaller pieces.

**Ask students:** What do you have in your mouth that can help you break food into smaller pieces?

**Tell students:** Teeth

**Tell students:** We use our teeth to break and grind food into smaller pieces so it can fit through the esophagus. The esophagus is a small tube in the throat that leads to the stomach. Touch your neck. Now swallow.

**Tell students:** You should feel your trachea or windpipe that carries oxygen to your lungs. Right behind your windpipe is the esophagus.

*Show students the esophagus tube.*

**Tell students:** This tube is like your esophagus.

**Ask students:** Do you think this whole strawberry could fit through this tube?

*Show students that the strawberry food model would not fit into the tube.*

**Tell students:** No — it needs to be chewed into smaller pieces. It is important to chew your food so there is less chance it can go down the wrong tube — your windpipe — and cause you to choke.

**Ask students:** What else in your mouth helps digest food? I will give you a hint — it keeps your mouth wet.

**Tell students:** That’s right — saliva or spit helps digest food, too. Saliva moistens food so it can slide down the esophagus easier. It also contains special chemicals that start to break food down.

**Tell students:** Let’s see how that works. I am going to give you each a cracker. Don’t put it in your mouth until I tell you. When I tell you, put the cracker in the middle of your tongue, but don’t chew it. Your saliva will start to digest the cracker which will make it taste a little sweet. When your cracker starts to taste sweet, raise your hand.
Using the plastic gloves, give each child a cracker.

Tell students: Put the cracker on your tongue, but don’t chew. Raise your hand when it starts to taste sweet. It won’t be a strong sweet taste, so you will have to pay attention to your taste buds.

Pause until students raise their hands.

Tell students: Saliva also keeps your mouth wet, which helps you swallow food.
Ask students: What else in your mouth helps you swallow food?
Tell students: Your tongue helps you swallow food by pushing it to the back of your throat. Hold your tongue still on the bottom of your mouth. Now try to swallow.

Ask students: Can you swallow without using your tongue?
Tell students: Our tongues and saliva also work together on another important job — they help us taste food. Rub your tongue across your lips.
Ask students: Does your tongue feel smooth or a little bumpy?
Tell students: Your tongue is bumpy. Taste buds are inside those little bumps on your tongue.
Ask students: How many taste buds do you think you have?
Tell students: Our tongues have 10,000 taste buds. Taste buds need to be wet to tell how things taste. Saliva keeps the taste buds wet so we can taste food.

Ask students: Which parts of the mouth help us digest food?
Tell students: Teeth, saliva and tongue.

Ask students: Do you see anything that can help keep our mouth clean and healthy?
Show students giant toothbrush.

Tell students: Brushing and flossing your teeth keeps them healthy and clean.

Ask students: How often should you brush your teeth?

Tell students: You should try to brush your teeth after every meal and snack so food doesn’t stick to your teeth and cause cavities. Eating crunchy foods like apples also helps keep food from sticking to your teeth and keeps them healthy and strong.

Now is the time for you all to get swallowed and travel through the esophagus to get to the stomach. To make yourself small enough to fit, wrap your arms around you like you are hugging yourself.

Demonstrate by wrapping your arms across your body.
**Mouth 3-5**

**Key concepts**
- Digestion begins in the mouth.
- The tongue, teeth and saliva help digest food.
- Taste buds and saliva allow us to taste food.
- Taking care of our teeth keeps them healthy and strong.

**Outcomes**
- Students will be able to state how their tongue, teeth and saliva start digestion
- Students will be able to identify the location of their taste buds and esophagus.
- Students will be able to name two things they can do to properly care for their teeth.

**Student activity**
- Students will experience digestion of a small cracker.

**Props**
- Tooth stools
- Hand sanitizer
- Plastic gloves
- Small crackers – oyster or goldfish
- Esophagus model
- Food model
- Giant toothbrush

**Tell students:** Welcome to the mouth — have a seat on the teeth or tongue.

*Squirt hand sanitizer onto each child’s hands and tell them to clean their hands.*

**Tell students:** We need to clean our hands for the activity in this station.

**Ask students:** Is using hand sanitizer the best way to clean our hands?

**Tell students:** No, washing our hands with soap and water is the best way to clean our hands. But since we don’t have running water in the mouth station, we will use the hand sanitizer.

**Tell students:** The mouth is where digestion begins.

**Ask students:** What is digestion?

**Tell students:** Digestion is when the body breaks food down into tiny pieces called nutrients. Nutrients are what our bodies need to think, grow, play and stay healthy.
Tell students: Turn your arm over and look at your wrist.

Ask students: What are those blue lines on your wrist?

Tell students: Those blue lines are your blood vessels. They carry blood to all parts of your body.

Ask students: Do you think a whole apple could fit through your blood vessels?

Tell students: No — whole foods cannot fit through our blood vessels. The body has to break them down into smaller pieces and then nutrients.

Ask students: What do you have in your mouth that can help you break food into smaller pieces?

Respond: Teeth

Tell students: We use our teeth to break and grind food into smaller pieces so it can fit through the esophagus. The esophagus is a small tube in the throat that leads to the stomach. Touch your neck. Now swallow.

Tell students: The tube you feel is the trachea or windpipe. Right behind your windpipe is the esophagus.

Show students the esophagus tube.

Tell students: This tube is like your esophagus.

Ask students: Do you think this whole strawberry could fit through this tube?

Show students that the strawberry food model would not fit into the tube.

Tell students: No — food needs to be in small pieces so it can fit through the esophagus. Chewing food into small pieces helps prevent it from going down the wrong tube — the windpipe — and prevents choking. Food only takes 10 seconds to get from your mouth to your stomach. The muscles in your esophagus squeeze the small pieces of food into your stomach.

Ask students: What else in your mouth helps digest food? I will give you a hint — it keeps your mouth wet.
Tell students: That's right — saliva or spit helps digest food, too. Saliva contains special chemicals called enzymes that start to break down food. Let see how that works. I am going to give you each a cracker. Don’t put it in your mouth until I tell you. When I tell you, put the cracker in the middle of your tongue, but don’t chew it. Your saliva will start to digest the carbohydrates in the cracker, which will make it taste a little sweet. When your cracker starts to taste sweet, raise your hand.

Using the plastic gloves, give each child a cracker.

Tell students: Put the cracker on your tongue, but don’t chew. Raise your hand when it starts to taste sweet. It won’t be a strong sweet taste, so you will really have to pay attention to your taste buds.

Pause until students raise their hands.

Tell students: Saliva also keeps your mouth wet, which helps you swallow food.

Ask students: What else in your mouth helps you swallow food?

Tell students: Your tongue helps swallow food by pushing it to the back of your throat. Hold your tongue still on the bottom of your mouth. Now try to swallow.

Ask students: Can you swallow without using your tongue?

Tell students: Our tongues and saliva work together on another important job — they help us taste food. Rub your tongue across your lips.

Ask students: Does your tongue feel smooth or a little bumpy?

Tell students: Your tongue is bumpy. Taste buds are inside those bumps on your tongue.

Ask students: How many taste buds do you think you have?

Tell students: Our tongues have 10,000 taste buds, which is too many to count. Taste buds need to be wet to tell how things taste. Saliva keeps the taste buds wet to let us taste food.

Ask students: Which parts of the mouth help us digest food?

Tell students: Our teeth, saliva and tongue.
Ask students: Do you see anything that can help keep our mouths clean and healthy?

Show students giant toothbrush.

Tell students: Brushing and flossing your teeth keeps them healthy and clean.

Ask students: How often should you brush your teeth?

Tell students: You should try to brush your teeth after every meal and snack so food doesn’t stick to your teeth and cause cavities. Eating crunchy foods like apples also helps keep foods from sticking to your teeth and keeps them healthy and strong.

Now is the time for you all to get swallowed and travel through the esophagus to get to the stomach.
Stomach and Small Intestine K-2

Key concepts
- The stomach and small intestine are parts of the digestive system.
- The small intestine breaks down food for absorption.
- Digested food goes through the body to provide energy and help the body grow.

Outcomes
- Students will be able to explain what happens to food in the stomach.
- Students will be able to state that villi absorb nutrients from the small intestine.
- Students will be able to identify one way food helps our bodies.

Student activity
- Students act out the digestion and function of food.

Props
- One jar filled with chyme
- Picture of child on the wall
- Empty spray bottle

Tell students: Welcome to the stomach and the small intestine. Please stay standing. You all have been chewed up by teeth in the mouth and squeezed down the esophagus. Now you are in the stomach where digestion really gets going.

Point to the picture of the child on the wall.

Tell students: The stomach releases special digestive juices onto the food. The stomach muscles squeeze and churn. The muscles mix the food with the digestive juices into a thick soup. The food pieces become smaller and smaller.

Show students the jar of chyme.

Tell students: This is what your stomach contents look like. I am going to pretend to release some digestive juices on you, pieces of food, while the stomach muscles squeeze and mix you up. Stay in your spot and twist yourself down to the floor just like the digesting food in the stomach.

Use the spray bottle to pretend to release digestive juices on the students. Demonstrate how the students should do the twist to become smaller and smaller until they are eventually sitting.
Tell students: The stomach muscles mix the food and digestive juices for three hours. So if you eat lunch at noon, the food is ready to leave your stomach by the time your school day ends. When the food leaves your stomach, it goes into the small intestine.

Point to the small intestine on the picture of the child on the wall.

Tell students: Your small intestine is about 20 feet long. That is as long as a school bus!

Tell students: The small intestine is where most digestion takes place. The body releases more digestive juices into the small intestine, which breaks the food pieces into even smaller pieces. I am going to release more digestive juices and see if you can make yourselves even smaller.

Use spray bottle to pretend to release digestive juices on the children and encourage them to make themselves smaller.

Tell students: Very good! The inside of the small intestine is lined with villi (pronounced vil-eye). Villi are like tiny fingers that pick up what your body needs from the mixed-up food going through the small intestine and puts it into your blood. Your blood carries the digested food to all parts of the body that need it.

Tell students: Let’s pretend you are getting picked up and sent to the parts of the body that need you.

Tell students: We are going to talk about each of the food groups on MyPlate and see how the foods in each group help our bodies go and grow.

Tell students: Raise your hand if your favorite food is in the grain group. Grain foods give our bodies energy. You need to go through the blood to the arm muscles so they can do things like raise your hand or clap your hands.

Ask students: Can everyone show me how your arm muscles would use the grain food to clap your hands twice?

Demonstrate the activity for the students.
Tell students: Raise your hand if your favorite food is in the vegetable group. Vegetables give us lots of vitamins and minerals that help keep our eyes healthy.

Ask students: Can everyone make glasses with your fingers and put them to your eyes to remind us veggies help keep our eyes healthy?

Demonstrate the activity for the students.

Tell students: Raise your hand if your favorite food is in the fruit group. Fruits also give us lots of vitamins and minerals that help heal cuts and wounds.

Ask students: Can everyone point to a spot on your arm or leg where you had a cut that has healed?

Demonstrate the activity for the students.

Tell students: Raise your hand if your favorite food is in the dairy group. Dairy foods like milk, cheese and yogurt help build strong bones.

Ask students: Can everyone grab your elbows and feel the bones in your arms?

Demonstrate the activity for the students.

Tell students: Raise your hand if your favorite food is in the protein group. Protein foods like meats and beans help our bodies build muscle.

Ask students: Can everyone show me your strong arm muscle that meats and beans helped build?

Demonstrate the activity for the students.

Tell students: Excellent! Now you are ready to go through the small intestine to see the villi. Please walk through quietly. You are going to the muscle to discover more about what your muscles need to stay strong.
Stomach and Small Intestine 3-5

Key concepts
- The body breaks down food into nutrients in the stomach and small intestine.
- The small intestine absorbs nutrients that travel by blood throughout the body.
- The six different nutrients have different functions.

Outcomes
- Students will be able to explain what happens to food in the stomach and small intestine.
- Students will be able to name different nutrients and their functions.
- Students will be able to state the primary nutrients in one food group.

Student activity
- Students will see what happens to the food once it reaches the stomach and small intestine. Students will act out the functions of the six types of nutrients.

Props
- One jar filled with chyme
- One picture of a child on the wall
- Nutrients poster
- MyPlate picture

Tell students: Welcome to the stomach and small intestine. Please have a seat.

Tell students: This is where the body breaks down food into nutrients for the blood stream to absorb. The blood carries the nutrients through the body. The stomach releases strong digestive acids and enzymes. The stomach muscles squeeze and churn the food until it makes a thick soup called chyme (rhymes with time).

Show students the jar of chyme.

Tell students: For about three hours, the stomach muscles mix up the chyme before it slowly moves into the small intestine. In the small intestine, more digestive enzymes break the chyme down into nutrients. Your small intestine is lined with tiny finger-like villi (pronounced vil-eye). The villi pick up the nutrients and send them into the bloodstream, which carries them throughout the body. All food breaks down into six different types of nutrients.
Ask students: Can you name the six types of nutrients?

Point to the poster.

Tell students: Carbohydrates, protein, fat, vitamins, minerals and water.

Tell students: Each nutrient has a different job. To help us remember what nutrients do, we have a nutrient action rhyme. Try to remember the actions because we will use them in the nutrient challenge.

Tell students: Please stand up and do the actions with me.

Carbohydrates give us energy to grow, play (twist and turn) and think.

Water is needed, especially when we run and play (run in place). We get it from our food and from drinks.

Fat is important. It keeps the body warm (rub your arms).

Protein builds our muscles that give our bodies form (punch up over head — raise the roof).

Minerals build strong blood, cells, bones and teeth (smile, frown, smile, frown — showing teeth).

Vitamins are needed for healthy eyes, skin and all that’s underneath (form a V with your fingers on both hands and dance in place).

Tell students: Let’s practice the actions again.

Carbohydrates: twist and turn
Water: run in place
Fat: rub your arms
Protein: punch up over head — raise the roof
Minerals: smile, frown, smile, frown — showing teeth
Vitamins: form a V with your fingers and dance in place

Ask students: Are you ready for the nutrient challenge?

Tell students: We are going to review the nutrients each food group provides. When you hear the nutrient’s name, do the actions you just learned.
**Point to each group on the MyPlate poster as you mention them.**

**Tell students:** The orange group on MyPlate is the grain group. Grain foods have lots of carbohydrates that give us energy to grow, play (twist and turn) and think.

**Tell students:** The green group on MyPlate is the vegetable group. Vegetables give us lots of minerals to build strong blood, cells, bones and teeth (smile, frown, smile, frown — showing teeth). They also give us vitamins for healthy eyes, skin and all that’s underneath (form a V with your fingers on both hands and dance in place).

**Tell students:** The red group on MyPlate is the fruit group. Fruits are also rich in minerals to build strong blood, cells, bones and teeth (smile, frown, smile, frown — showing teeth). They also give us vitamins for healthy eyes, skin and all that’s underneath (form a V with your fingers on both hands and dance in place). Many fruits also contain lots of water (run in place).

**Tell students:** The blue group on MyPlate is the milk group. Milk gives us protein that builds our muscles give our bodies form (punch up over head — raise the roof). Milk also gives us minerals that build strong blood, cells, bones and teeth (smile, frown, smile, frown — showing teeth). They also give us vitamins for healthy eyes, skin and all that’s underneath (form a V with your fingers on both hands and dance in place).

**Ask students:** Can you name an important mineral in milk that builds strong bones?

**Tell students:** Calcium is right. Milk also contains lots of water (run in place).

**Tell students:** The purple group is the protein group. Protein builds our muscles to give our bodies form (punch up over head — raise the roof). Some meats also contain fat that keeps the body warm (rub your arms).

*If there is time, go through the nutrient challenge again, at a faster pace.*

**Tell students:** Great job! Now you are ready to go through the small intestine and into the muscles where you will discover what makes them strong. Be sure to walk and notice the villi in the small intestine.
Muscles K-2

Key concepts
• Physical activity is important for healthy muscles.
• Nutrition is important for physically active muscles.
• The heart is the most important muscle.

Outcomes
• Students will be able to state an activity they can do to exercise their muscles.
• Students will recognize the heart as the most important muscle and activity keeps it healthy.

Student activity
• Students will feel their muscles and heartbeat, jog in place to increase their heart rate, strengthen their arms using resistance tubing and stretch their arms by reaching up high.

Props
• Resistance tubing
• MyActivity Pyramid

Tell students: Please sit down so we can continue your adventure. Welcome to the muscle. This is where the energy from your food goes so you can move, stand, run, sit, walk and play!

Ask students: Do you know the most important muscle in your body? Hint: You can’t live without this muscle.

Respond: Your heart is the most important muscle in your body. It pumps blood to all parts of your body so digested food gets to where you need it.

Tell students: Put your hand on your chest to feel your heartbeat.

Ask students: Can you feel your heart pumping blood? Does it ever stop?

Tell students: You might not feel your heart pumping, but you heart never stops. It needs exercise to stay strong just like your other muscles.

Ask students: What do you think happens to your heart when you run and play at recess?

Respond: When you run and play, your heart beats faster.

Ask students: Is that good for your heart?

Tell students: Yes, exercising your heart makes it stronger and helps you run and play for a long time before you get tired.
**Point to the MyActivity Pyramid.**

**Tell students:** Take a look at this picture of MyActivity Pyramid. MyActivity Pyramid tells us what activities we should do to keep our hearts and other muscles healthy. It also tells us how often we need to do these activities.

**Tell students:** The bottom of the MyActivity Pyramid shows us activities we should do every day.

**Ask students:** Do you see activities you like to do every day?

**Tell students:** The next level of the MyActivity Pyramid shows us activities that we should do three to five times per week. These are activities like jumping rope, basketball, soccer and running. These activities move our muscles and make our hearts beat faster.

**Tell students:** Let’s practice one of these activities and make your heart beat harder. When I say “go,” run in place and move your arms until I say “stop.”

**Have students run in place and pump their arms for 20 seconds.**

**Tell students:** Place your hand on your chest to feel your heartbeat.

**Ask students:** Can you feel your heart beating harder now?

**Tell students:** That is because your heart muscle is working to pump more blood and energy to the other muscles. Let’s feel another muscle.

**Have students bend their arm at the elbow and put their hand on their bicep muscle in their upper arm.**

**Ask students:** Does your bicep muscle feel strong? What are some things you can do to build strong muscles?

**Tell students:** Raking leaves, shoveling snow, doing push-ups and curl-ups or sit-ups are examples.

**Point to MyActivity Pyramid.**

**Tell students:** This level of MyActivity Pyramid reminds us to do activities that make our muscles stronger two to three times per week. We are going to try some exercises to make our arm muscles stronger.
Give each student resistance tubing. Show them how to stand on the tubing. Demonstrate the exercise as you explain.

**Tell students:** Basic curl
Keeping your elbows close to your sides, pull the handles of the resistance tubing up toward your shoulder by flexing, or bending, at the elbow. Don’t use your back to help you pull the tubing up. Feel the muscles on the front of your arm working. Lower the tubing slowly, which should take about two to three seconds. Be sure to breathe.

**Demonstrate.** Good job. That’s called a basic curl.

Begin the basic curl by standing on the tube, then bend your elbow to pull the tube up.

After pulling the tube all the way up, lower it slowly over two to three seconds. Be sure to breathe.

Switch arms and do the basic curl with the other arm.
Tell students: **One-arm row**
This next exercise, called the one-arm row, works your back muscles. Stand with your feet shoulder-width apart and your knees slightly bent. Bend slightly at the waist while keeping a nearly straight back. Grasp the handle with your palm facing in. Keeping your back straight and stable, pull the tubing up toward your back and pause. Squeeze the muscles of your back.

*Demonstrate.* Now, you try the one-arm row. Remember to lower slowly and don’t hold your breath.

Start the one-arm row with your feet shoulder-width apart, and your knees and waist slightly bent. Keeping your back straight, bend your elbow and pull the tube up. Squeeze your back muscles. After pulling the tube all the way up, lower it slowly over two to three seconds. Be sure to breathe.

Switch arms and do the one-arm row with the other arm.

**Ask students:** Did you know that exercising your muscles helps your body be flexible? What does flexible mean?

**Tell students:** It means you can bend and stretch.

**Tell students:** Stretch your arms up as high as you can while you stand on your toes. Now wrap your arms around yourself and touch your back.

**Tell students:** You can increase your flexibility by bending and stretching before and after you exercise. Exercise takes a lot of energy, but eating good food gives your muscles the energy they need.

**Tell students:** Now you are ready to go to the last station where you will learn how bones work with muscles to help you move and the way to keep your bones healthy.
Muscles 3-5

Key concepts
• Physical activity is important for muscular strength, flexibility and endurance.
• Nutrition is important for physically active muscles. Carbohydrates provide energy for activity and protein provides components for muscle growth.
• The heart is the most important muscle.

Outcomes
• Students will be able to state an activity from MyActivity Pyramid they can do to exercise their muscles.
• Students will be able to name nutrients that provide the muscles energy and material for growth.

Student activity
• Students will feel their muscles and heartbeat, jog in place to increase their heart rate, strengthen their arms using resistance tubing and stretch their arms by reaching up high.

Props
• Resistance tubing
• MyActivity Pyramid

Tell students: Welcome to the muscle. You will discover ways that make your heart and other muscles stronger.

Ask students: Which nutrient gives us energy to grow, run and think?

Respond: Carbohydrates give your heart and other muscles energy to exercise and be strong.

Ask students: Which nutrient helps build muscles?

Respond: Protein, which gives our body form, helps your muscles grow.

Tell students: Put your hand on your chest to feel your heartbeat.

Ask students: Your heart is your most important muscle. You may not feel your heart beating, but do you think your heart ever rests?

Tell students: Your heart never stops. It keeps beating to pump blood to all parts of your body.
Ask students: What do you think happens to your heart when you go to P.E. class or play outside?

Tell students: Your heart beats faster.

Ask students: Is that good for your heart?

Tell students: Yes, exercising your heart makes it stronger and helps you run and play for a long time before you get tired. That's called endurance.

Point to the MyActivity Pyramid.

Tell students: Take a look at MyActivity Pyramid. It shows us activities we could do to improve our endurance and the number of times we should do them each week. The bottom of the MyActivity Pyramid shows us daily activities. The next level shows us activities — like jogging, soccer and basketball — to improve our endurance.

Ask students: How often should we do endurance or aerobic activities?

Respond: Three to five times per week.

Tell students: Let's try to feel another muscle. Bend your right arm at the elbow and put your left hand on your bicep muscle. (Upper arm)

Ask students: Does your bicep muscle feel strong? What are some things you can do to build strong muscles?

Tell students: Raking leaves, shoveling snow, doing push-ups, curl-ups and sit-ups.

Point to MyActivity Pyramid.

Tell students: This level of MyActivity Pyramid reminds us to do activities to strengthen and stretch our muscles two to three times per week. Let's strengthen some other muscles.
Give each student resistance tubing. Show them how to stand on the tubing. Demonstrate the exercise as you explain.

Tell students: **Basic curl**
Keeping your elbows close to your sides, pull the handles of the resistance tubing up toward your shoulder by flexing, or bending, at the elbow. Don’t use your back to help you pull the tubing up. Feel the muscles on the front of your arm working. Lower the tubing slowly, which should take about two to three seconds. Be sure to breathe.

*Demonstrate.* Good job. That’s called a basic curl.

*Begin the basic curl by standing on the tube, then bend your elbow to pull the tube up.*

*After pulling the tube all the way up, lower it slowly over two to three seconds. Be sure to breathe.*

Switch arms and do the basic curl with the other arm.
Tell students: **One-arm row**
This next exercise, called the one-arm row, works your back muscles. Stand with your feet shoulder-width apart and your knees slightly bent. Bend slightly at the waist while maintaining a nearly straight back. Grasp the handle with your palm facing in. Keeping your back straight and stable, pull the tubing up toward your back and pause. Squeeze the muscles of your back.

**Demonstrate.** Now, you try the one-arm row. Remember to lower slowly and don’t hold your breath.

Start the one-arm row with your feet shoulder-width apart, and your knees and waist slightly bent. Keeping your back straight, bend your elbow and pull the tube up. Squeeze your back muscles. After pulling the tube all the way up, lower it slowly over two to three seconds. Be sure to breathe.

Switch arms and do the one-arm row with the other arm.

**Ask students:** Why are exercise and working your muscles important?

**Respond:** Exercising and working your muscles keeps them strong.

**Tell students:** Exercising your muscles also helps your body be flexible.

**Ask students:** Can you tell me what flexible means?

**Respond:** It means you can bend and stretch.

**Tell students:** Stretch your arms as high as you can and stand on your toes. Now bend over and reach for your toes. You can increase your flexibility by bending and stretching before and after you exercise.
Tell students: It takes a lot of energy to exercise, but eating good food gives your muscles the energy they need. Excellent work!

Tell students: Now you are ready to go to the last station where you will learn how bones work with muscles to help you move and the ways to keep your bones healthy.
Bones K-2

Key concepts
• Bones support the body and protect our brain and heart.
• Bodies need calcium from the milk group for strong bones.
• Exercise is important for keeping bones strong.

Outcomes
• Students will be able to explain the need for strong bones to support, move and protect the body.
• Students will be able to name the food group they need to build bone.
• Students will be able to name a nutrient they need for strong bones.

Student activity
• Students will point to the location of their bones while they march to a song.

Props
• Skeleton poster
• Food packages
• Calcium-rich foods picture
• MyActivity Pyramid
• CD player and “Those Strong Bones” CD

Tell students: Welcome to the bones. Please sit down so we can finish our adventure.

Point to the skeleton on poster.

Ask students: What is this?
Tell students: This is a skeleton.
Ask students: What are skeletons made of?
Tell students: Skeletons are made of bones.
Ask students: Why do we have bones? What is their job?
Tell students: Bones hold up our bodies.
Tell students: Everyone stand up. Show me what you would look like if you didn't have any bones.

If you didn't have any bones, you wouldn't be able to stand. You also wouldn't be able to move. Our muscles are attached to bones and the muscles wouldn't be able to move our bodies without the bone. Bones also protect important parts of our body. Our skulls protect our brains.
Point to the ribs on the skeleton. Show the location of ribs on your body.

Tell students: These are the ribs. Put your hands above your tummy and feel your ribs.

Ask students: What important muscle do our ribs help protect?

Tell students: Our ribs protect our hearts. Because they do so many important jobs, we need to be sure we help our bodies build strong bones.

Ask students: Do you remember which food group helps build strong bones?

Point to the calcium sources poster.

Tell students: The dairy group helps build strong bones. Milk and other foods made from milk are good bone builders because they have a lot of calcium. Our bones need calcium to make them strong.

Ask students: What are some of the other foods from the dairy group?

Show food packages.

Tell students: Other foods in the dairy group include cheese, yogurt, ice cream, pudding and cottage cheese.

Point to the calcium sources poster.

Tell students: Calcium is also found in some other foods. Orange juice with added calcium, soybeans and soy foods like tofu, broccoli, spinach and almonds all contain calcium. The best sources of calcium are milk and foods made from milk.

Show soda bottle.

Ask students: Does soda have calcium to build strong bones?

Respond: Soda does not have calcium.

Ask students: What do you think would happen to your bones if you drank soda instead of milk?

Respond: If you drank soda all the time, your bones would not grow as big or as strong as they would if you drank milk all the time.

Ask students: Did you know that your bones can grow and get stronger every day?
Tell students: They can — calcium is added to your bones, so eating calcium-rich foods every day is important. You need three foods from the dairy group every day to build new bone. It is easy to remember — just drink milk or eat foods high in calcium at breakfast, lunch and dinner every day and you will get the calcium your bones need to stay strong.

Your body needs something else to build strong bones and it is not something you eat or drink. Exercise you do while standing on your feet, like running and playing, helps build strong bones.

Tell students: Let’s do a bone-building activity. Let’s march while we point to the bones mentioned in this song.

Play the “Those Strong Bones” CD.

Those Strong Bones

Calcium builds these strong bones.
Calcium builds these strong bones.
Calcium builds these strong bones.
May I have some milk?
My toe bone’s connected to my foot bone,
My foot bone’s connected to my ankle bone,
My ankle bone’s connected to my leg bone,
My leg bone’s connected to my knee bone,
My knee bone’s connected to my thigh bone,
My thigh bone’s connected to my hip bone,
My hip bone’s connected to my back bone,
My back bone’s connected to my shoulder bone,
My shoulder bone’s connected to my neck bone,
My neck bone’s connected to my head bone,
Exercise builds strong bones!
These bones, strong bones gonna march around,
These bones, strong bones gonna walk around,
These bones, strong bones, gonna sit down,
I’m gonna have strong bones!

Tell students: Great job! I hope you enjoyed your Food Power Adventure and learned a lot about what you need to eat and do in order to grow and go!
Bones 3-5

Key concepts
• Bones support the body, allow the body to move and protect our organs.
• Calcium, vitamin D and exercise are important for making strong bones.

Outcomes
• Students will be able to explain the need for strong bones to support, move and protect the body.
• Students will be able to name the food group needed to build bone.
• Students will be able to name a nutrient strong bones need.
• Students will be able to identify exercise as important to bone health.

Student activity
• Students look at pictures of healthy and weak bones. Students will point to the location of their bones while they march to a song.

Props
• Two bone pictures
• Skeleton poster
• Calcium-rich foods poster
• Soda pop bottle
• MyActivity Pyramid
• CD player and “Those Strong Bones” CD

Tell students: Welcome to the bones. Please sit down so we can finish our adventure.

Show pictures of the inside of the bone.

Ask students: What are these pictures of?

Tell students: These are close-up pictures of the inside of a weak bone and a strong bone. Bones look solid, but they actually have many holes, or small pores, in them.

Ask students: Which bone do you think is the strong bone? Why?

Tell students: The strong bone has smaller holes than the weak bone.

Ask students: Why do you think we need strong bones? What do bones do?
Tell students: Bones hold up our bodies. If you didn’t have any bones, you wouldn’t be able to stand or move. Our muscles are attached to bones and the muscles wouldn’t be able to move our bodies without bones. Bones also protect important parts of our bodies.

Point to the parts of the skeleton poster as you discuss them.

Ask students: Which important part of your body does your skull protect?
Respond: Your skull protects your brain.

Ask students: Which important parts of your body do your ribs protect?
Respond: Your ribs protect your lungs and heart.

Ask students: Which important part of your body does your spine protect?
Tell students: Your spine protects your spinal cord in your nervous system. Your spine has a hole in the middle that your spinal cord runs through. Your spine bones protect the spinal cord from getting damaged when we do everyday activities like run and play.

Ask students: What are two nutrients that work together to make bones strong? Here’s a hint — one is a vitamin and one is a mineral.
Tell students: Yes, the mineral calcium and vitamin D work together to make bones strong.

Ask students: Which food group has lots of calcium- and vitamin D-rich foods?
Tell students: The dairy group.

Ask students: Which foods are in the dairy group?
Tell students: Milk, cheese, yogurt, pudding and ice cream are all good sources of calcium and vitamin D.
Ask students: What about people who can’t drink milk? Do they have foods they can eat to help them build strong bones?

Tell students: Calcium is also found in some other foods. Orange juice with added calcium, soybeans and soy foods like tofu, broccoli, spinach and almonds all contain calcium.

Show soda bottle.

Ask students: Does soda have calcium to build strong bones?

Respond: Soda does not have calcium.

Ask students: What do you think would happen to your bones if you drank soda instead of milk?

Respond: If you drank soda all the time, your bones would not grow as big or as strong as they would if you drank milk all the time.

Ask students: Did you know that bones can grow and get stronger every day?

Tell students: Your bones can grow and get stronger because calcium moves in and out of your bones every day. To make sure you have enough calcium moving into your bones, you should be sure to have three calcium-rich foods every day. It is easy to remember — eat or drink high calcium foods at breakfast, lunch and dinner. Your body needs something else to build strong bones and it is not something you eat or drink.

Ask students: Do you know what it is?

Tell students: Exercise you do while standing on your feet, like running and playing, helps build strong bones.

Tell students: Let’s do a bone-building activity. We are going to march in place and point to the bones mentioned in this song. But when the song says a common name for a bone, I want you to say the scientific name. For example, when the song says “toe bone,” I want you to say “phalanges.”
Point to the skeleton poster and quickly go over the scientific names of the bones.

Toes: phalanges
Foot: metatarsals
Ankles: tarsals
Legs: tibia
Knees: patella
Thighs: femur
Hips: pelvis
Back: spine
Shoulders: scapula
Necks: cervical spine
Heads: cranium

Play the “Those Strong Bones” CD.

**Those Strong Bones**

Calcium builds these strong bones.
Calcium builds these strong bones.
Calcium builds these strong bones.

May I have some milk?

My toe bone’s (PHALANGE’S) connected to my foot bone (METATARSAL),
My foot bone’s (METATARSAL’S) connected to my ankle bone (TARSALS),
My ankle bone’s (TARSAL’S) connected to my leg bone (TIBIA),
My leg bone’s (TIBIA’S) connected to my knee bone (PATELLA),
My knee bone’s (PATELLA’S) connected to my thigh bone (FEMUR),
My thigh bone’s (FEMUR’S) connected to my hip bone (PELVIS),
My hip bone’s (PELVIS) connected to my back bone (SPINE),
My back bone’s (SPINE’S) connected to my shoulder bone (SCAPULA),
My shoulder bone’s (SCAPULA) connected to my neck bone (CERVICAL SPINE),
My neck bone’s (CERVICAL SPINE’S) connected to my head bone (CRANIUM),

Exercise builds strong bones!

These bones, strong bones gonna march around,
These bones, strong bones gonna walk around,
These bones, strong bones, gonna sit down,
I’m gonna have strong bones!

**Tell students:** Great job! I hope you enjoyed your Food Power Adventure and learned a lot about what you need to eat and do in order to grow and go!
Funded in part by USDA SNAP.

**Running out of money for food?**
Contact your local food stamp office or go online to
[**dss.mo.gov/fsd/fstamp**.](http://dss.mo.gov/fsd/fstamp)

For more information on nutrition and physical activities you can do with your family, call MU Extension’s Show Me Nutrition line at **1-888-515-0016**.