

LESSON 1



A Date with MyPlate

Concept

Making healthy food choices is a critical part of living a healthier life. The US Department of Agriculture recently released MyPlate, which provides information about nutrition and physical activity to make it easier for people of all ages to make better choices. This lesson introduces MyPlate, with a focus on eating a variety of foods.



Background

Since the early 1980s the rate of childhood obesity in the United States has tripled (1–3). Children who are overweight or obese are at higher risk for weight-related problems such as type 2 diabetes (4), high blood pressure, high cholesterol (5), depression (4, 6) and problems with bones, joints (7) and breathing (8). In order to address this problem, there has been a focus on developing programs and policies that focus on obesity prevention. In fact, the two main concepts of the newly released Dietary Guidelines for Americans, 2010, are to 1) maintain calorie balance over time to achieve and sustain a healthy weight and 2) focus on consuming nutrient-dense foods and beverages (9). Implementing the key recommendations of the Dietary Guidelines for Americans, 2010, can help Americans make better choices and lead healthier lives.

DIETARY GUIDELINES FOR AMERICANS

One of the important jobs of nutrition educators is to translate federal guidelines into educational materials and programs that are easy to understand and meaningful to Americans. The Dietary Guidelines for Americans, 2010, (9) provide evidence-based nutrition and physical activity recommendations for healthy Americans and those at risk for chronic diseases ages two and older. The “Selected Messages for Consumers” from the Dietary Guidelines, 2010, published by the US Department of Agriculture include (10):

1. Balancing calories
 - a. Enjoy your food but eat less.
 - b. Avoid oversized portions.
2. Foods to increase
 - a. Make half your plate fruits and vegetables.
 - b. Make at least half your grains whole grains.
 - c. Switch to fat-free or low-fat (1%) milk.
3. Foods to reduce
 - a. Compare sodium in foods like soup, bread, and frozen meals and choose the foods with lower numbers.
 - b. Drink water instead of sugary drinks.

MYPLATE

MyPlate is the US Department of Agriculture’s newly released food guidance system based on the Dietary

Guidelines for Americans, 2010, that uses printed materials and the ChooseMyPlate.gov website to provide Americans with information on the types and amounts of foods to eat every day (11). Americans can visit the ChooseMyPlate.gov website to get a personalized nutrition plan based on their age, sex, height, weight and activity level. The five food groups represented by the colors used on MyPlate include Grains – orange, Vegetables – green, Fruits – red, Dairy – blue, and Protein Foods – purple. Each of the food groups has a key message designed to help Americans make better choices, which include the following:

Grains – Make half your grains whole

Vegetables – Vary your veggies

Fruits – Focus on fruits


Dairy – Get your calcium-rich foods

Protein Foods – Go lean with protein

In summary, the Dietary Guidelines for Americans, 2010, and MyPlate were developed to help American families make better food and physical activity choices. Teaching young children about nutrition and providing specific recommendations in a fun activity is a first step in preventing obesity in children.

REFERENCES

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3rd Grade Lesson

LEARNING OBJECTIVES:

The students will:

- name and categorize foods consumed by people living in Mexico, Italy, India, and China into the food groups of MyPlate
- recognize that foods consumed by people from other cultures fit into MyPlate.

BEHAVIORAL OBJECTIVE:

The students will:

- eat a variety of foods from each of the MyPlate food groups.

RECOMMENDED BOOK:

Spriggles Health & Nutrition by Jeff and Martha Gottlieb. For special pricing (\$5.00/book) call Jeff Gottlieb directly at 888-875-5856 or fax him a Purchase Order

FLORIDA STANDARDS:

SOCIAL STUDIES:

SS.3.G.1.3.: The student will label the continents on a world map.

READING/LANGUAGE ARTS:

LA.3.2.2.3.: The student will organize information to show an understanding of main ideas within a text through charting, mapping, or summarizing.

LA.3.3.1.1: The student will prewrite by generating ideas from multiple sources (e.g., text, brainstorming, graphic organizer, drawing, writer's notebook, group discussion, printed material)

ENGLISH LANGUAGE ARTS:

LACC.3.W.1.1: The student will write opinion pieces on topics or texts, supporting a point of view with reasons.

MATHEMATICS:

MA.3.A.2.2: The student will describe how the size of the fractional part is related to the number of equal sized pieces in the whole.

MA.3.A.1.2: The student will solve multiplication and division fact problems by using strategies that result from applying number properties.

PHYSICAL EDUCATION:

PE.3.M.1.1: The student will apply locomotor skills in a variety of movement settings. PE.3.R.1.2: The student will willingly try new activities.

PE.3.R.2.3: The student will choose to participate in group physical activities.



DANCE:

DA.3.C.1.2: The student will learn movement quickly and accurately through application of learning strategies.

DA.3.S.2.2: The student will learn and repeat movement using observation and listening skills. DA.3.H.1.1: The student will practice and perform social, cultural, or folk dances, using associated traditional music, to identify commonalities and differences.

DA.3.S.2.2: The student will learn and repeat movement using observation and listening skills.





Learning Activity: Around the World with MyPlate

PRIOR TO ACTIVITY

Before the activity, print 1 food group worksheet for each student in the class, 4 blank MyPlate sheets, food cards representing each country (4 total; these need to be printed front to back with the picture and name of the meal on one side and the foods included in the meal on the other side) and one copy of each of the posters representing Mexico, Italy, India and China. Hang the MyPlate poster and the world map on the board using sticky tack so that all the students are able to see them (use a projector or Smart Board to show the world map, if available).

Optional Activity: Print 3 additional food group worksheets for each student in the class.

ACTIVITY INTRODUCTION:

Today we will talk about foods from different countries and how they fit into MyPlate.

Point to the MyPlate poster. *This is MyPlate. MyPlate teaches us how to make healthy food choices.*

MyPlate reminds us to be sure to eat foods from the five food groups. Raise your hand if you can tell me the name of this food group? (Point to each section of the plate and call on a student to name the food group.)

Point to the world map. *Now let's look at the map, we are going to travel to different countries today and learn about foods that are popular in Mexico, Italy, India, and China.* (Point to each country as you say its name.)

The first country we will talk about is Mexico. (Point to Mexico on the world map.) *Who can tell me the name of the continent on which Mexico is located?* (Call on a student(s) to answer. Give hints if needed, such as it is on the same continent as the United States and Canada.) *Mexico is located on the continent of North America.*

(Hang the Mexico food poster on the board.) *Popular foods eaten in Mexico include tacos and papaya. This poster shows pictures of the foods that may be eaten as part of a taco and a picture of a papaya. I'm going to say the name of each of these foods and point to the picture of each food on the poster. As I do this, I want you to tell me the name of the food group to which it belongs.*

Whole wheat tortilla? (Allow students to respond; correct answer: Grains)

Lettuce? (Allow students to respond; correct answer: Vegetables)

Tomatoes? (Allow students to respond; correct answer: Vegetables)

Avocado? (Allow students to respond; correct answer: Vegetables)

Papaya? (Allow students to respond; correct answer: Fruits)

Shredded cheese? (Allow students to respond; correct answer: Dairy)


Black beans? (Allow students to respond; correct answer: Protein Foods)

Lean ground beef? (Allow students to respond; correct answer: Protein Foods)

Next we will take a trip to Italy. (Point to Italy on the world map.) *Who can tell me the name of the continent on which Italy is located?* (Call on a student(s) to answer. Give hints if needed, such as it is on the same continent as England and France.) *Italy is located on the continent of Europe.*

MATERIALS

- MyPlate poster
- World map, available at http://www.freeworldmaps.net/download/maps/political_new.png (American Automobile Association members can request free world maps at local AAA agency)
- Posters of Mexico, Italy, India, and China, provided
- Sticky tack for posters
- Food cards for each country, template provided
- 4 blank MyPlate sheets, available at <http://www.choosemyplate.gov/print-materials-ordering/ColoringSheet.pdf>
- Food group worksheets, template provided
- Pencils (if students don't already have them at their desks)



(Hang the Italy food poster on the board.) *Popular foods eaten in Italy include spaghetti and grapes. This poster shows pictures of the foods that are used as ingredients when making spaghetti and pictures of zucchini and a bunch of grapes. I'm going to say the name of each of these foods and point to the picture of each food on the poster. As I do this, I want you to tell me the name of the food group to which it belongs.*

Whole wheat pasta? (Allow students to respond; correct answer: Grains)

Onions? (Allow students to respond; correct answer: Vegetables)

Tomatoes? (Allow students to respond; correct answer: Vegetables)

Bell peppers? (Allow students to respond; correct answer: Vegetables)

Zucchini? (Allow students to respond; correct answer: Vegetables)

Parmesan cheese? (Allow students to respond; correct answer: Dairy)

Lean ground beef? (Allow students to respond; correct answer: Protein Foods)

Grapes? (Allow students to respond; correct answer: Fruits)

Now, let's travel to India. (Point to India on map and on poster.) *Who can tell me the name of the continent on which India is located?* (Call on a student(s) to answer. Give hints if needed, such as it is on the same continent as Japan.) *India is located on the continent of Asia.*

(Hang the India food poster on the board.) *Chicken curry with lentils, naan bread and mango are very popular foods in India. This poster shows pictures of the foods that are used as ingredients when making chicken curry with lentils and pictures of naan bread and a mango. I'm going to say the name of each of these foods and point to the picture of each food on the poster. As I do this, I want you to tell me the name of the food group to which it belongs.*

Naan bread? Naan bread is an Indian flatbread. (Allow students to respond; correct answer: Grains)

Onions? (Allow students to respond; correct answer: Vegetables)

Tomatoes? (Allow students to respond; correct answer: Vegetables)

Low-fat yogurt? (Allow students to respond; correct answer: Dairy)

Chicken? (Allow students to respond; correct answer: Protein Foods)

Lentils? (Allow students to respond; correct answer: Protein Foods)

Mango? (Allow students to respond; correct answer: Fruits)

Finally, we arrive in China. (Point to China on the world map.) *Who can tell me the name of the continent on which China is located?* (Call on a student(s) to answer. Give hints if needed, such as it is on the same continent as another country that we already discussed.) *China is located on the continent of Asia just like India!*

(Hang the China food poster on the board.) *Shrimp chow mein, fortified soymilk, and starfruit are popular foods in China. This poster shows pictures of the foods that are used as ingredients when making shrimp chow mein and pictures of fortified soy milk and starfruit. I'm going to say the name of each of these foods and point to the picture of each food on the poster. As I do this, I want you to tell me the name of the food group to which it belongs.*

Noodles? (Allow students to respond; correct answer: Grains)

Bean sprouts? (Allow students to respond; correct answer: Vegetables)

Bok choy? (Allow students to respond; correct answer: Vegetables)

Mushrooms? (Allow students to respond; correct answer: Vegetables)

Shrimp? (Allow students to respond; correct answer: Protein Foods)

Sesame seeds? (Allow students to respond; correct answer: Protein Foods)

Starfruit? (Allow students to respond; correct answer: Fruits)

Fortified soy milk? (Allow students to respond; correct answer: Dairy)

The thing that all of these meals have in common is that each of them includes foods from the Grains, Vegetable, Fruits, Dairy, and Protein Foods groups. It is important to eat foods from each of these groups every day to grow healthy and strong. Today, we will do an activity to help us remember to eat a variety of foods.

ACTIVITY DIRECTIONS:

1. Divide the class into 4 groups.
2. I am going to distribute the materials for an activity. Each group will receive a food card with a meal from one of the four countries we discussed and a MyPlate worksheet. (Show examples of each of these to the students.) Each of you also will receive 1 food group worksheets that look like this. (Show them what the food group worksheet looks like.) Listen for the directions I will give you before you do anything with these papers. Distribute a food card with a country's specific meal and a blank MyPlate sheet to each group. Also distribute 3 copies of the food group worksheet to every student.
3. Look at the card with the picture of the meal. The names of all of the foods that are part of this meal are printed on the back of the card. Look at the list of foods and write the name of each food in the correct spot on MyPlate. For example, if whole wheat bread was on your list of foods you would write the words "whole wheat bread" in the Grains section of your MyPlate poster. (Point to the spot on the MyPlate poster.) Make sure everyone in your group has a chance to write the name of at least one food in the correct spot on the MyPlate sheet.
4. After the students have finished categorizing the foods into each of the MyPlate food groups, call on each group, one at a time, to come up and tell their classmates the name of the country they have and the continent on which their country is located. Each group also will state the names of the foods in their meal and the MyPlate food group to which each of these foods belongs.

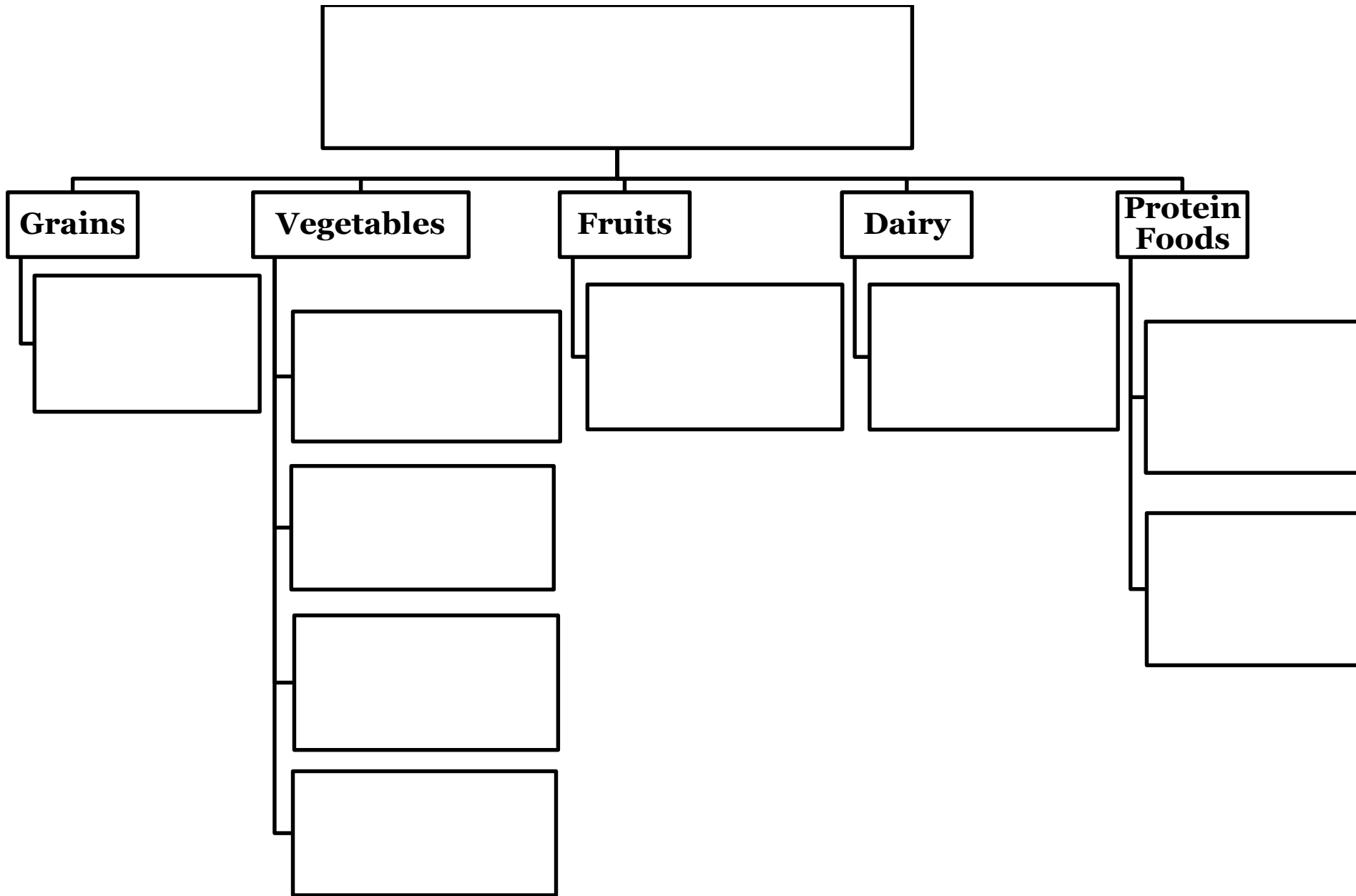
Optional Activities:

5. While the groups are presenting, the other students who are seated must complete the food group worksheet for each of the other countries. Tell them to write the name of the country in the box at the top of the page. Instruct them to write the names of the foods eaten in that country in the boxes that correspond with the food group to which each food belongs.
6. When I call the name of the meal you have, come to the front of the room with your group and tell the class the name of your country, the continent on which it is located, the names of each of the foods in your meal and the food groups to which each of them belongs. For those of you seated, be sure to pay close attention because you will need to write the name of the country in the box at the top of one of your food group worksheets. You will do this for each country except your team's country. (Point to where you want them to print



the name of each country.) When you hear the name of a food eaten in that country, write the name of the food under the box that matches the food group to which the food belongs. Let's do an example together. Suppose my country was India. You would write the word, India here. (Point to the box on the page.) If I told you that one of the foods that was in my meal was naan bread, where would you write the words "naan bread"? (Call on a student.) Yes, that's correct. You would write the words "naan bread" under the box that says "Grains". If you are not sure how to spell the name of the food, you can look at the food posters on the board.

6. After all groups have presented and the students have completed their food group worksheets, point out that the meals from each of the countries included foods from each of the MyPlate food groups. Great job everyone, now you can see that each of the countries we discussed included meals with foods from all of the MyPlate food groups.
7. Now, think about the foods on your food group worksheets and the foods in the meal from the country that you worked on with your team. Write a sentence that tells us what was similar to your country's meal. (Give the students a chance to write their sentence on at least one of the food group worksheets.)
8. Who would like to share their sentence with the class? (Allow a student to answer.) Great job! Each of the country's meals included grains, vegetables, fruits, dairy, and protein foods. You all did such a wonderful job! Now you can see that it is possible to eat foods from each of the food groups even if you are from another country.



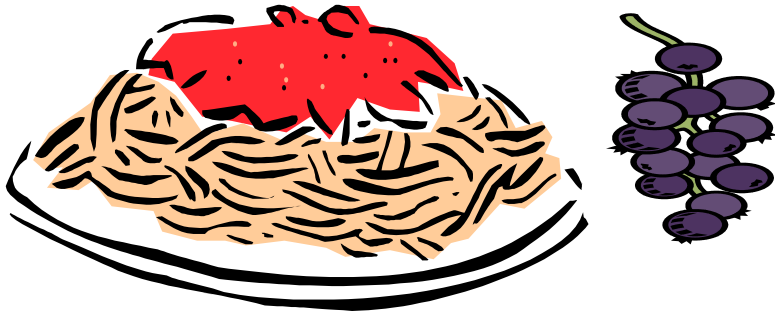
Taco with a slice of Papaya



This meal includes:

- Whole wheat tortilla
- Lettuce
- Tomatoes
- Avocado
- Shredded cheese
- Black beans
- Lean ground beef
- Papaya

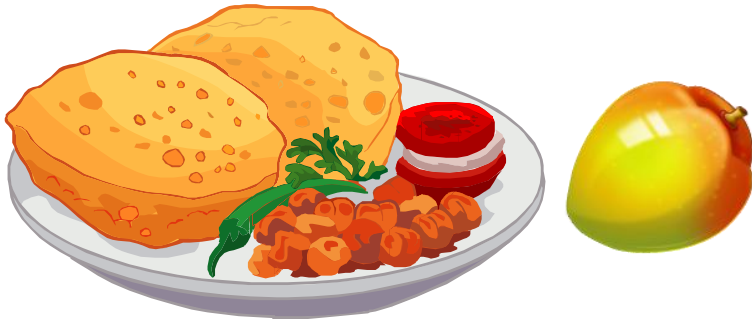
Spaghetti with a side of Grapes



This meal includes:

- Whole wheat pasta
- Onions
- Tomatoes
- Bell peppers
- Zucchini
- Parmesan cheese
- Lean ground beef
- Grapes

Chicken Curry with Naan Bread and Mango



This meal includes:

- Naan bread
- Onions
- Tomatoes
- Mango
- Low fat yogurt
- Chicken
- Lentils

Shrimp Chow Mein with Starfruit and Fortified Soymilk



This meal includes:

- Noodles
- Bean sprouts
- Bok choy
- Mushrooms
- Shrimp
- Sesame seeds
- Starfruit
- Fortified Soymilk



Mexico



Whole wheat tortilla



Source: <http://allrecipes.com/recipe/mexican-whole-wheat-flour-tortillas/>

Tomatoes



Shredded cheese



Source: <http://img4-1.realsimple.timeinc.net/images/1108/cheese->

Lean ground beef



Source: <http://static.caloriecount.about.com/images/medium/beef-ground-percent-lean-157872.jpg>

Lettuce



Avocado



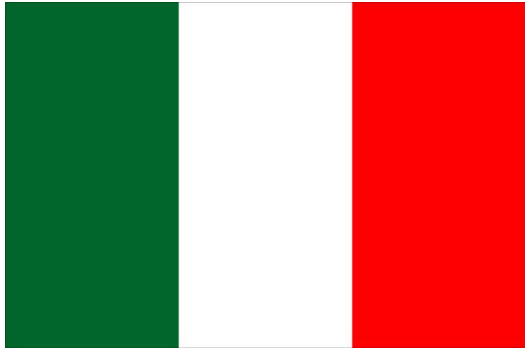
Black beans



Source: http://img4-2.realsimple.timeinc.net/images/1108/blackbean-silo_300.jpg

Papaya





Italy



Whole wheat pasta



Source: http://www.chow.com/assets/2008/09/5_ronzonirollover.jpg

Tomatoes



Zucchini



Source: <http://www.grit.com/uploadedImages/GRT/articles/issues/2012-04-01/2-Zucchini.jpg>

Lean ground beef



Source: <http://static.caloriecount.about.com/images/medium/beef-ground-percent-lean-157872.jpg>

Onions



Bell peppers



Parmesan cheese



Source: http://static.cookingplanit.com/public/uploads/inventory/parmesan_grated_1348171535.jpg?v=1348171551

Grapes





India



Naan bread



Source: <http://www.supremequalityfoods.com/images/products/product-naan-bread-garlic.jpg>

Tomatoes



Source: <http://www.muscleprodigy.com/content/articles/home/grilled-chicken-breast-2281.jpg>

Low-fat yogurt



Source: <http://img2.timeinc.net/health/images/gallery/living/greek-yogurt-400.jpg>

Lentils



Source: http://www.foodonthetable.com/content/wp-content/uploads/2012/07/iStock_000005231418XSmall.jpg

Onions



Mango



Source: <http://img.21food.com/20110609/product/1305678716093.jpg>



China



Noodles



Bok choy



Source: http://dietsinreview.s3.amazonaws.com/diet_column/wp-content/uploads/2012/05/bok-choy.jpg

Shrimp



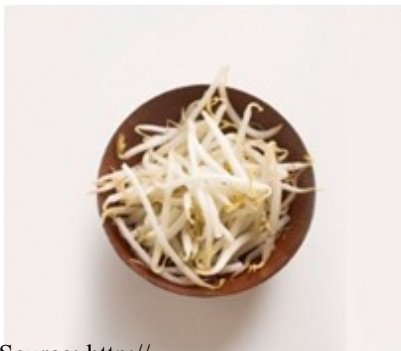
Source: <http://healthcontentus.mediresource.com/images/figures/shrimp.jpg>

Starfruit



Source: http://2.bp.blogspot.com/-U7_TdHPCBEQ/TkpDb27eUrI/AAAAAAAAAXQ/F9jB7czSqZA/s1600/Star+Fruit4.jpg

Bean sprouts



Source: http://cdn3.healthcommunities.com/image-gallery/size_400x348/crop_a/dir/article-upload/1663-Bean-Sprouts-Modified-MF.jpg

Mushrooms



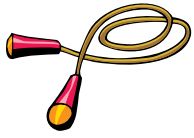
Sesame seeds



Source: http://s3.amazonaws.com/images.onedegreeorganics.com/assets/1731/Sesame_Seed_web_ing_cat_1.png

Fortified Soymilk





Physical Activity: MyPlate Zumba

ACTIVITY INTRODUCTION

This activity is a Zumba-like activity. Each of the dance moves used in this activity relates to one of the 4 countries previously discussed. The students will need to imagine that the MyPlate food group is on the floor in front of them. A series of slides will appear on the screen, one at a time, with the name of one of the four countries, the name and image of a food consumed in that country and a visual representation (i.e., “dancing feet”) showing the location of the food group to which that food belongs. The students will need to move to the space on their invisible dance floor that represents the food group for the food shown on the slide and complete the dance move specific to the country where that food is eaten. For example, when a picture of a whole wheat tortilla appears on the slide, they should move to the upper right portion of the space in front of them, representing the Grains group, and complete the dance move for Mexico. Similarly, they would move to the lower left for vegetables, upper left for fruits, diagonally to the right for dairy, and to the lower right for protein foods.

The dance moves for this activity are described below. Examples of the dance moves for each country are available on the DVD that accompanies this curriculum. The music for this activity can be downloaded from YouTube. (See link above.) The PowerPoint slides present the foods from one country at a time and can be advanced at a pace that seems reasonable for the class.

- **Mexico - cumbia.** Start with your feet together. Move one leg behind the other and bring it back to neutral, then move the opposite leg behind the other leg and bring it back to neutral. Repeat.
- **Italy - trabocchetto (tra-ba-shay-toe).** Hop on one leg to the other, letting the heel touch the opposite leg.
- **India** - Rotate wrists above your head and step forward, one foot at a time.
- **China** - Kung fu kick. Kick your leg out to the side or towards the front (whichever is most comfortable). *If classroom space is too small, consider using a straight punch technique and alternate arms one at a time.

ACTIVITY DIRECTIONS

Decide if there is adequate space for the students to perform the Zumba dance moves at their desks or arrange the room so there is an area where the students can assemble to do this activity. Tell the students to hold their arms out to their sides and in front of them (demonstrate) to make sure you have enough space to avoid bumping into their classmates during this activity.

Now that you know the MyPlate food groups for some of the foods eaten in Mexico, Italy, India and China, we're going to do an activity called MyPlate Zumba! Raise your hand if you've ever done Zumba. I will show the moves to you and you can follow what I do during this activity. For this activity you have to pretend that you have a drawing of MyPlate on the floor in front of you. Grains will be upper right, fruits will be upper left, etc.

A series of slides will appear on the screen, one at a time, with the name of one of the four countries, the name and image of a food consumed in that country and a visual

MATERIALS

- Music
 - Name of artist/song: Don Omar – Danza Kuduro (Instrumental)
 - http://www.youtube.com/watch?v=pmZltl_L8Ks
- MyPlate Zumba dance moves video



representation (i.e., “dancing feet”) showing the location of the food group to which that food belongs. (Show the first PowerPoint slide.) You will need to move to the space on your invisible dance floor that represents the food group for the food shown on the slide. For example, this slide shows a whole wheat tortilla. This food belongs to the Grains group, so you will need to move to the spot on your invisible dance floor where you would find the grains group. This would be to your upper right. Let’s all move to that spot. Once you are in that spot, you will need to do a certain dance move representing that country. I will show you the dance moves, but first, let’s make sure everyone knows where the food groups are located on your invisible dance floor.

Let’s say that a slide comes up with a food that belongs to the Fruits group. Show me where you would move. That’s right you would move to the upper left of your dance floor. What about a food from the Vegetables group? Correct! All of you should move to the lower left. We still have two more groups. For the Protein Foods group you would be to your lower right. Let’s do it! And finally, for the Dairy group, you would move diagonally to the right – like this. (Demonstrate and instruct the students to move along with you. Run through each of the locations again if you think the students need more practice.)

Now we’re going to do some special Zumba moves to remind you of the countries we discussed today and the MyPlate food groups. Let’s practice them. Let’s review the moves.

For Mexico, we’re going to do a dance move called cumbia. Start with your feet together. Move one leg behind the other and bring it back to neutral, then move the opposite leg behind your other leg and bring it back to neutral. Repeat this move. Let’s try it together. So if I call out whole wheat tortilla, which is a Grain group food, you are going to do cumbia in the upper right corner of your dance floor.

Italy is next. This move is called trabocchetto (tra-ba-shay-toe). Hop on one leg onto the other with the heel of your foot touching the opposite leg. When I call out a food from Italy, like Parmesan cheese, you would move diagonally to the right where the Dairy group is located and do this dance move.

When you hear a food for India rotate your wrists above your head and step forward, one foot at a time. If I say chicken curry, you’re going to do this move in the lower right to represent protein foods. Wonderful!


Finally, we have China. Kung fu is popular there so you are going to do a kung fu kick when you hear foods from China. (Demonstrate.) For example, if I say bok choy, which is a food from the Vegetables group, you are going to move to the lower left corner of your dance floor and do a Kung Fu kick. You need to be very careful with this move to avoid kicking one of your classmates. Start the activity.

DISCUSSION:

I hope all of you had fun learning about the different foods eaten in Mexico, Italy, India, and China and how they fit into the food groups on MyPlate. Can someone tell me the names of the five food groups? (Allow students to answer.) Excellent! Grains, Vegetables, Fruits, Dairy, and Protein Foods. So why is it important to eat a variety of foods from each of the food groups every day? (Allow students to answer.) That’s right, to grow strong and stay healthy! Terrific job everyone!

RECOMMENDED BOOK:

Evening Meals Around the World. By: Michele Zurakowski



Dear Parent or Caregiver,

Today your child learned about foods eaten in other countries that fit into the five food groups of MyPlate: the Grains group, the Vegetables group, the Fruits group, the Dairy group, and the Protein Foods group. MyPlate was developed by the US Department of Agriculture to remind us to make healthy choices when eating. Your child should be able to name and categorize foods from Mexico, Italy, India, and China into the food groups of MyPlate. Your child also should recognize that foods consumed by people from other cultures fit into the MyPlate food groups. Each food group provides different essential nutrients, so it is important to eat a variety of foods from each of the food groups to support good health.

A recipe for a healthy snack that includes foods from each of the five food groups is printed on the back of this letter. Making this recipe at home with your child is a simple way to work together to provide your child with a healthy snack. Use some of the activities listed below to remind your child about MyPlate and the importance of eating foods from each of the food groups a mealtimes.

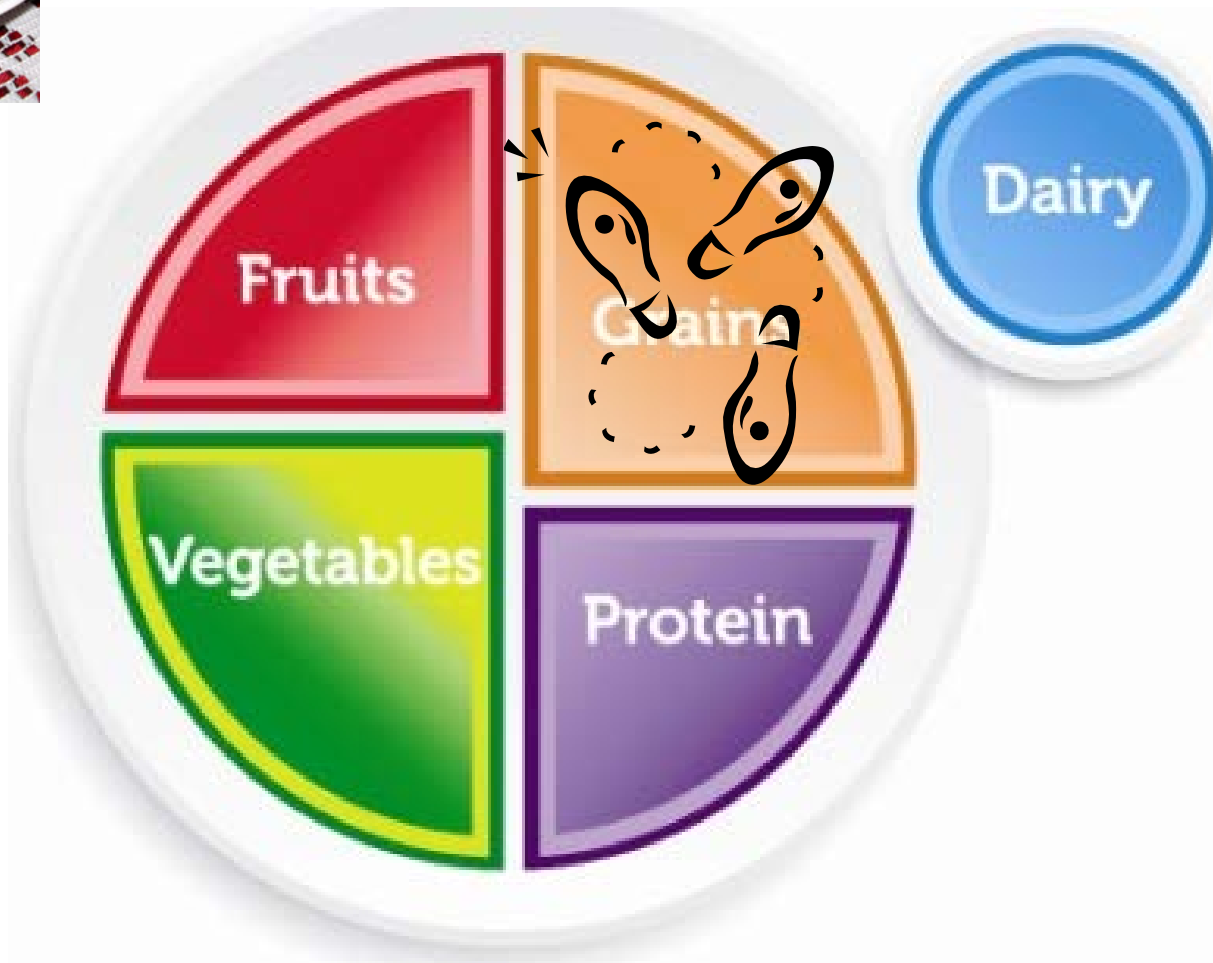
- Ask your child to tell you about the countries they learned about and to name some of the foods that are popular in those countries. Include some of those foods in the meals you eat together.
- Your child participated in MyPlate Zumba, an activity that includes a series of dance moves from each of the countries they learned about today. Ask your child to teach you the moves and do the activity as a family.
- When you go grocery shopping, ask your child to name the foods in your cart and to categorize them into each of the MyPlate food groups.

We hope you enjoy these ideas and that you will use this information to encourage your child and family to eat a variety of foods from each of the five food groups at mealtimes. If you would like more information on MyPlate, please visit www.ChooseMyPlate.gov.

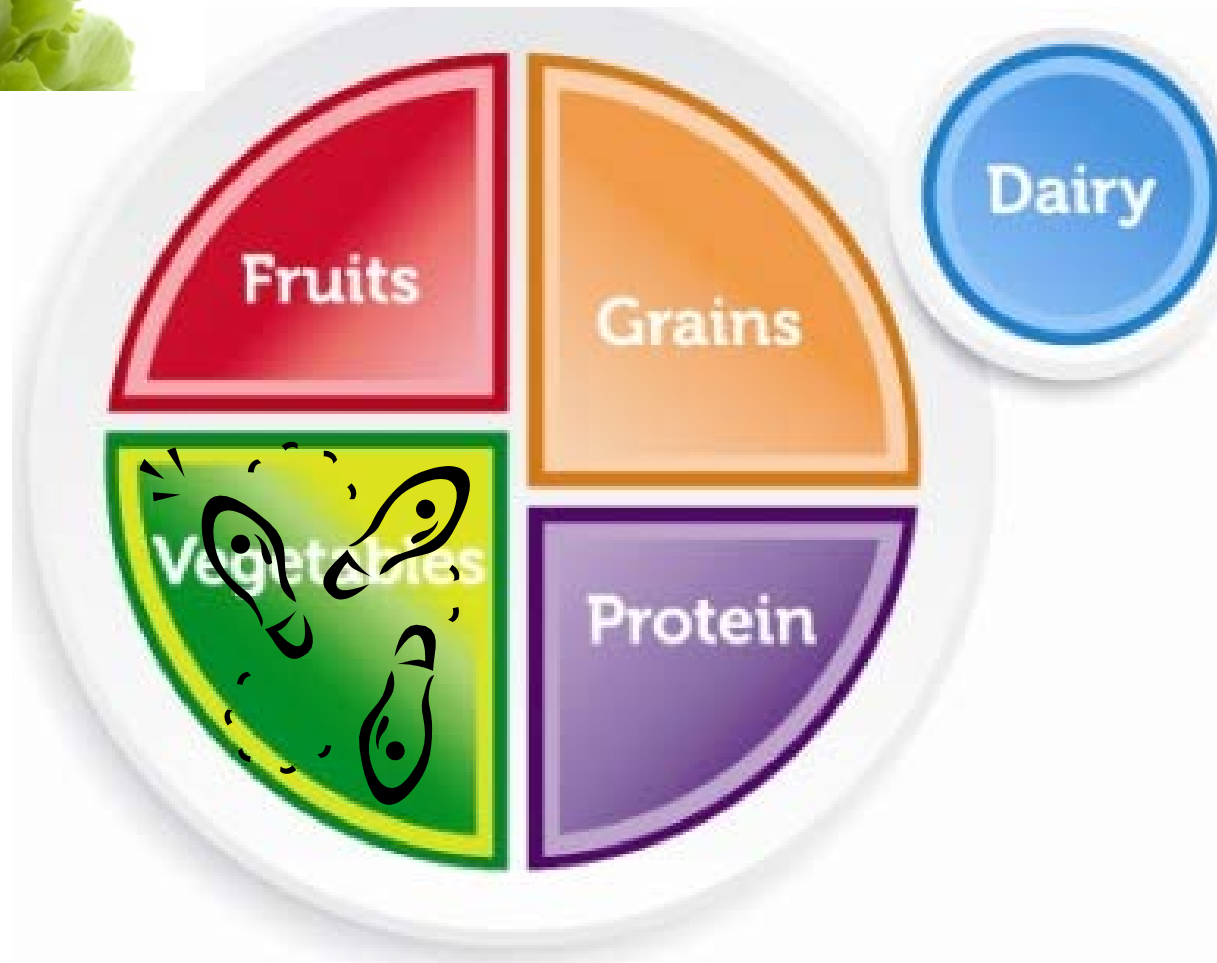
Sincerely,



Mexico: Whole wheat tortilla

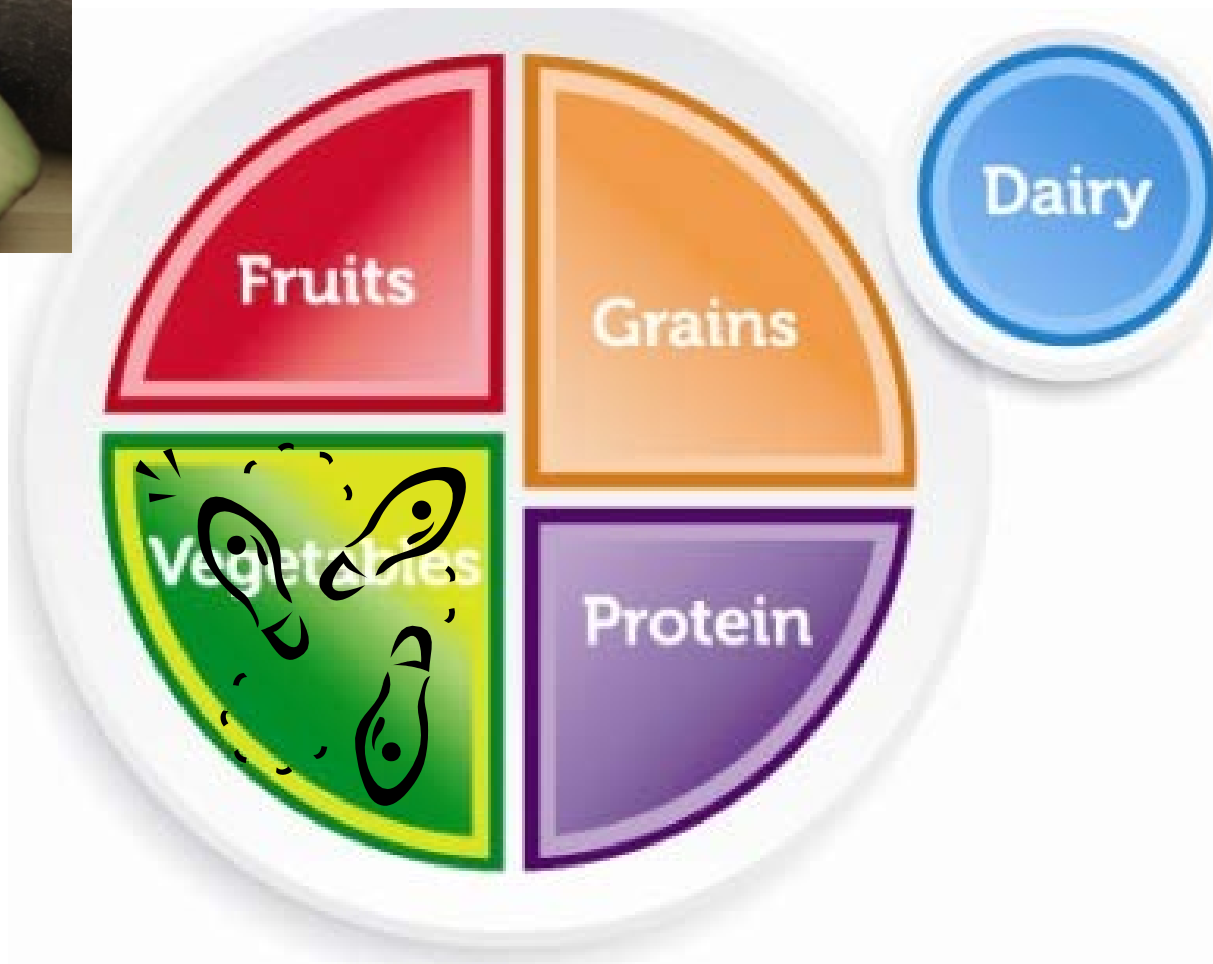


Mexico: Lettuce

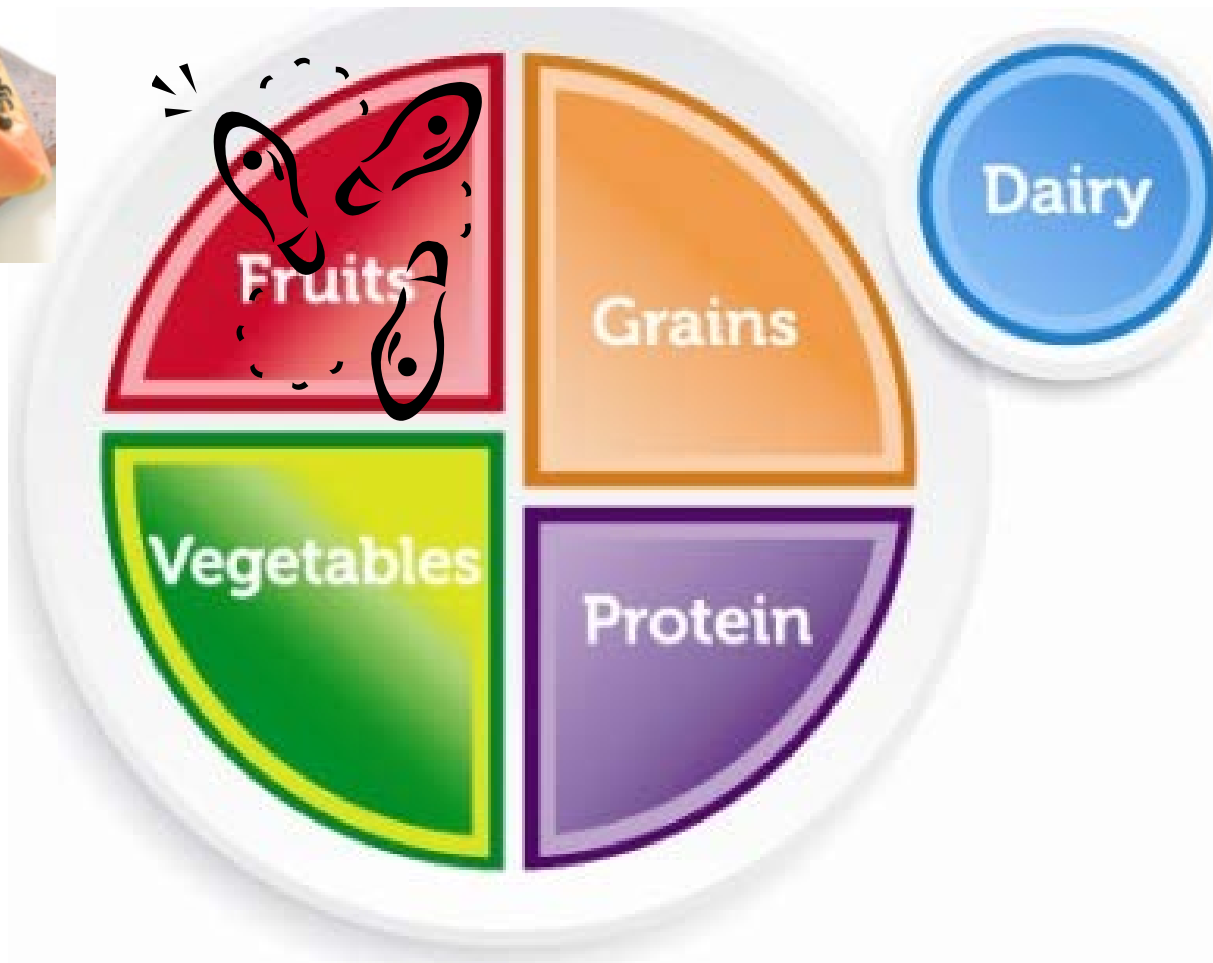




Mexico: **Avocado**

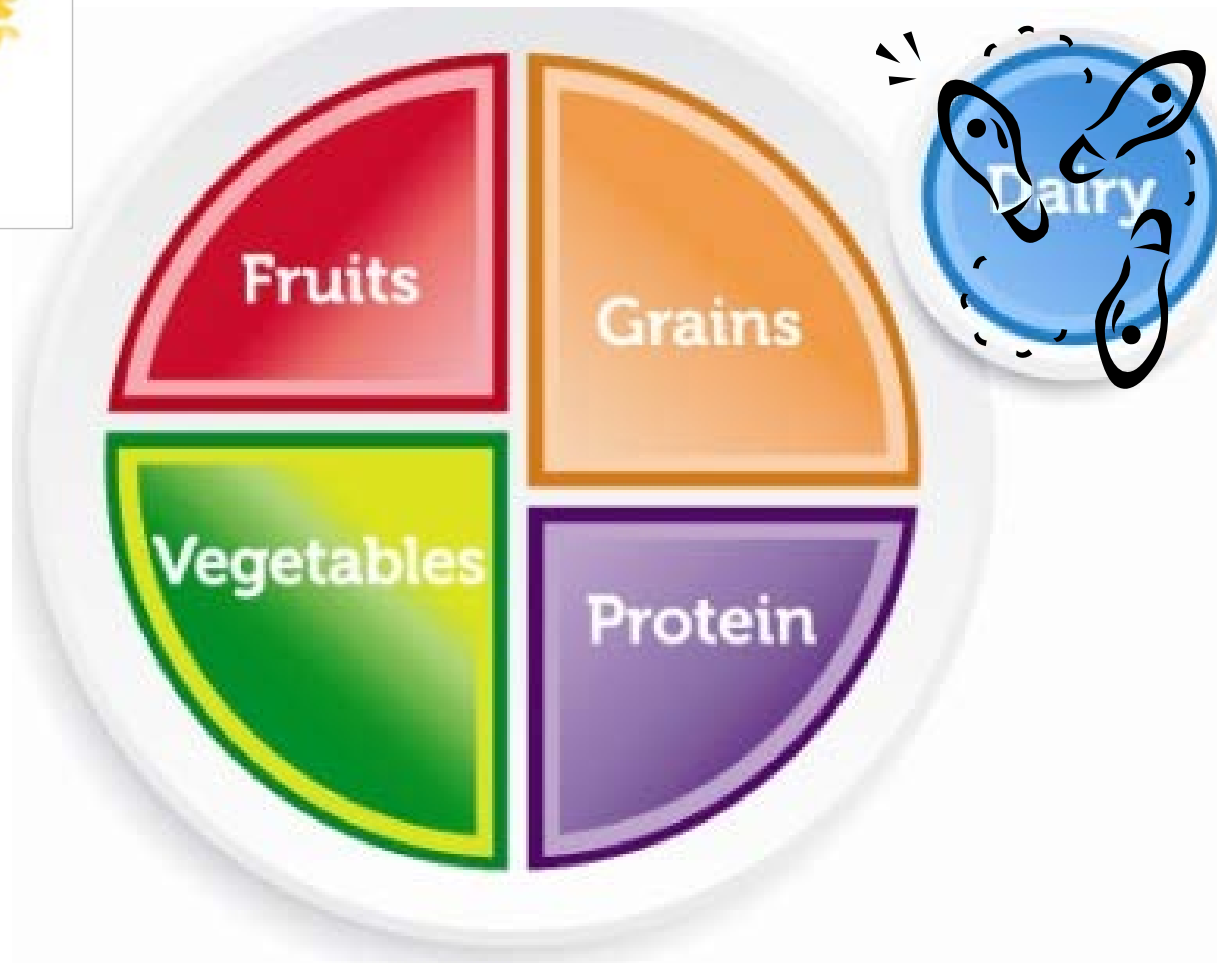


Mexico: **Papaya**



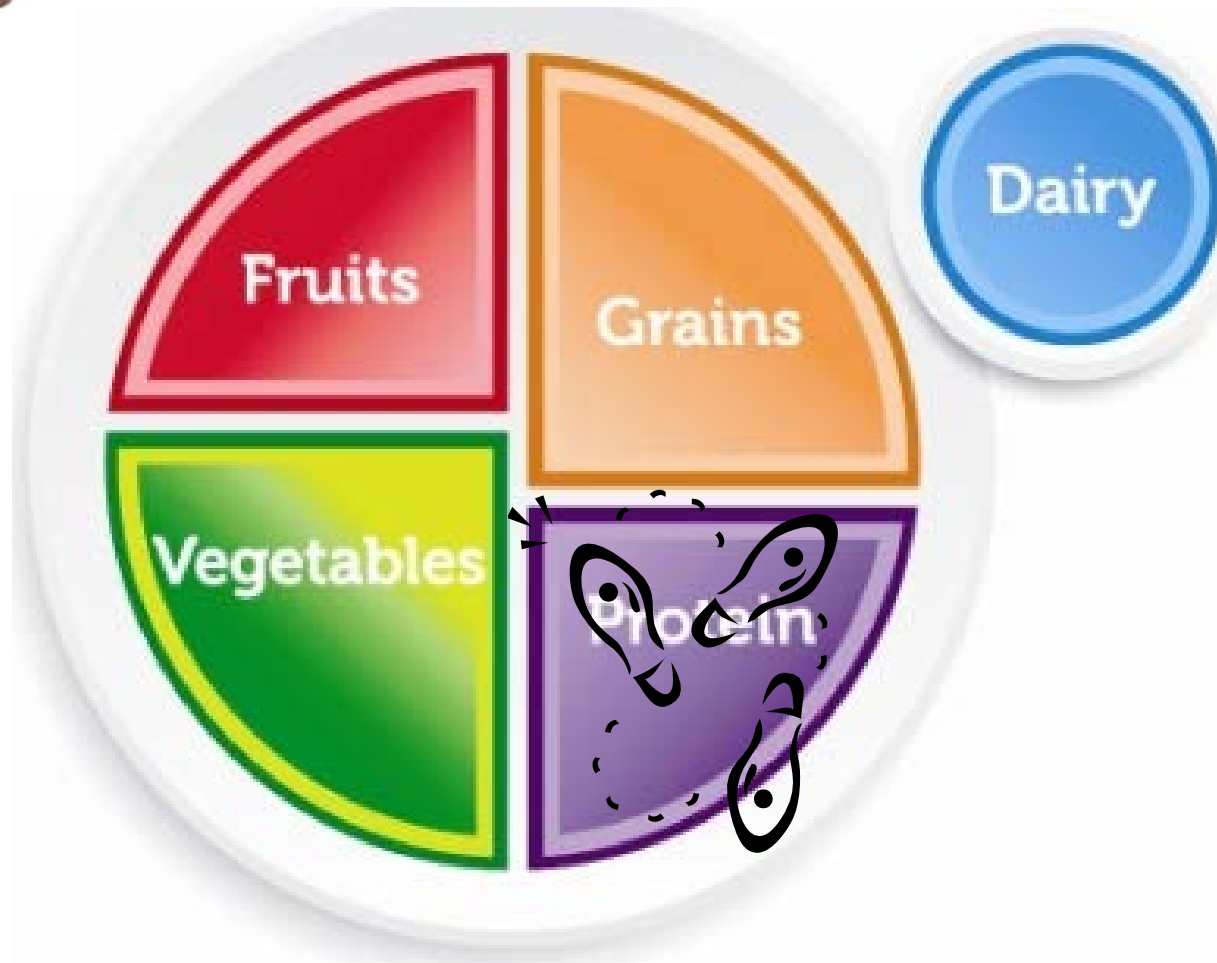


Mexico: Shredded cheese



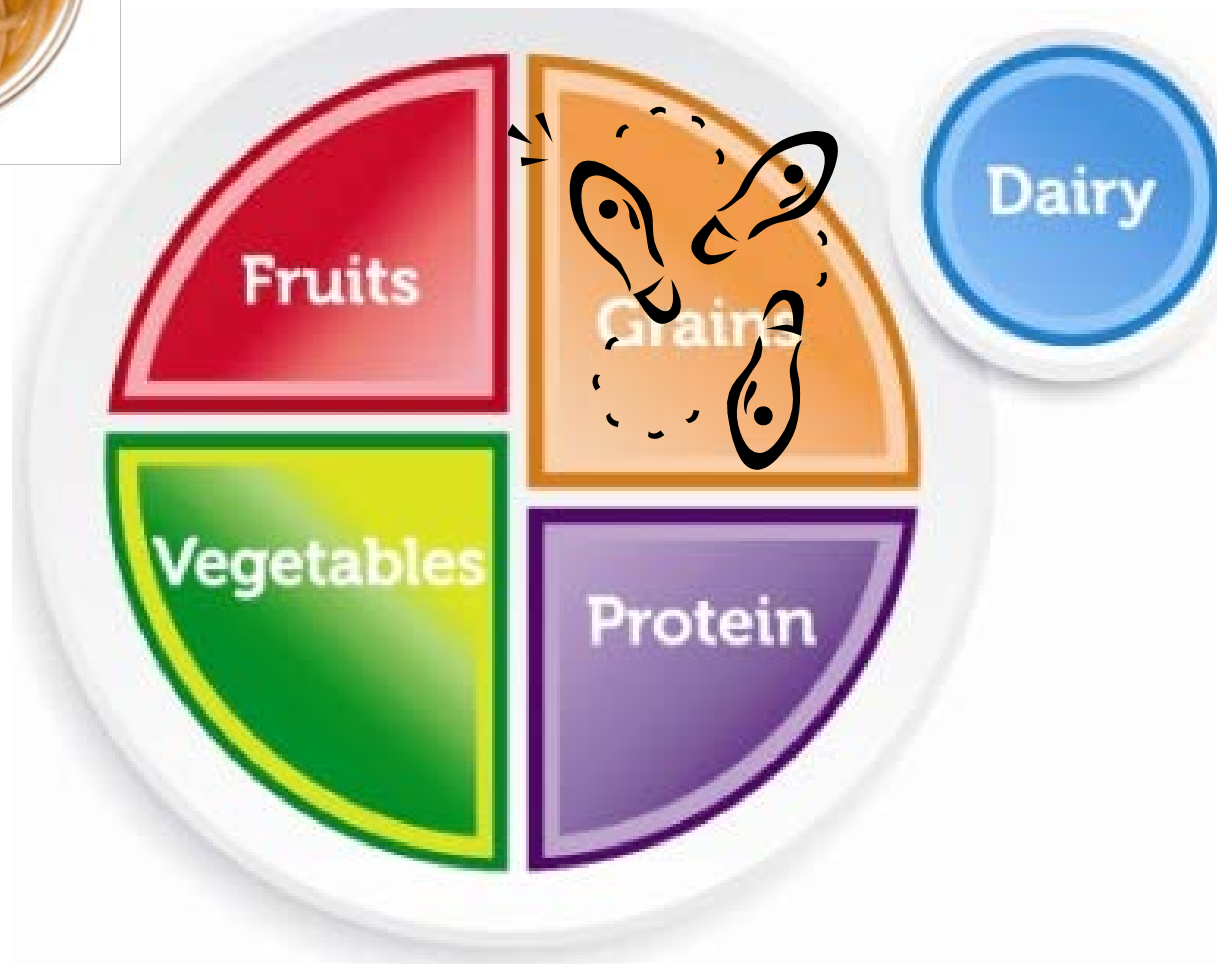


Mexico: Black beans



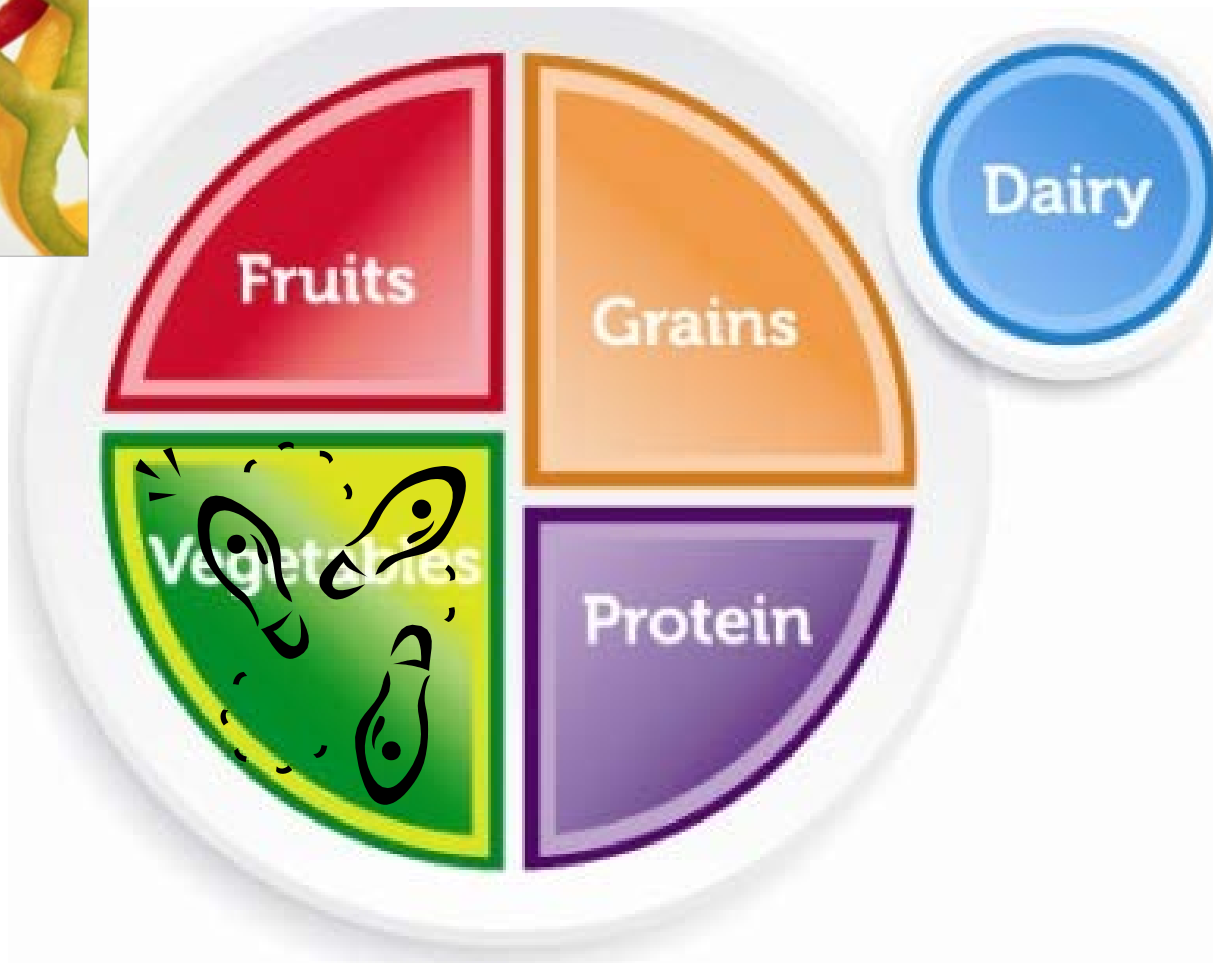


Italy: Whole wheat pasta



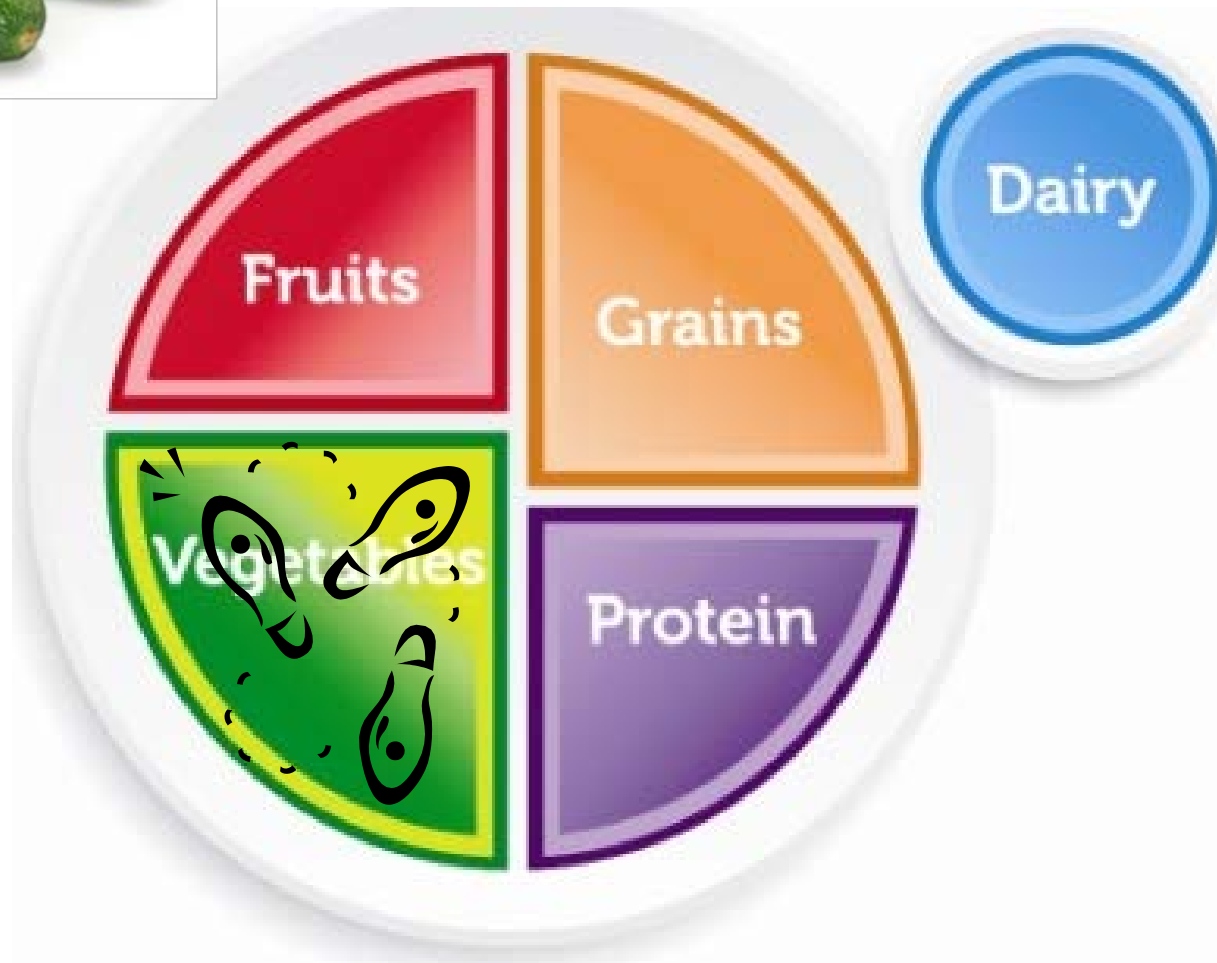


Italy: **Bell peppers**



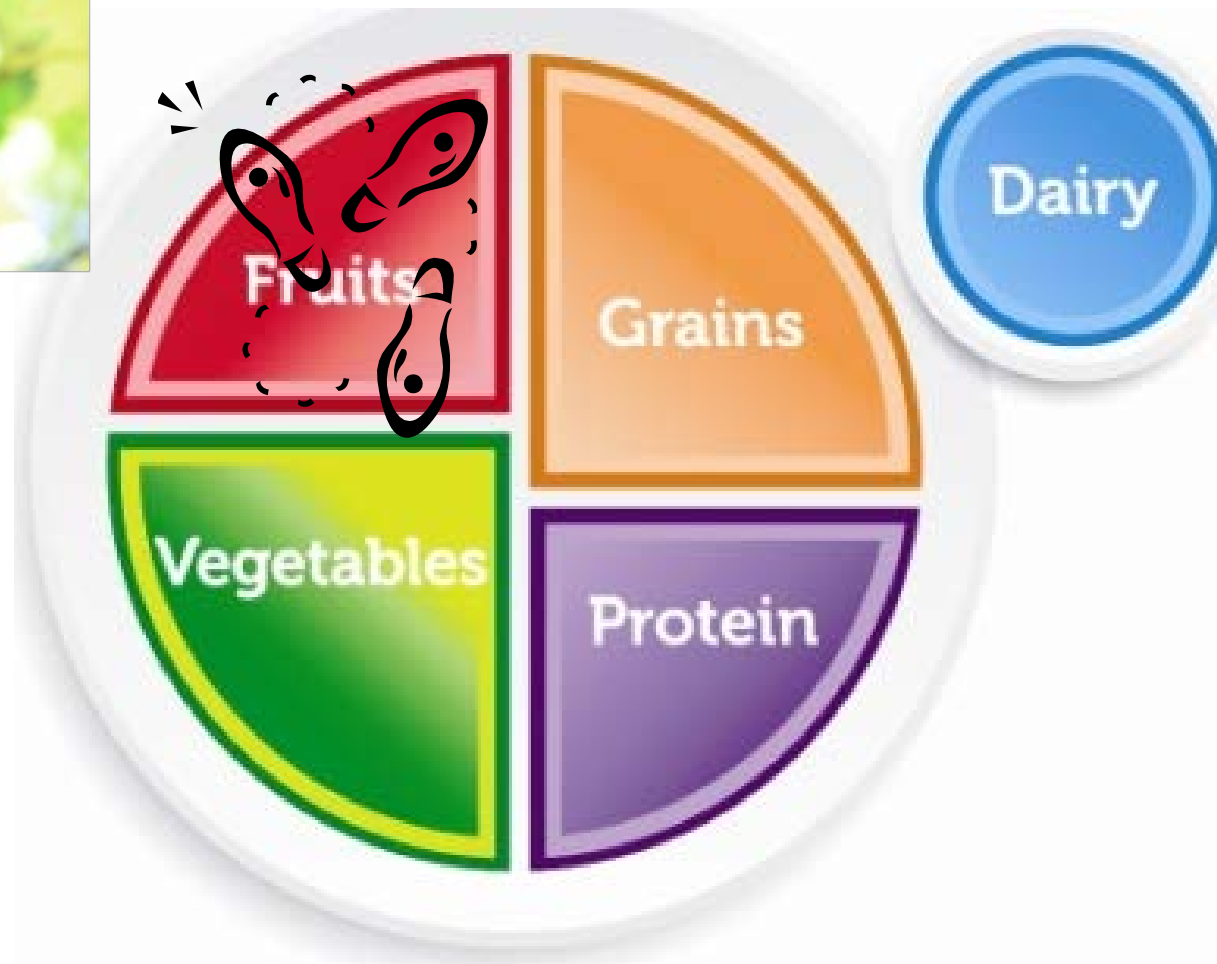


Italy: Zucchini



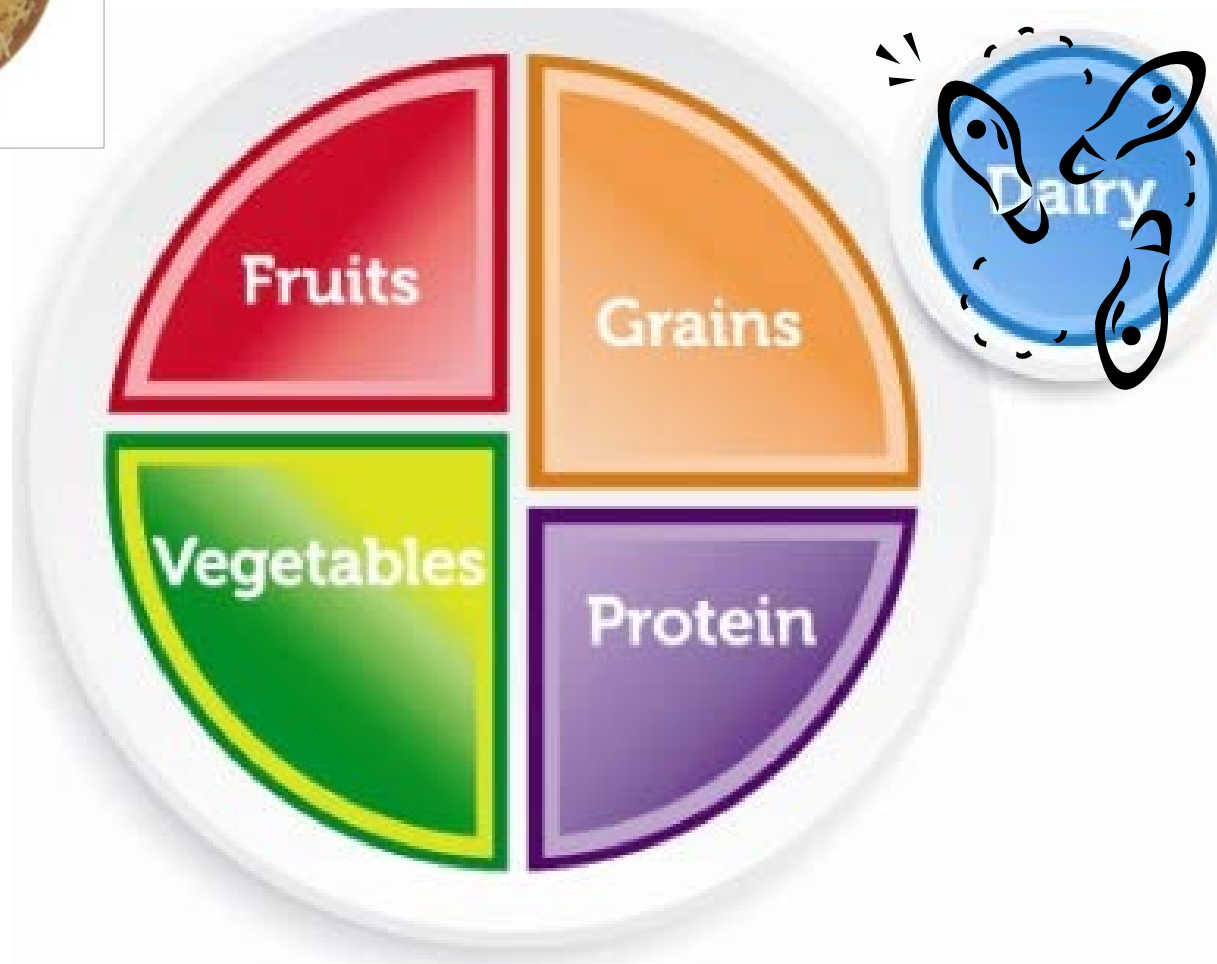


Italy: **Grapes**



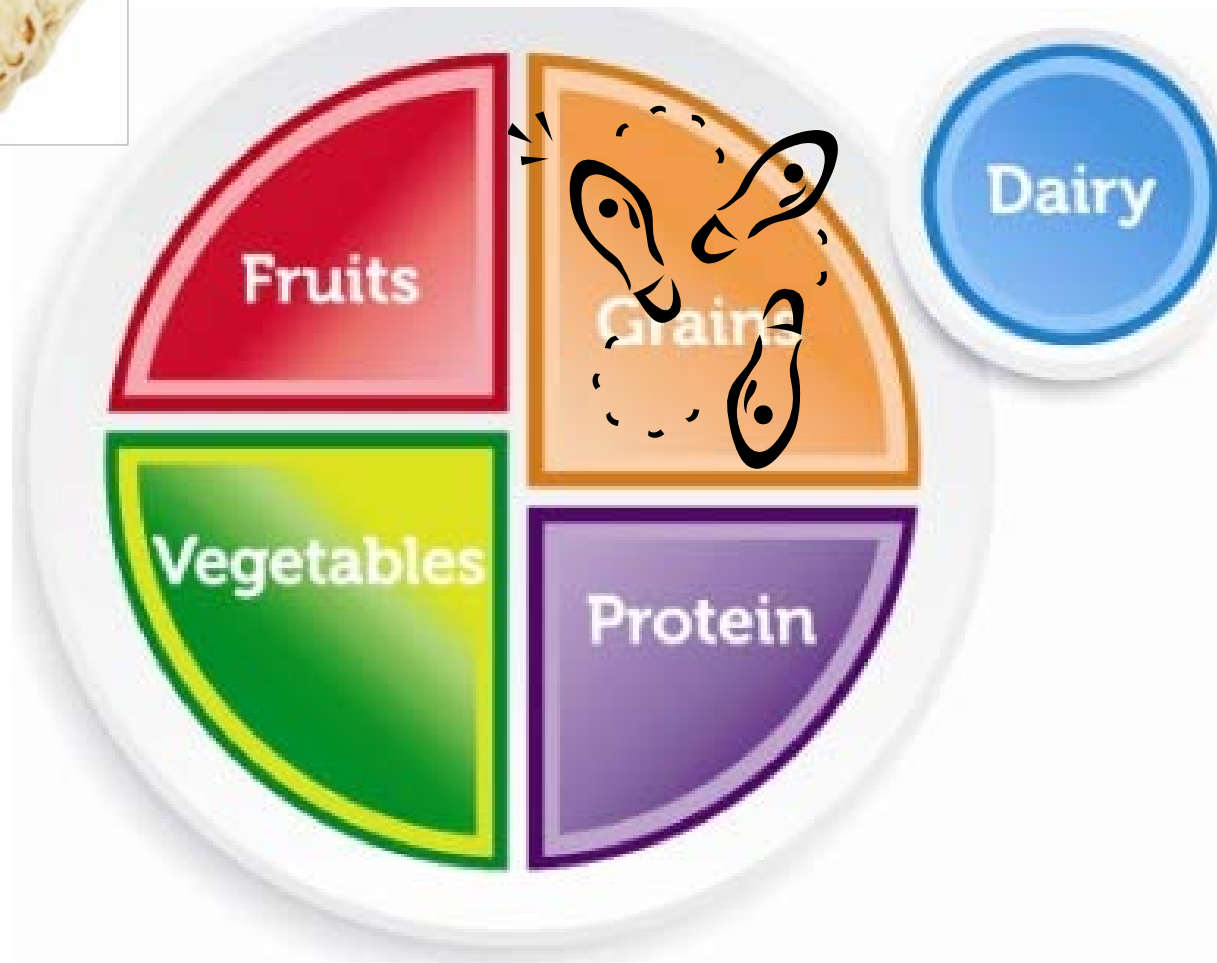


Italy: **Parmesan cheese**



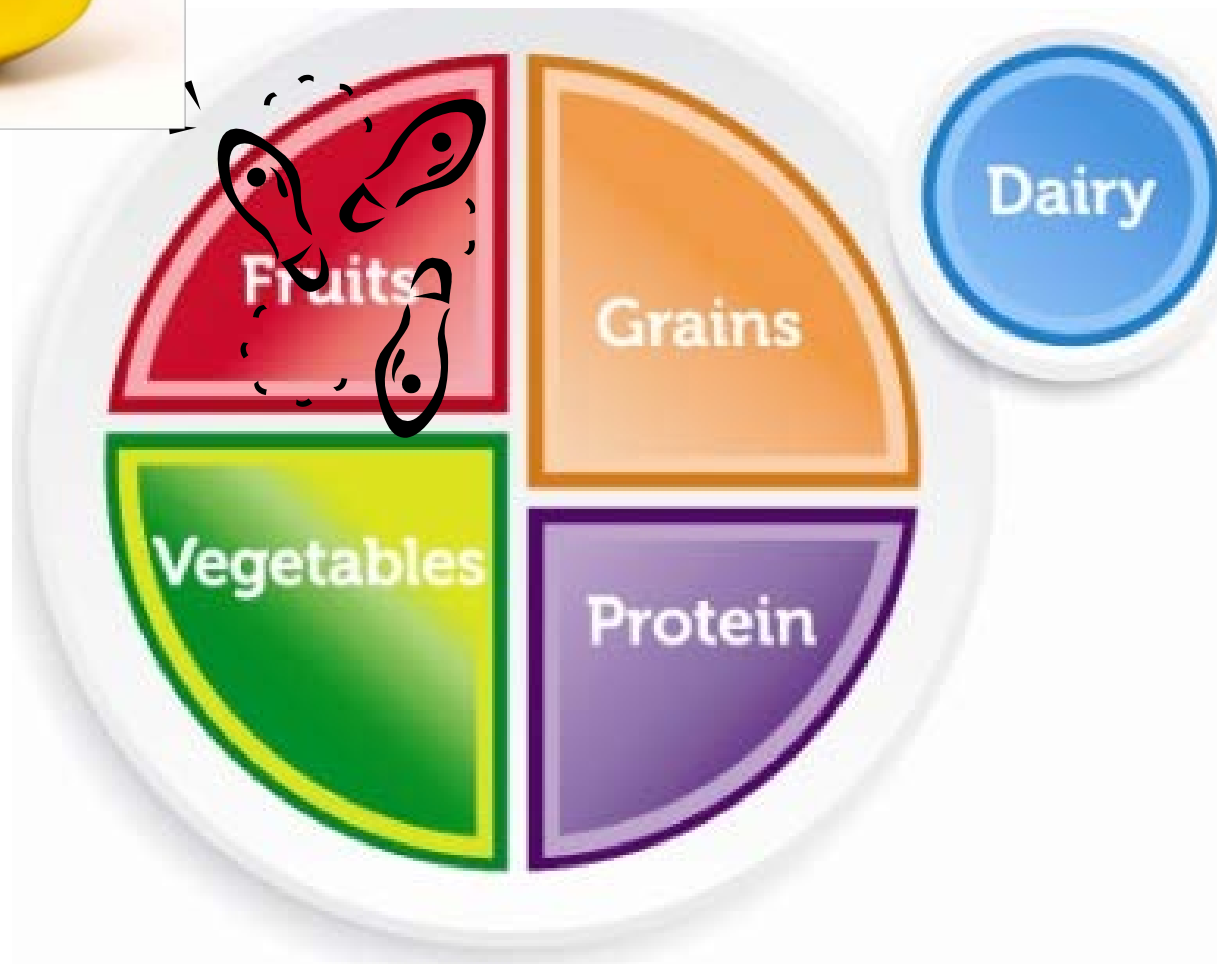


India: Naan bread



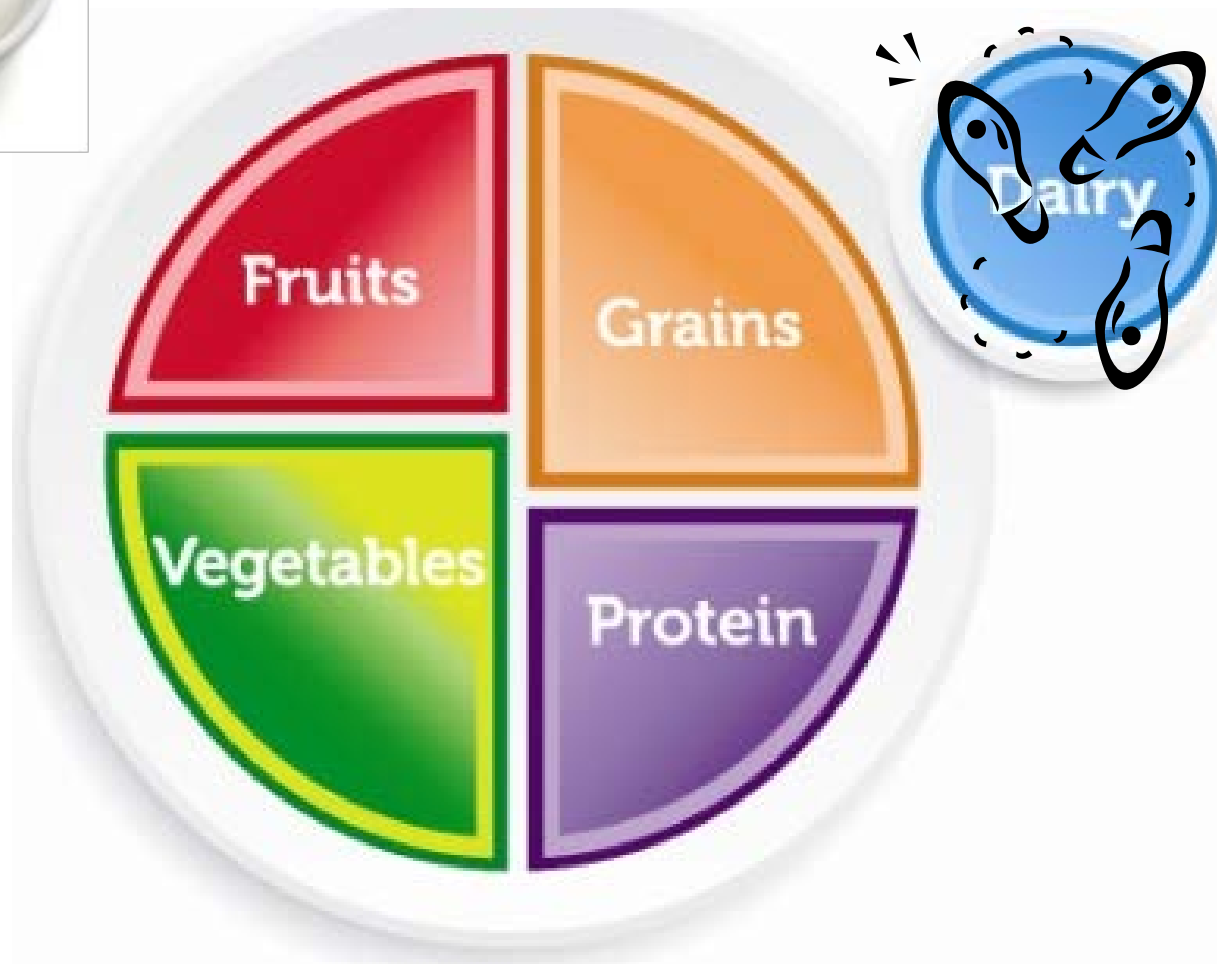


India: **Mango**



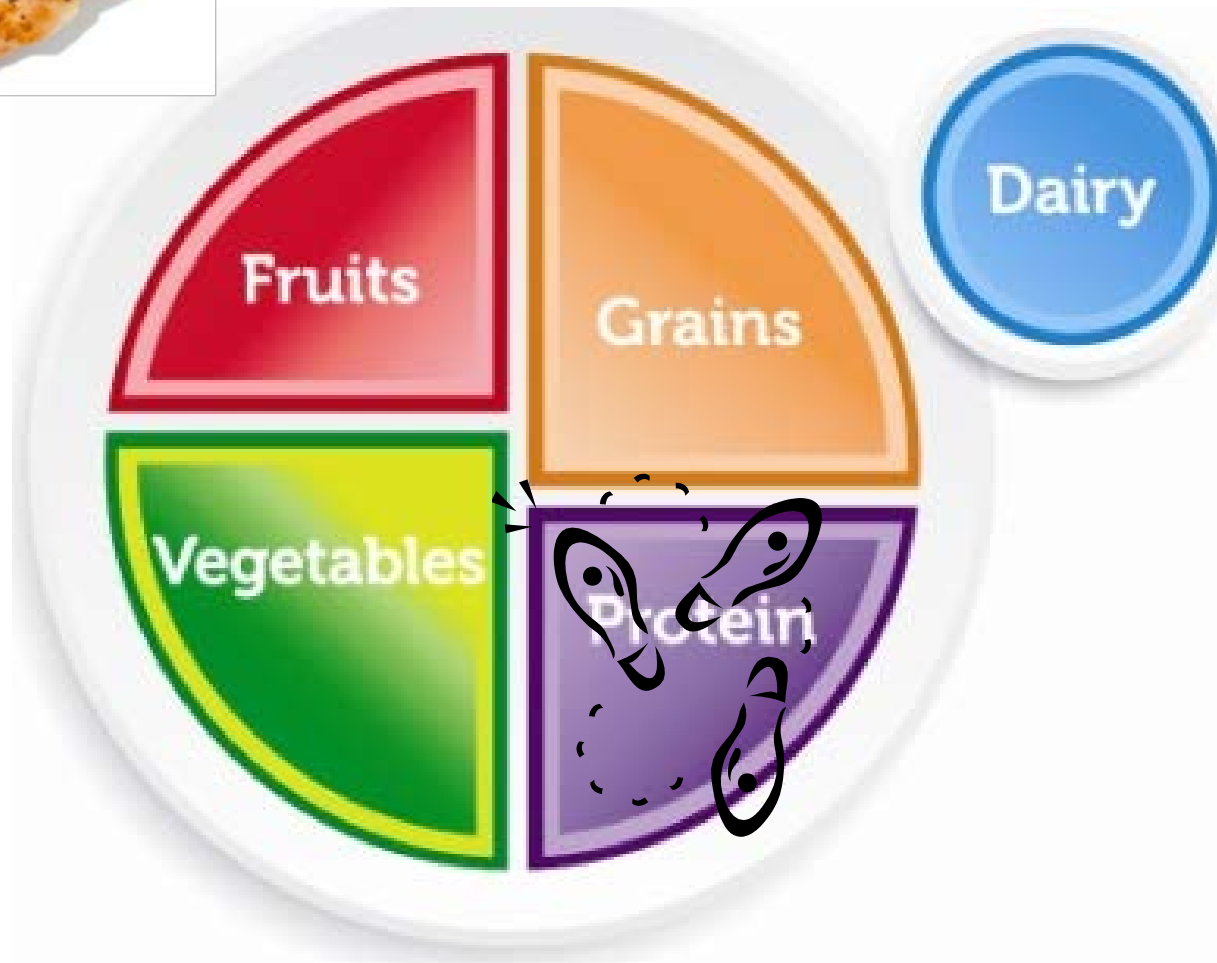


India: Low-fat yogurt



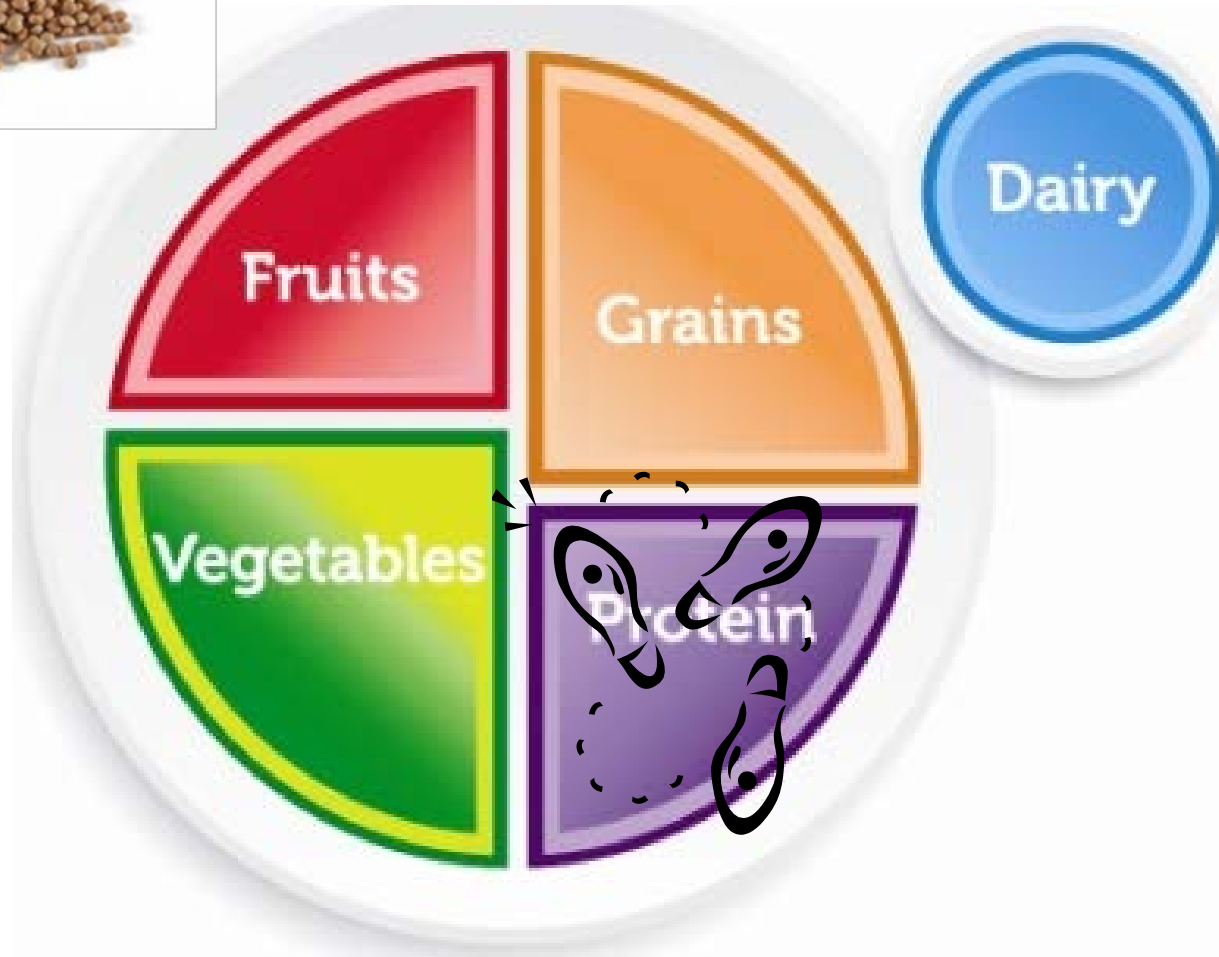


India: Chicken



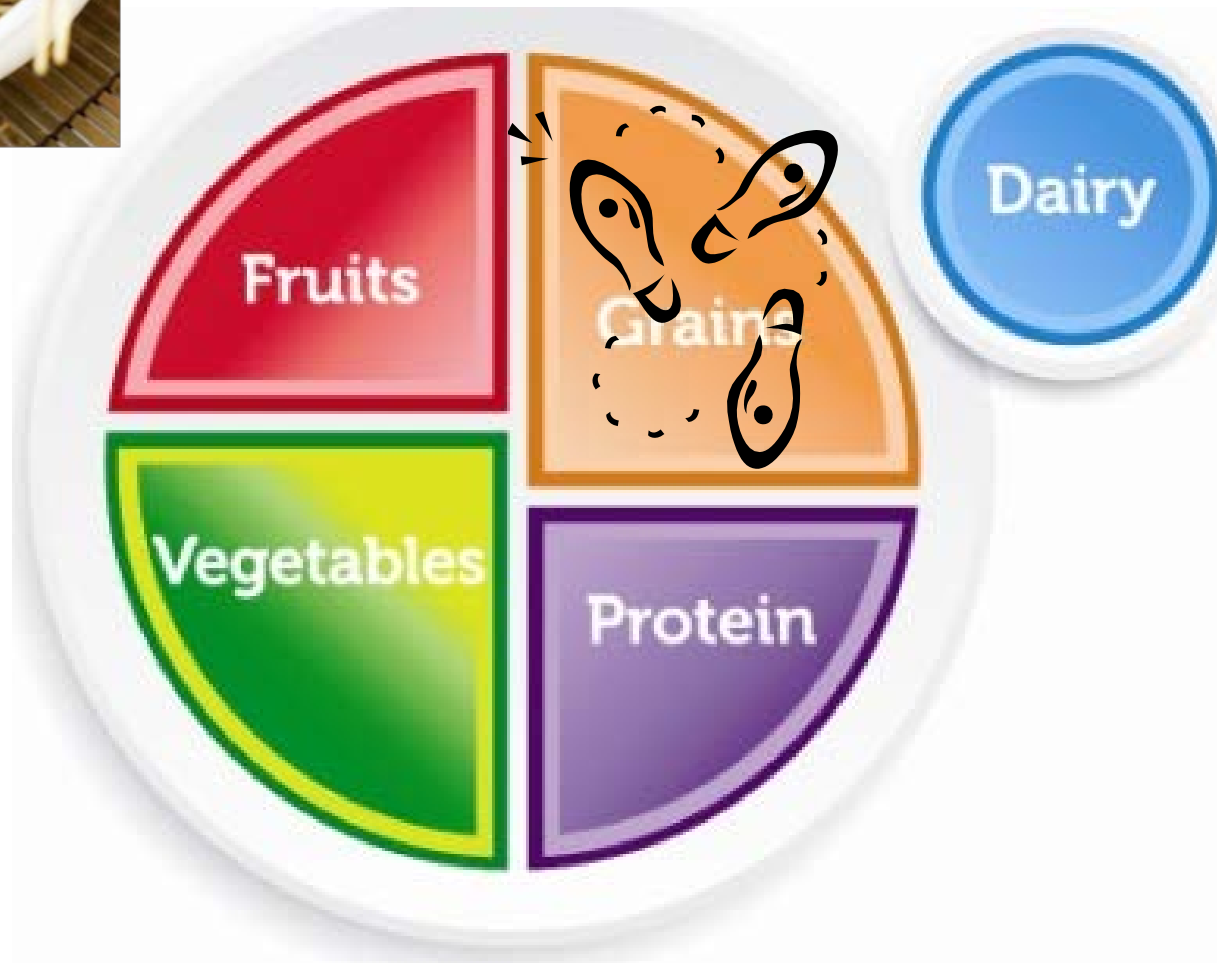


India: Lentils



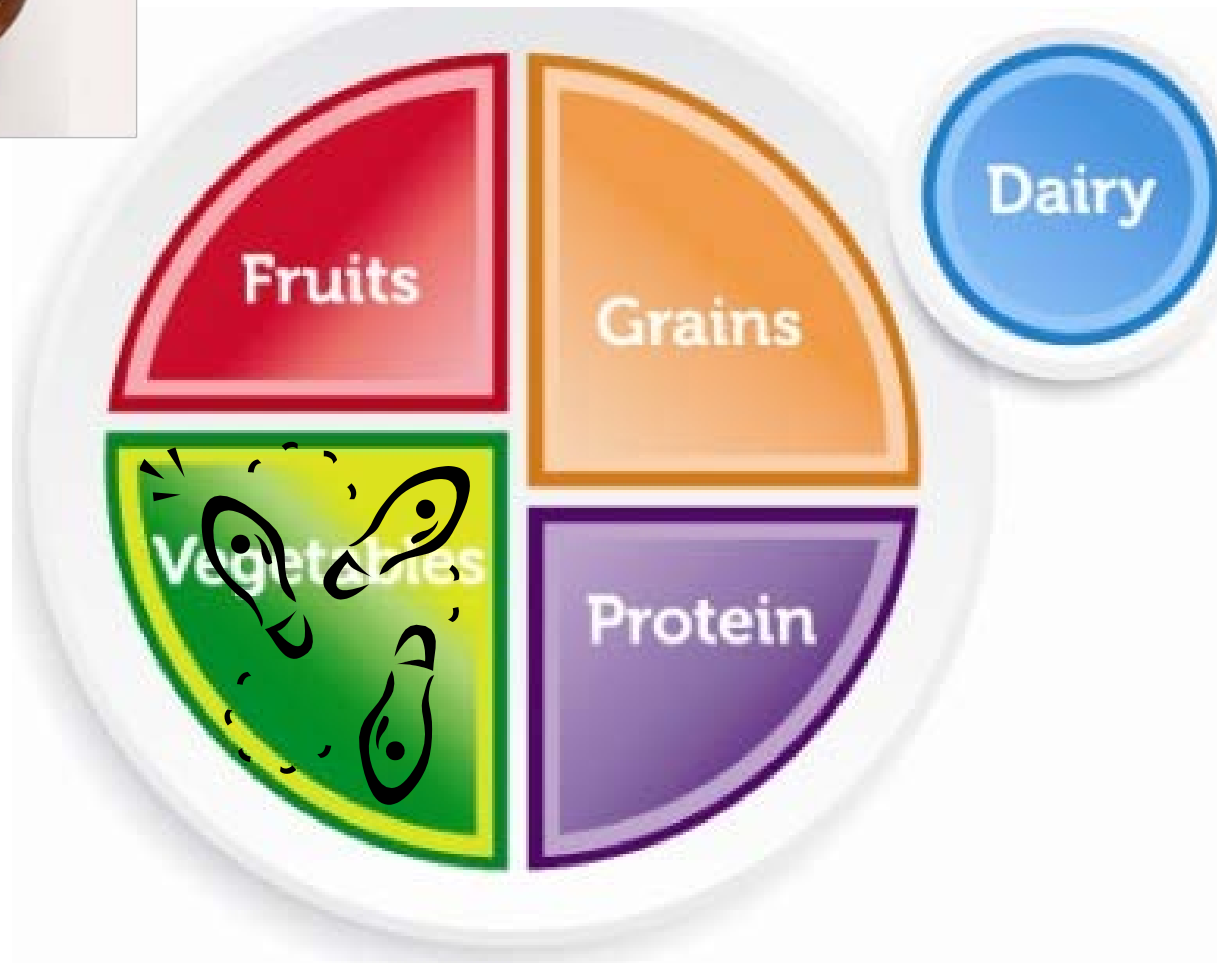


China: Noodles



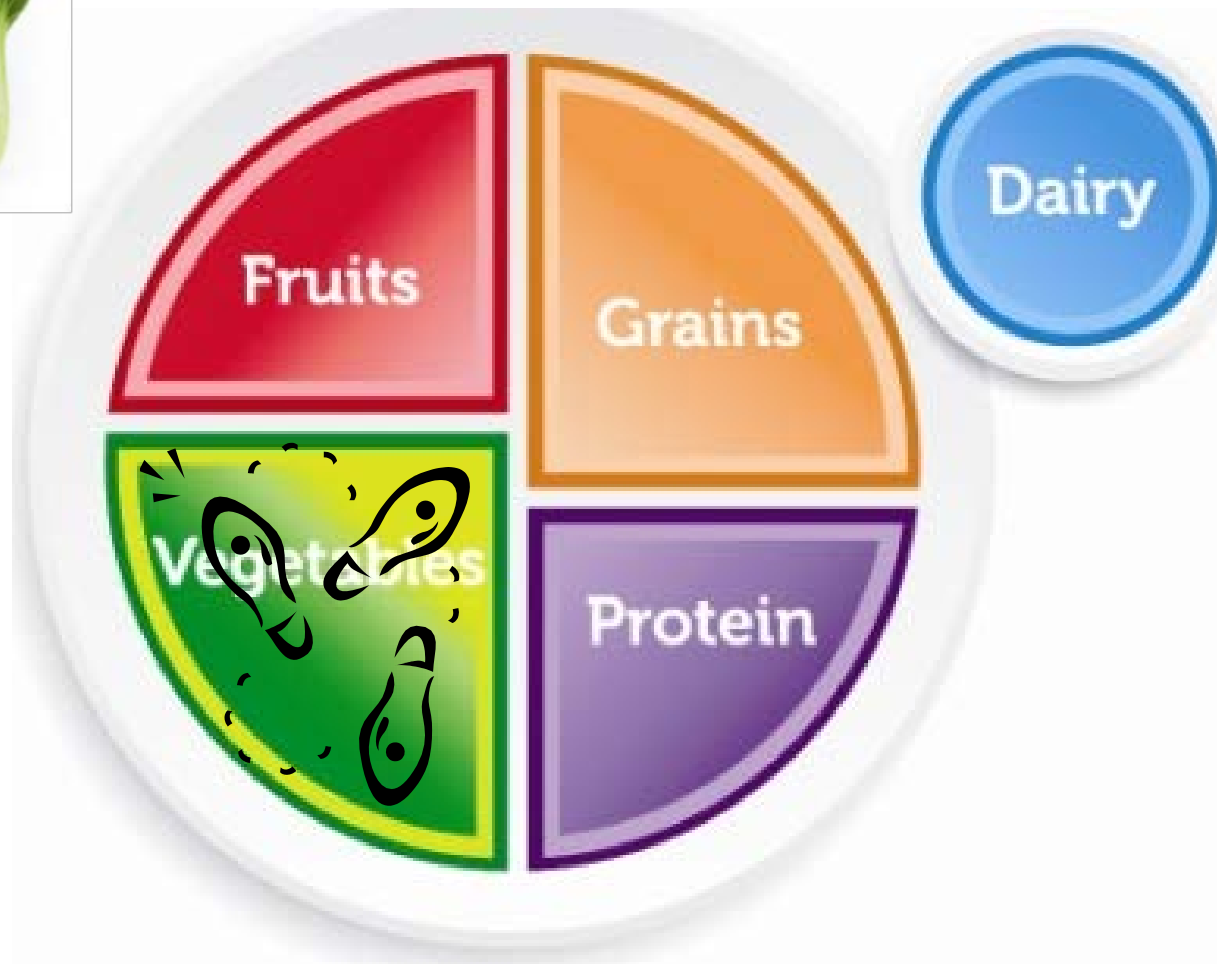


China: **Bean sprouts**



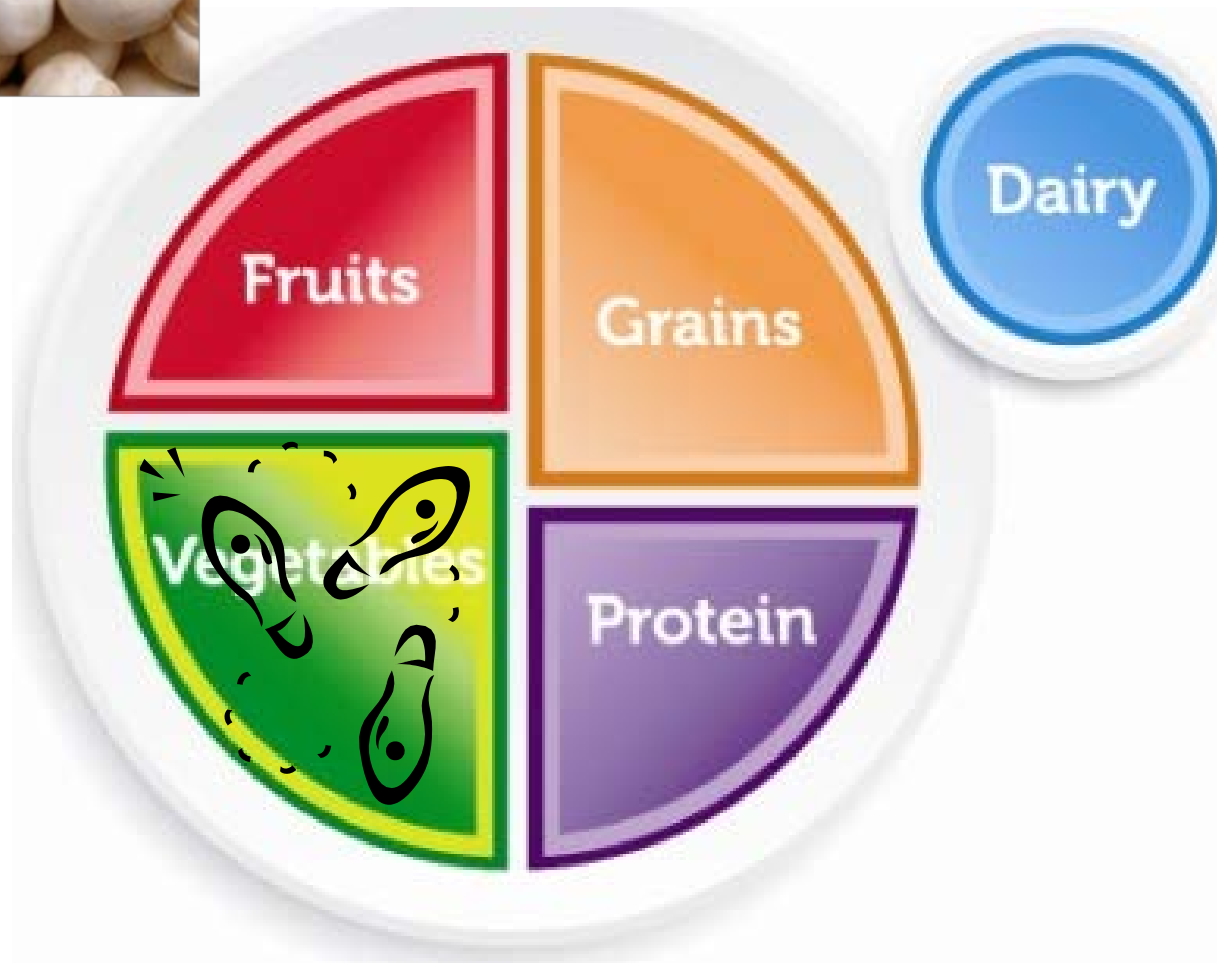


China: Bok choy



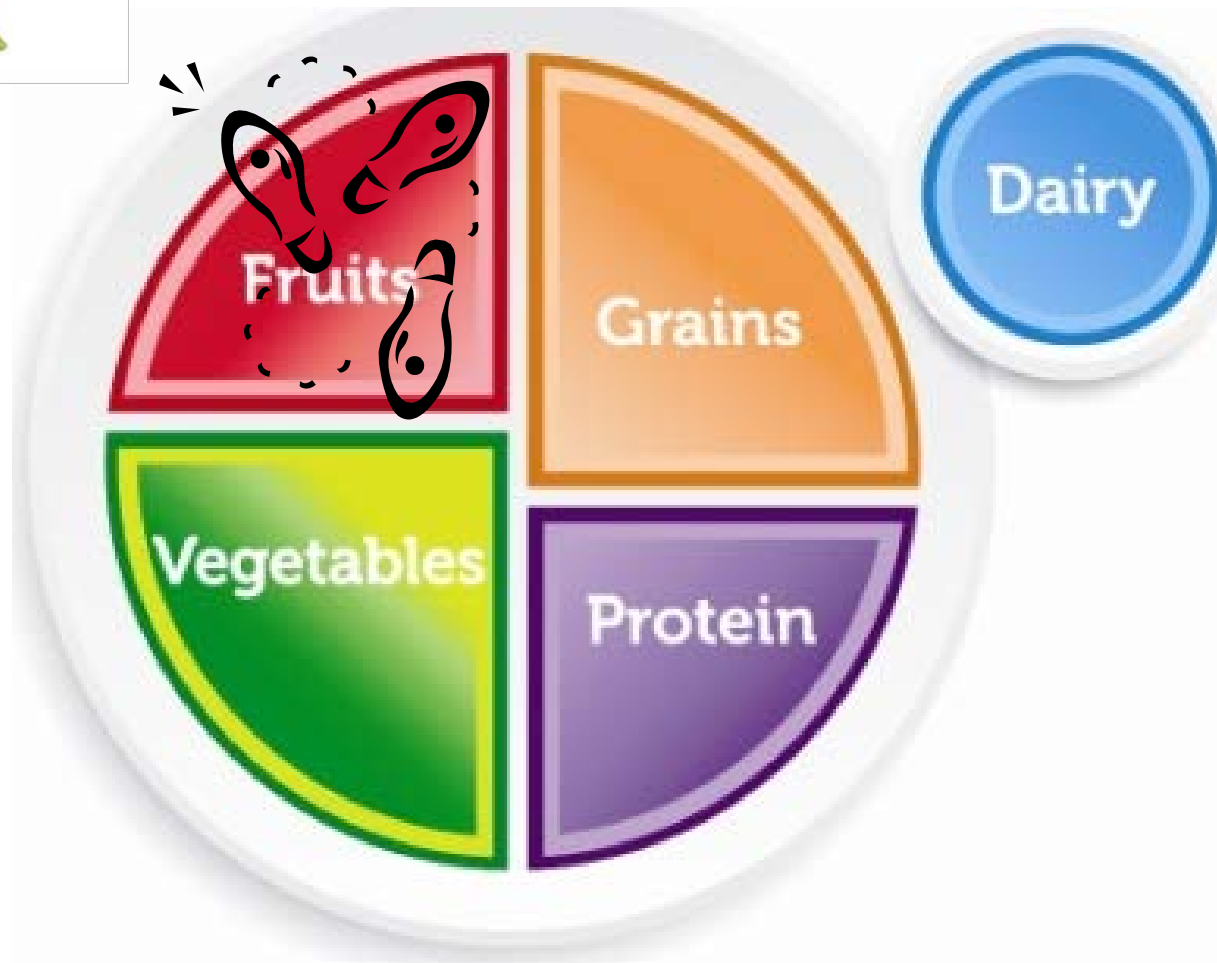


China: **Mushrooms**



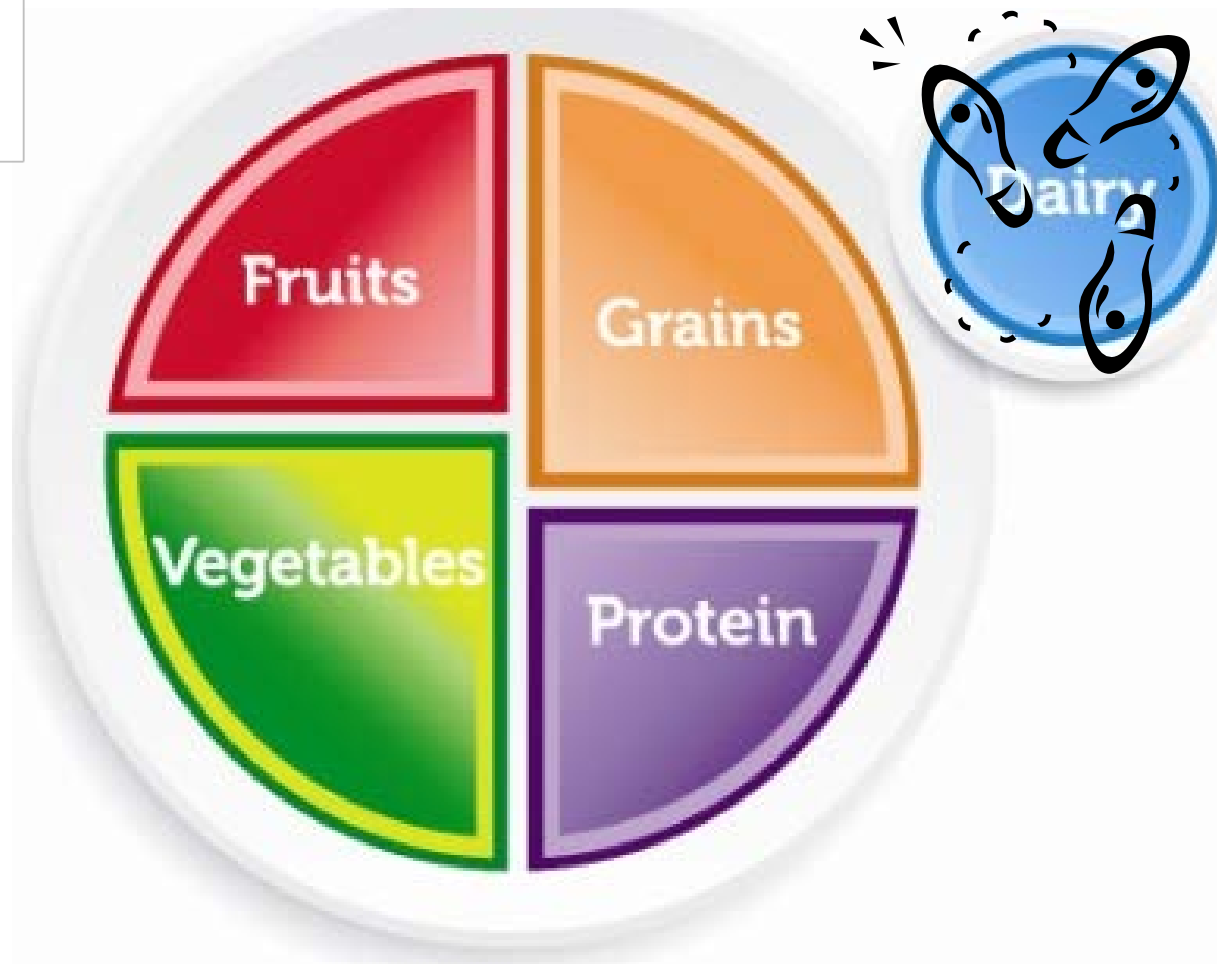


China: **Starfruit**



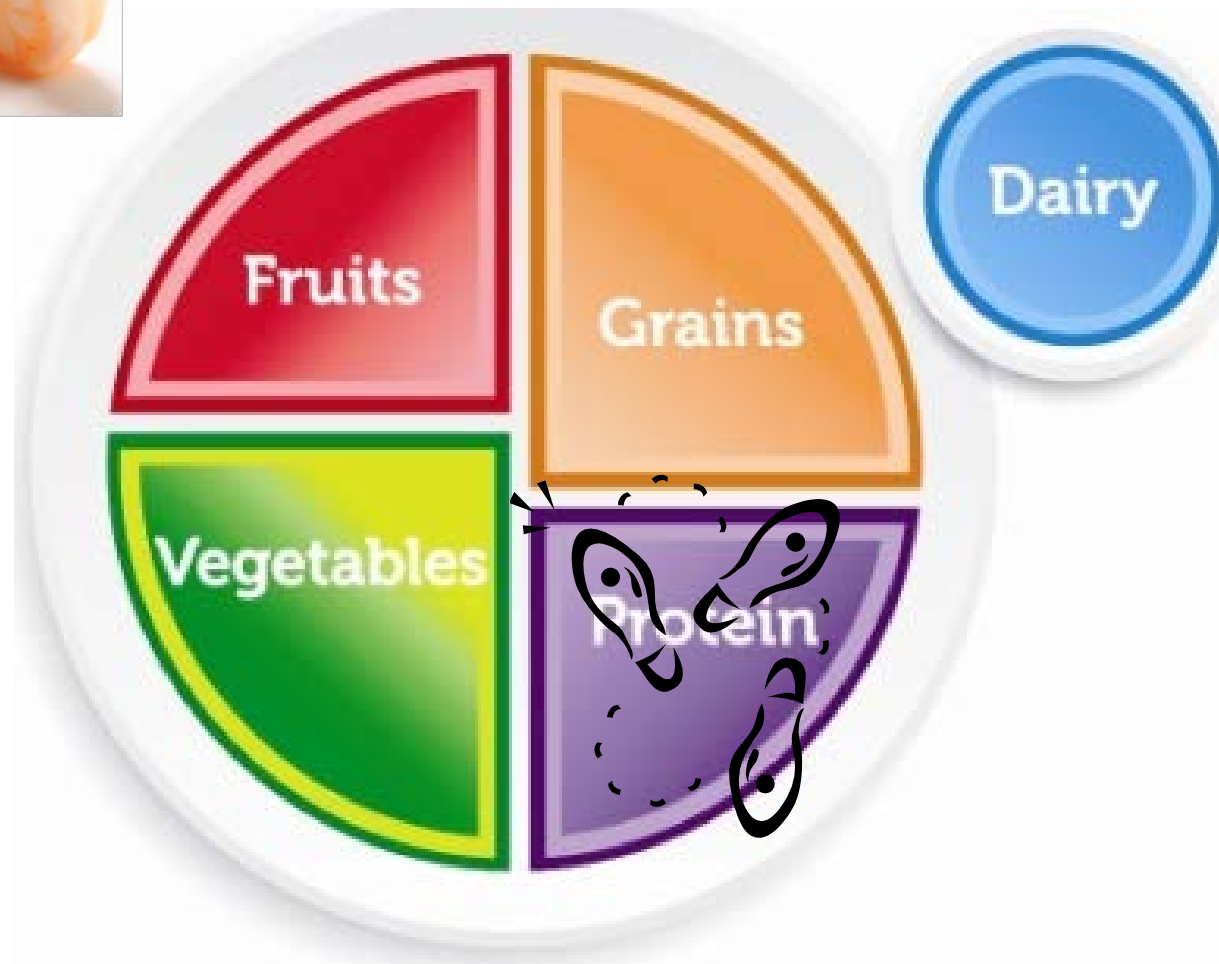


China: **Fortified Soymilk**



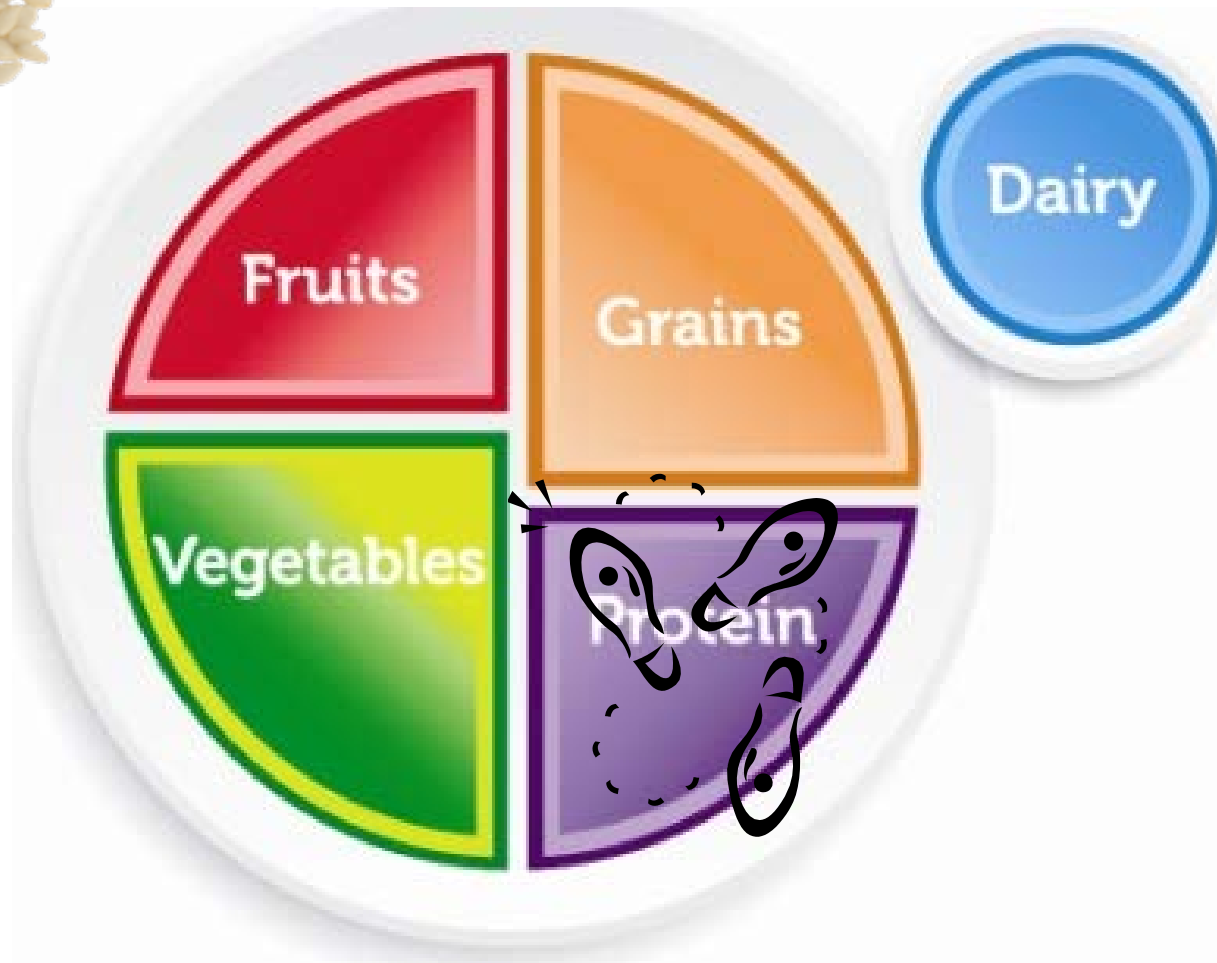


China: Shrimp





China: Sesame seeds



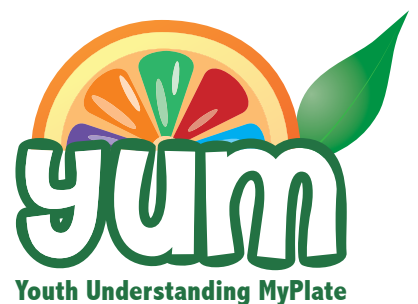
LESSON 2



The Goods on Grains

Concept

Foods from the Grains group should make up a large proportion of the diet. Although whole grains provide most of the nutritional benefits, most children do not get the recommended amounts. This lesson will introduce children to the Grains group with a focus on whole grains and fiber. Children will be encouraged to consume more whole grains as part of a healthy diet.



Background

The Grains group is signified on MyPlate by the color orange. Grains are an important part of a healthy diet and, as indicated by MyPlate, should make up one quarter of the plate. All grains provide important nutrients for the body, but whole grains provide even more of certain nutrients such as fiber, vitamins, and minerals, that keep children and adults healthy. Teaching children the importance of whole grains and how to recognize different types of whole grains can help them to make better food choices that are good for their bodies.

There is a big difference between whole grains and refined grains. Whole grains are grains that have not been processed and have all three parts: the germ, the endosperm, and the bran. The germ is found inside the grain kernel and has lots of nutrients. The endosperm makes up most of the kernel but doesn't have as many nutrients as the germ. The bran is the outside of the kernel and has lots of fiber. Refined grains have been processed to remove the bran and the germ, which makes the grain products softer and more appealing to many consumers, but processing also removes most of the fiber, vitamins, and minerals (1). Since certain vitamins and minerals are lost through the refining process, food companies are required to add thiamin, niacin, riboflavin, and iron back through the process of enrichment (2). Choosing whole grain foods will provide children with these vitamins and minerals as well as the fiber needed to help them stay healthy.

Caregivers can visit www.choosemyplate.gov to get nutrition information for their kids. The amount of grains each child needs will depend on the child's age, sex, and physical activity level. For example, a five-year-old girl who is active for at least 60 minutes a day needs at least five ounces of grains every day. It's important to make sure that half of the recommended amount of grains are whole grains, so this five-year-old girl should get 2 ½ ounces of whole grains every day (3). Examples of whole grains include: whole wheat flour, oatmeal, whole cornmeal, brown rice, barley, and popcorn (2). Sometimes it can be confusing for caregivers to choose whole grain products. One way to determine if a food has whole grains is to look at the ingredients list. If the first ingredient has the word "whole" it likely is mostly whole grain. But if it's the second ingredient then there is no way to tell for sure. The Whole Grains Council has made it easier for families to find whole grain products by labeling different foods with the Whole Grain Stamp (4). There are two kinds of stamps available: the Basic Stamp and the 100% Stamp.



THE BASIC STAMP



THE 100% STAMP

Buying food with either stamp guarantees at least some whole grain is in it, but foods with the 100% Stamp have even more.

Eating whole grains provides many health benefits. The extra fiber helps keep the digestive system working properly and can help lower cholesterol. In fact, studies have shown that people who eat more whole grains have a lower risk of developing heart disease and diabetes than people who do not (5). The extra fiber in the diet also helps people stay full longer, which can help them eat less and manage their weight (5, 6).

In summary, choosing whole grains over refined grains provides children and adults with more fiber, which is important for good health. Although it may seem difficult to find foods that have whole grains, reading the ingredients list and looking for the Whole Grain Stamp can make it easier to choose whole grain products. Making sure children get enough whole grains every day and teaching them to choose whole grain products will help them live a healthier life and maintain a healthier weight.

REFERENCES

1. Whole Grains Council. What is a whole grain? Available at: <http://www.wholegrainscouncil.org/whole-grains-101/what-is-a-whole-grain>. Accessed April 29, 2011.
2. US Department of Agriculture. MyPlate. Grains. Available at: <http://www.choosemyplate.gov/foodgroups/grains.html>. Accessed June 23, 2011.
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1. Whole grains Council. Whole grain stamp. Available at:
<http://www.wholegrainscouncil.org/whole-grain-stamp>.
Accessed April 29, 2011.
2. Slavin J. Whole grains and human health. *Nutr Res Rev*. 2004;17:99-110.
3. Liu S, Willett WC, Manson JE, Hu FB, Rosner B, Colditz G. Relation between changes in intakes of dietary fiber and grain products and changes in weight and development of obesity among middle-aged women. *Am J Clin Nutr*. 2003;78:920-927.

3rd Grade Lesson

LEARNING OBJECTIVE

The students will:

- find and read the amount of dietary fiber printed on the Nutrition Facts panel of foods from the Grains group.
- distinguish whole grains from refined grains by looking at the ingredients list from a package of food from the Grains group.
- explain why fiber is necessary for good health.

BEHAVIORAL OBJECTIVE

- The students will make half of their grains whole grains every day.

FLORIDA STANDARDS

MATHEMATICS

MACC.3.NBT.1.2: The student will fluently add and subtract within 1000 using strategies and algorithms based on place value, properties of operations, and/or the relationship between addition and subtraction.

PHYSICAL EDUCATION

PE.3.L.2.7: The student will engage in appropriate physical activity that results in the development of cardiorespiratory endurance.

PE.3.L.2.12: The student will read food labels for specific nutrition facts.

PE.3.R.1.1: The student will work cooperatively with peers of differing skills.

PE.3.R.1.4: The student will cooperate with all class members by sharing & taking turns.

PE.3.R.2.3: The student will choose to participate in group physical activities.



Learning Activity: Grain Exploration

MATERIALS

- MyPlate poster
- Picture of a whole grain kernel/seed and labels for each part of the kernel (bran, germ, endosperm), template provided
- Pictures of body parts (stomach, intestines, heart), templates provided
- Sticky Tack
- 1, 22" x 28" white poster board
- 18 food packages (9 should have 2 or more grams of fiber per serving and the first ingredient listed should be a whole grain; 9 should have less than 2 grams of fiber per serving and the first ingredient listed should not be a whole grain)*Suggestions for food packages in Note to Educator.*
- Whole Grain Nutrition Facts poster, template provided; enlarge to 11" x 14"
- Refined Grain Nutrition Facts poster, provided; enlarge to 11" x 14"
- Add Up Your Fiber worksheets (1 per group of 6 students), provided
- Pencils, one per student

NOTE TO EDUCATOR

You can use empty packages collected over time, but it is preferable to use unopened packages so the students can see what the foods look like.


REFINED GRAINS	WHOLE GRAINS
White Rice ($\leq 2g$ fiber)	Wild or brown rice ($\geq 2g$ fiber)
Refined bread products (sliced bread, English muffin, tortilla, pita etc.)	100% Whole wheat bread products
Refined grain cereal	100% Whole grain cereal
Refined pasta	100% Whole wheat pasta
Refined chips	Popcorn
Refined crackers	100% Whole grain Crackers
	Oatmeal

PRIOR TO ACTIVITY

Print, cut out, and laminate the picture of the whole grain kernel, the names of the parts of a whole grain (bran, germ and endosperm) and the pictures of the stomach, intestines and heart. These materials will be used to make the "Grains Review" poster. Start by writing the words, "The Grains Review". Attach Sticky Tack to each laminated picture using the recommended poster layout that follows the "Activity Introduction" below. Enlarge the Whole Grain Nutrition Facts and the Refined Grains Nutrition Facts posters to 11" X 14. Attach the MyPlate poster, "The Grains Review" poster, and the Whole Grain Nutrition Facts and the Refined Grains Nutrition Facts posters to the board using Sticky Tack or magnets.

ACTIVITY INTRODUCTION

Can anyone tell me the color of the Grains group on MyPlate? Point to MyPlate poster. That's right. The Grains group is orange! Point to Grains group on MyPlate poster. We can divide grains into two main types based on the layers of layers of the seed kernel that are present or have been removed. Who can tell me what we call these two main type of grains? Whole grains and refined grains. Whole grains are different from refined grains, and we are going to learn how they are different. This is a grain kernel or seed. Point to picture of the grain kernel/seed on the board. Can you repeat the parts of the seed with me? Point to the bran and place the bran label next to it. The bran, (allow students to repeat the word; point to the germ and place the germ label next to it); the germ, (allow students to repeat and point to the endosperm and place the endosperm label next to it); and the endosperm. Whole grain foods contain ALL three parts of the kernel or seed. Remove the labels from the parts. Now you name them! Who can tell me one name of one of the parts? Call on students with their hands raised. Yes, that's right, the bran! Which part is the bran? Who can come up and show us? Call on a student to show the



location of the bran. Put the label back on the poster. *Repeat this strategy for each part of the kernel/seed. Who can name another part? Yes, the germ! Who would like to show us which part is the germ? Call on a student to show the location of the bran. Now what is the name of the last part of the grain? Yes, the endosperm.* Put the label back on the poster. *Those are the three parts of the grain kernel or seed! Some examples of whole grains are whole wheat bread, brown rice, and popcorn. Some of the grain foods that we eat are made from grains that have had the bran and germ removed.* Point to the bran and the germ on the poster. *When these parts are removed, the grain is called a refined grain. Can you say that with me? "Refined grains." Refined grains have less fiber than whole grains because refined grains don't contain bran. Why? Because when we make refined grains, the bran is removed along with the germ. The germ has most of the vitamins and minerals, but foods made with refined grains have some vitamins and minerals added back to them. Some examples of refined grains are white bread and white rice. Does anyone remember which one of these two types of grains you should eat more of to promote good health? That's right, whole grains! Now who remembers what whole grains have that's important for keeping your body healthy? Call on a student with their hand raised. Yes, Fiber! Fiber helps keep your body healthy! You should make at least half of the grains you eat each day whole grains to make sure you are getting enough fiber! .*

Let's review why we need fiber for good health. Eating fiber slows down how fast food moves from your stomach into your intestines. Place picture of the stomach on right side of the poster board. *This is a good thing because it helps keep you feeling full so you don't get hungry again right after you eat! Fiber also helps keep your intestines working properly.* Place the picture of intestines underneath the stomach picture. *It also works in your body to help keep your heart (place picture of heart underneath the intestines picture) healthy!*


Now that you know why whole grains are important for good health, we are going to talk about how to find whole grain foods at the grocery store. Has anyone ever seen anything like this on the side of a box or bag of food? Point to the Nutrition Facts panel posters on the board. *Does anyone know what these are called? These are called Nutrition Facts Labels! Can we all say that together? "Nutrition – Facts – Labels." These labels are on ALL packaged foods made in the US, and they list the amount of nutrients and fiber in one serving of a food. The food label also lists the names of all of the ingredients in a food.* Distribute the packages of food or the empty boxes/bags of food that you collected for this class. Ideally, there should be a package for each student. Half of the students should have a whole grain package and half of the students should have a refined grain package. *I want everyone to point to the Nutrition Facts Label on your food package. Go ahead and show your neighbor where the Nutrition Facts Label is located on your package of food. Today we are going to learn how to read the Nutrition Facts Label. Let's start at the top! The first thing to look at is, "Serving Size".* Point to where it says serving size on the Nutrition Facts poster. *The amount of fiber and nutrients listed on the Nutrition Facts label is the amount contained in one serving of the food. Look for the spot on your Nutrition Facts label that says, "serving size". Serving sizes can be measured in different ways. Some of you may see the word cups or the letter "g" for grams, but what is important is to know that ALL of the information on the food label about nutrients (point to everything on the label below serving size) is for one serving of your food, and your package of food may have MANY servings! For example, this label (point to serving size on whole grain bread example label) says that each serving is 1 slice and that there are 15 servings in the ENTIRE package.* Ask one or two students to state the serving size and



number of servings in the package of food that they have in front of them. *There are A LOT of different parts on a food label, but today I want to focus on the parts that are most important to look at when choosing grains. Does anyone see where it says "Dietary Fiber?" Point to "fiber" on the Whole Grain Nutrition Facts poster. Let's say that together. "Dietary – Fiber." This is where you find out how much fiber is in 1 serving of your food. Once you've found it, make sure your neighbor has found the amount of dietary fiber on their package too, and then raise your hand.* Wait for the students to locate dietary fiber on their food labels. Walk around the room and help if needed. *The number next to the word fiber on the food label (point to the grams of fiber) tells us how much fiber is in one serving. The small letter "g" stands for grams. This is how the amount of fiber is measured. Let's review. Do we want to have MORE or LESS fiber when we choose our grain foods? Yes! That's right, MORE fiber. Which type of grains has the most fiber? Yes, whole grains! When comparing different grain foods, we want to look for grains with more grams of fiber. Who tell me the number of grams of fiber in one serving of your food? Raise your hand. Call on a student. Great! You guys are doing a great job! Almost all food packages also have an ingredients list! Let's say it together. "Ingredients list." The ingredients list on your food package will look similar to this. Point to the ingredients list one of the Nutrition Facts posters). It may be underneath or next to the Nutrition Facts Label. Can everyone find and point to the ingredients list on their package? Wait for students to locate the ingredients list. The ingredients list shows us everything that was used to make the food! The first item on the list is the ingredient that is used the most and the last item on the list is the ingredient that is used the least. You may notice there are a lot of big unfamiliar words on your list, but when it comes to choosing healthy grains, we want to focus on the FIRST ingredient. Point to first ingredient on the ingredients list. Can everyone point to the first ingredient on their ingredients list? Great! Point to first ingredient on the whole grain food label poster ingredients list. How can we use the ingredients list to tell the difference between grains that are whole grains and grains that are refined grains? For some types of grains, if you see the words "whole grain" or "whole wheat" listed as the first ingredient, you will know that it is made with a whole grain. If a food made from wheat doesn't list the words "whole grain" or "whole wheat" as the first ingredient, it is not a whole grain food. Let's look at the posters on the board. Point to Whole Grain Nutrition Facts poster. The first ingredient listed for this food is, "whole wheat flour." Because the first ingredient lists the words "whole wheat", we know it is made the whole grain – the bran, the germ and the endosperm.. Point to the Refined Grain Nutrition Facts poster. The first ingredient on this label is, "unbleached enriched wheat flour." This can be tricky, but the words "WHOLE grain" or "WHOLE wheat" are not listed as the first ingredient, so this must be a refined grain.*

Whole wheat is not the only example of a whole grain food. Foods like oatmeal, popcorn, long grain brown rice, and pearled barley are other examples of whole grain foods. Write the names of these foods on the board and any others that may pertain to the packages of food that you brought to class. If you see these words listed as the first ingredient, then you know you have a whole grain food.

Now, let's look at the first ingredient on YOUR ingredients list. Raise your hand if you think you have a whole grain food. Remember to look for the words, "whole grain" or "whole wheat", or words like popcorn, oatmeal or brown rice listed as the first ingredient. If you are having trouble, let me know. Once I have checked your label, you can put your hand down. If you have a whole grain food, stand on the right side of the room with your food. (Move around the room and check to see if the students evaluated their label correctly. Point



to the area where they should stand with their package of food.) *Great! Let's look for the foods that do not have a whole grain listed first. Remember, we are looking for packages of food that do not use the words "whole grain" or "whole wheat" or do not list words like oatmeal, popcorn or brown rice as the first ingredient. Raise your hand if you think the food you have is not a whole grain. Once I have checked your label, you can put your hand down. If you have a refined grain food, stand on the left side of the room with your food.* (Move around the room and check to see if the students evaluated their label correctly. Point to the area where they should stand with their package of food.) *Great job! Let's review! When you are choosing grains you should always look at this* (point to the Nutrition Facts poster), *what is this called again?* Answer: the Nutrition Facts Label. *There are two places we should look to see if we are choosing a healthy grain. Who remembers what they are?* Answers: Fiber and the first ingredient of the ingredients list. *Good job! Do want to eat foods that have MORE or LESS fiber?* Answer: More. Yes, more! *Finally, what words do we want to look for in the first ingredient of most grains to see if our grain is a whole grain?* Answer: whole grain, whole wheat, oats (or oatmeal), popcorn, brown rice, etc. *Great job! You are going to be pros at picking out the healthiest grain foods at the grocery store.*

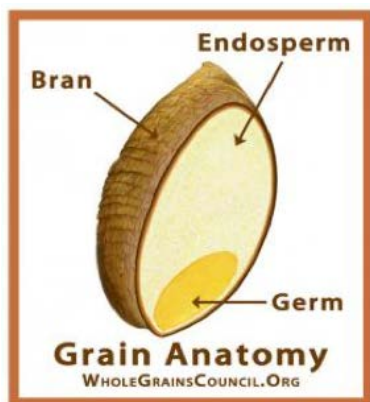
Now look at the number next to where it says, "Dietary Fiber" on your package of food. If you have less than 2 grams of fiber per serving move to the front of the room, and if you have 2 or more grams of fiber per serving move to the back of the room! Now everyone hold up their packages again! Walk around to check and see that all of the students are in the right place. Correct anyone who is not. *Now I want everyone to look at the amount of dietary fiber in one serving of your food and to find other students in the room who have the same amount of fiber as you! That means if you have 2 grams of fiber you should find other students with 2 grams of fiber! If your package says 1 gram of fiber, then you will get together with other students who have that amount of fiber in one serving of their food. Students with a food package that says there is 0 or less than 1 gram of fiber should form another group.* Wait for the students to assemble into groups based on the amount of fiber in one serving of their food. Provide assistance as needed. (Point to one of the groups) *How many grams of fiber are in your foods? Let the students answer.* Continue asking each group how many grams of fiber their foods have until you have finished asking all of the groups. *Now, I am going to split you into groups to show you how much fiber you might be getting every day depending on how many servings of whole grain foods you eat!* (This part of the lesson is designed for a class size of 18 students. If your class has more or less than 18 students, make each group as even as possible. For example, if the class has 20 students, it may work to have two groups of seven students and one group of six students. Make sure you have enough packages for each child regardless of class size. Remember that $\frac{1}{2}$ of the class should have been given whole grain packages and $\frac{1}{2}$ of the class should have been given refined grain packages for this activity to work.) *Raise your hand if you have a whole grain food.* Count off six of the nine students with whole grain packages of food and instruct them to move to a specific area of the room. *The six of you represent a WHOLE day of eating only whole grain foods from the Grains group. Raise your hand if you have a refined grain food.* Count off six of the nine students with refined grain packages of food and instruct them to move to a different area of the room. *The six of you represent a WHOLE day of eating only refined grain foods from the Grains group. I didn't forget about the rest of you! Move over here* (point to where you want them to move). *Your group represents a day of eating half of your intake from for the day from whole grains and half from refined grain*

foods. Distribute the Add Up Your Fiber worksheet and pencils to each group. Line up the foods in your group on a nearby desk, and list the amount of dietary fiber in each type of food on the lines on your worksheet. *For example, if the first food you have lined up has one gram of dietary fiber, put the number one on the first line of your worksheet. If the next food has no dietary fiber, write "0" on your worksheet. Do this until you have listed the amount of fiber found in one serving of every food in your group. Remember, to look at the number of grams of dietary fiber, not the percent value shown here.* (Point to one of the Nutrition Facts posters and show them which number to use.) *Once you have done that, add the total amount of fiber from all of the foods in your group. Compare your answers with the other students in your group. Check each other to make sure that you have the correct answer.* Walk around to check on each group and help the students if needed. While the students are working, write the words, "All Whole Grains", "Half Whole Grains", and "All Refined Grains" across the top of the board. *Is everyone ready? Can the ALL Whole Grains group please tell me the total amount of dietary fiber from one serving of the foods in their group?* After making sure it is correct, write this number under the words "All Whole Grains" on the board. *Great! Next, I want the ALL Refined Grains group to tell me the total amount of dietary fiber from one serving of the foods in their group.* After making sure it is correct, write this number under the words "All Refined Grains" on the board. *Finally, I want the Half Whole Grains and Half Refined Grains group to tell me the total amount of dietary fiber from one serving of the foods in their group.* After making sure it is correct, write this number under the words, "Half Whole Grains" on the board and instruct the students to return to their desks.

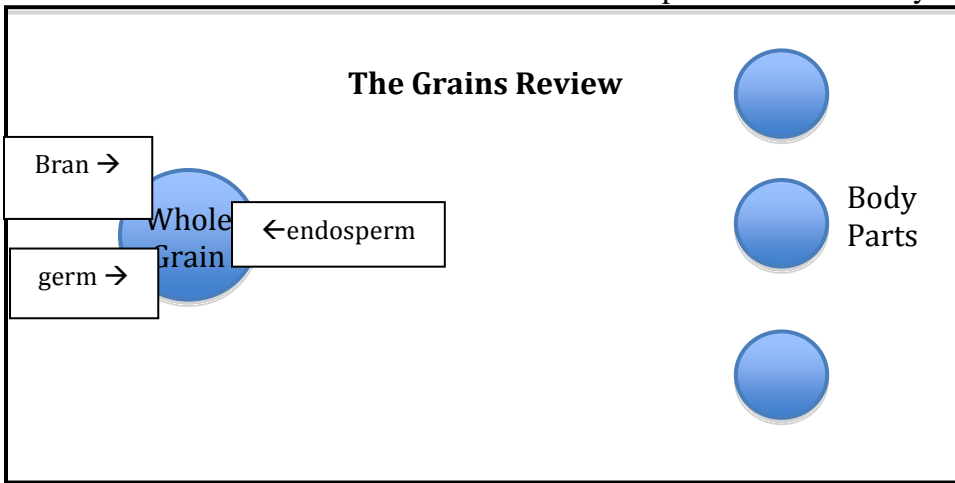
So, if we eat six servings of Grain group foods a day and all of them are whole grain foods, you will get the _____ (most/least) amount of dietary fiber. If all six of your servings of Grain group foods are refined grain you will get the _____ (most/least) amount of dietary fiber. Remember, we should strive to make a least _____ (half) of our servings of Grain group foods come from whole grains, but of course, you can make even more of your servings whole grain choices if you want!

Remember, fiber is important for good health. It helps you feel full so you don't eat too much; it helps your intestines work properly; and it works in your body to help keep your heart healthy! Now everyone can go sit back at their desks. Does anyone have any questions about the food label or choosing healthy whole grains with lots of fiber?

PARTS OF A WHOLE GRAIN KERNEL OR SEED

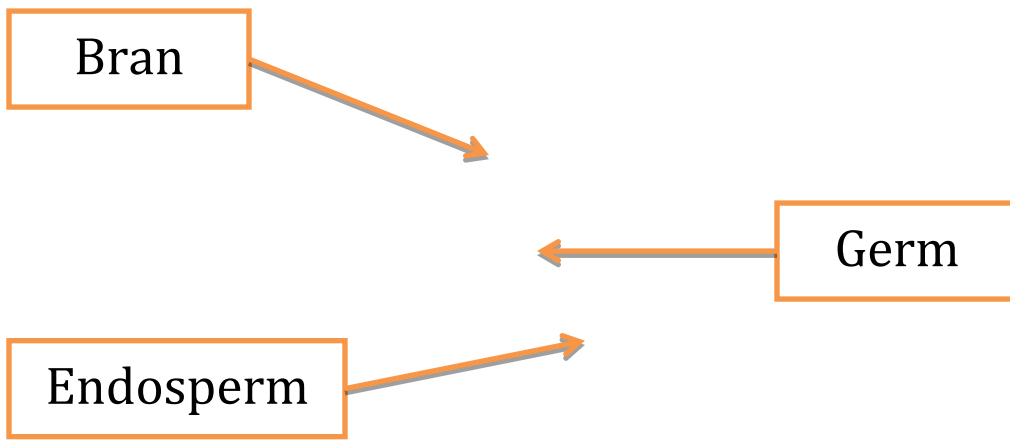


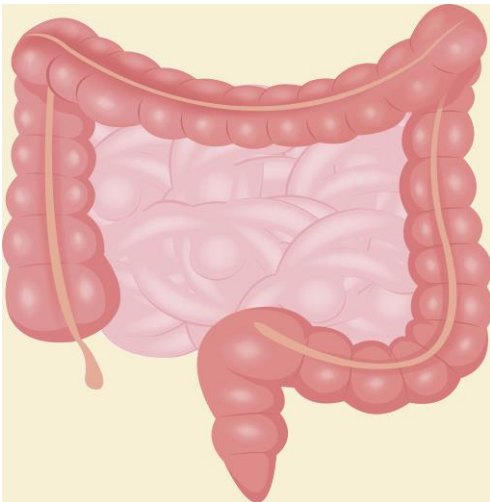
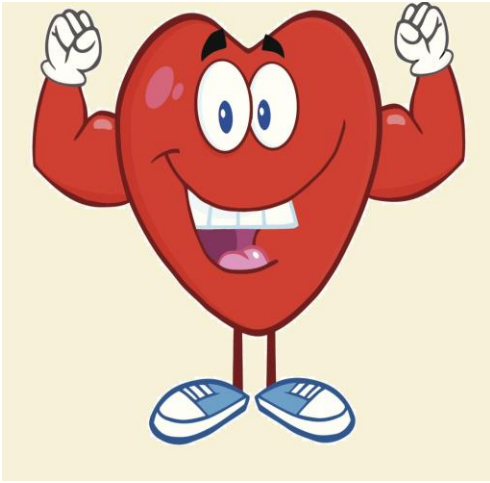
“The Grains Review” Poster – Example of the Poster Layout



Printable Materials:

“The Grains Review” Poster





Heart, stomach, and intestines

Whole Grain Bread Nutrition Facts

Serving Size 1 Slice (43g)
Servings Per Container 15

Amount Per Serving

Calories 110 Calories from Fat 20

%Daily Value*

Total Fat 2g **3%**

Sodium 150mg **6%**

Total Carbohydrate 20g **7%**

Dietary Fiber 3g **12%**

Sugars 3g

Protein 4g

Calcium 4% Iron 6%

Not a significant source of saturated fat,
transfat, cholesterol, vitamin A, vitamin C.

* Percent Daily Values are based on a
2,000 calorie diet.

Ingredients: **WHOLE WHEAT FLOUR**, WATER, SUGAR,
SUNFLOWER SEEDS, WHEAT GLUTEN, WHEAT RYE,
CELLULOSE FIBER, OATS, YEAST, SOYBEAN OIL,
GROUND CORN, SALT, MOLASSES, BUCKWHEAT,
BROWN RICE, CALCIUM PROPIONATE
(PRESERVATIVE)

Refined Grain Bread

Nutrition Facts

Serving Size 2 Slice (41g)

Servings Per Container 11

Amount Per Serving

Calories 100

Calories from Fat 0

%Daily Value*

Total Fat 1g **2%**

Sodium 210mg **9%**

Total Carbohydrate 20g **7%**

Dietary Fiber 0g **0%**

Sugars 3g

Protein 3g

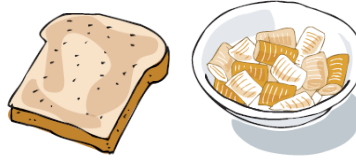
Calcium 4%

Iron 6%

Not a significant source of saturated fat,
transfat, cholesterol, vitamin A, vitamin C.

* Percent Daily Values are based on a
2,000 calorie diet.

Ingredients: UNBLEACHED ENRICHED WHEAT FLOUR
[FLOUR, MALTED BARLEY FLOUR, REDUCED IRON,
NIACIN, THIAMIN MONONITRATE (VITAMIN B1),
RIBOFLAVIN (VITAMIN B2), FOLIC ACID], WATER,
RAISINS, SUGAR



Add Up Your Fiber!

List the number of grams of dietary fiber in each of the foods in your group.

Food → _____

+

Food → _____

+

Food → _____

+

Food → _____

+

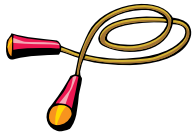
Food → _____

+

Food → _____

= _____ Total

Dietary Fiber



Physical Activity: Find it on A Food Label Relay!

PRIOR TO ACTIVITY

Print grain food labels directly onto index cards or onto white computer paper. If using computer paper, cut each label and glue one to each index card. Highlight the words “Dietary Fiber ____g” and the FIRST ingredient on the ingredients list of each label.

ACTIVITY INSTRUCTIONS

Depending on the layout of the classroom, desks may need to be moved for this activity. It may be beneficial to split the class into 2 groups before the game begins. A diagram showing the proposed set up for this activity is shown below.

1. Before beginning, write the words “Refined Grain” and “Whole Grain” on the top left side of the board and the top right side of the blackboard/whiteboard. Draw a vertical line separating the refined grains from the whole grains on each side of the board.
2. Split the 20 grain food labels into two sets. Each set should have five whole grain labels and five refined grain labels. Place one set of 10 cards directly across from each side of the blackboard/whiteboard on the opposite side of the room.
3. Split the class into two groups with equal numbers of students. (If there is an odd number, one student in the smaller group should go twice.)
4. Instruct the groups to line up single file, with one group on the right side of the board and the other on the left side of the board.
5. When the activity begins the first student in line from each group should be instructed to carefully run across the room to where the food labels are, pick up a label, and say aloud number of grams of fiber listed on the label. The student holding the label and the students on his or her team must do as many jumping jacks as there are grams of fiber. The student who selected the card should then read the ingredient list and decide whether the food belongs under the whole grain or refined grain category and place the card in the correct category on the board. The educator should stand near the board to make sure the students are placing the labels in the correct category. Once the label has been placed under the correct category, the student should carefully run back to his/her team and tag the next person in line so the process can be repeated. This scenario will continue until all of the labels in the pile have been used. The team that finishes first is the winner and should cheer on the other team until they have completed the activity.

NOTES TO THE EDUCATOR

This physical activity can be altered to remove the portion where the students read the ingredient list and categorize the grain label. Reading an ingredients list can be challenging for some students and may be difficult to do correctly during the excitement of the game. During the lesson, if you feel that your students are not confident

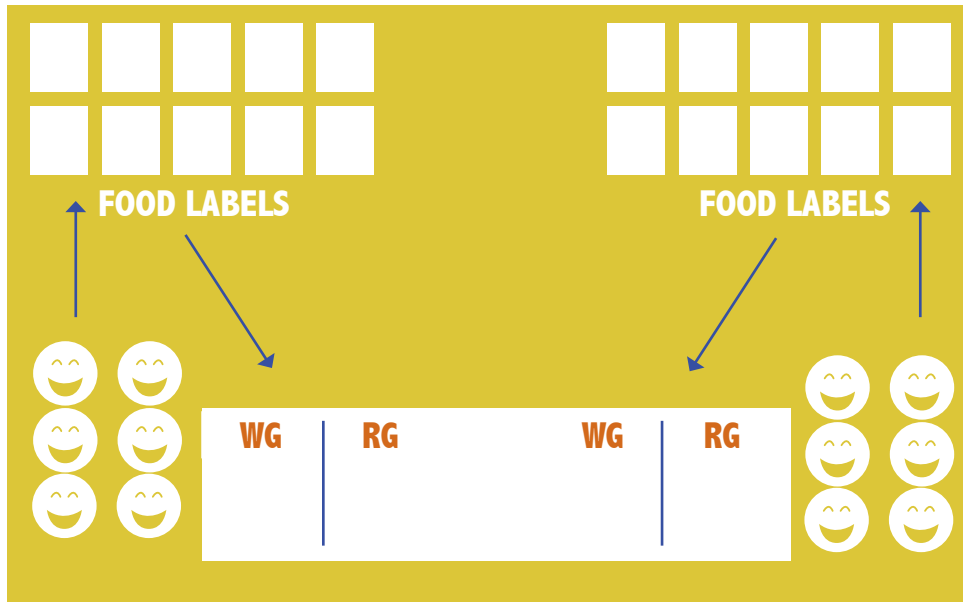
MATERIALS

- 20 grain food labels, provided
 - 2 sets of 5 identical whole grain labels
 - 2 sets of 5 identical refined grain labels
- 20 unlined white index cards (5 x 7 inches)



with determining if grains are whole or refined by reading the ingredients list, remove this portion from the physical activity and end each students turn after their group has completed the jumping jacks.

The two sets of food labels (one for each group) should be identical. Students may pick the labels up in a different order, but both teams will have the same labels and will complete the same number of jumping jacks. You may want to explain this to the students.



Set up the relay activity as described above, moving desks if necessary. The teacher can do this while you are putting the kids into groups to save time. ***Now we're going to do a fun activity! This activity is a relay race, and we're going to use some new food labels to practice what we've learned.*** If groups have not already been assigned, assign them now by numbering the students to group "1" or group "2." ***I want all of the students from group 1 to follow me and line up in a single file here!*** Line up the students from group 1 to the right side of the blackboard/whiteboard in the classroom. ***Now I want all of the students from group 2 to follow me and line up in a single file here!*** Line up the students from group 2 to the left side of the blackboard/whiteboard in the classroom. ***Listen carefully as I explain how the relay works.*** Demonstrate each step to the students as you give the directions. ***When I say "go," the first student in each line is going to run to the other side of the room and pick up a food label from the floor. You will look at the label where it says "Dietary Fiber" and read the number of grams of fiber aloud to your team. You and your teammates need to do the same number of jumping jacks as the number of grams of fiber in the food. For example, this label, (hold up one of the labels), has "x" grams of fiber, so you should all do "x" jumping jacks! Once you have finished your jumping jacks, look at the ingredients list on your label. If the first ingredient says whole grain, put it under the "Whole Grain" section for your team. If the first ingredient does NOT say whole grain, put it under the "Refined Grain" section for your team. If you need help, ask a teammate! Once you have done that, run back to your team and tag the next person in line. The next person will run to the front of the room and repeat the same process. If one team finishes before the other, cheer the other team on until they finish. Does anyone have any questions? Okay everyone get ready. On your mark, get set, go!!***

Relay Refined Grain Labels (5)

Nutrition Facts	
Serving Size 3 tbsp (24g)	
Servings Per Container 24	
Amount Per Serving	
Calories 130	Calories from Fat 0
%Daily Value*	
Total Fat 0g	0%
Saturated Fat 0g	0%
<i>Trans</i> Fat 0g	
Cholesterol 0mg	0%
Sodium 80mg	3%
Total Carbohydrate 20g	7%
Dietary Fiber 1g	4%
Sugars 11g	
Protein 1g	
Vitamin A 4%	• Vitamin C 0%
Calcium 0%	• Iron 4%
* Percent Daily Values are based on a 2,000 calorie diet. Your Daily Values may be higher or lower depending on your calorie needs:	
	Calories: 2,000 2,500
Total Fat	Less than 65g 80g
Sat Fat	Less than 20g 25g
Cholesterol	Less than 300mg 300mg
Sodium	Less than 2,400mg 2,400mg
Total Carb	300g 375g
Dietary Fiber	25g 30g

Ingredients: Unbleached Wheat Flour, Powdered Sugar, Red Decorating Sugar, Blue Decorating Sugar, Xanthan Gum, Guar Gum, Carob Bean Gum

Nutrition Facts

Serving Size 2 Slice (41g)

Servings Per Container 11

Amount Per Serving

Calories 100 Calories from Fat 10

%Daily Value*

Total Fat 1g **2%**

Saturated Fat 0g **0%**

Trans Fat 0g

Cholesterol 0mg **0%**

Sodium 210mg **9%**

Total Carbohydrate 20g **7%**

Dietary Fiber 1g **4%**

Sugars 3g

Protein 3g

Vitamin A 4% • Vitamin C 0%

Calcium 0% • Iron 4%

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

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

Ingredients: UNBLEACHED ENRICHED WHEAT FLOUR [FLOUR, MALTED BARLEY FLOUR, REDUCED IRON, NIACIN, THIAMIN MONONITRATE (VITAMIN B1), RIBOFLAVIN (VITAMIN B2), FOLIC ACID], WATER, FARINA, YEAST, SUGAR, SALT, SOYBEAN OIL, PRESERVATIVES (CALCIUM PROPIONATE, SORBIC ACID), GRAIN VINEGAR, MONOGLYCERIDES, NONFAT MILK, SOY FLOUR, WHEY.

Nutrition Facts

Serving Size 1 Slice (40g)
Servings Per Container 10

Amount Per Serving	
Calories 90	Calories from Fat 10
%Daily Value*	
Total Fat 1g	2%
Saturated Fat 0g	0%
Trans Fat 0g	
Cholesterol 0mg	0%
Sodium 130mg	5%
Total Carbohydrate 15g	5%
Dietary Fiber 1g	4%
Sugars 1g	
Protein 3g	
Vitamin A 0%	• Vitamin C 0%
Calcium 4%	• Iron 6%
* Percent Daily Values are based on a 2,000 calorie diet. Your Daily Values may be higher or lower depending on your calorie needs:	
	Calories: 2,000 2,500
Total Fat	Less than 65g 80g
Sat Fat	Less than 20g 25g
Cholesterol	Less than 300mg 300mg
Sodium	Less than 2,400mg 2,400mg
Total Carb	300g 375g
Dietary Fiber	25g 30g

Ingredients: UNBLEACHED ENRICHED WHEAT FLOUR [FLOUR, MALTED BARLEY FLOUR, REDUCED IRON, NIACIN, THIAMIN MONONITRATE (VITAMIN B1), RIBOFLAVIN (VITAMIN B2), FOLIC ACID], WATER, FARINA, YEAST, SUGAR, SALT, SOYBEAN OIL, PRESERVATIVES (CALCIUM PROPIONATE, SORBIC ACID), GRAIN VINEGAR, MONOGLYCERIDES, NONFAT MILK, SOY FLOUR, WHEY.

Nutrition Facts

Serving Size 55 Pieces (40g)

Servings Per Container 10

Amount Per Serving

Calories 140 Calories from Fat 45

%Daily Value*

Total Fat 5g **8%**

Saturated Fat 1g **5%**

Trans Fat 0g

Cholesterol 10mg **3%**

Sodium 250mg **10%**

Total Carbohydrate 20g **7%**

Dietary Fiber 1g **4%**

Sugars 0g

Protein 3g

Vitamin A 0% • Vitamin C 0%

Calcium 4% • Iron 6%

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

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

Ingredients: UNBLEACHED ENRICHED WHEAT FLOUR [FLOUR, MALTED BARLEY FLOUR, REDUCED IRON, NIACIN, THIAMIN MONONITRATE (VITAMIN B1), RIBOFLAVIN (VITAMIN B2), FOLIC ACID], CHEDDAR CHEESE, WATER, FARINA, YEAST, SUGAR, SALT, SOYBEAN OIL, PRESERVATIVES (CALCIUM PROPIONATE, SORBIC ACID), GRAIN VINEGAR, MONOGLYCERIDES, NONFAT MILK, SOY FLOUR, WHEY.

Nutrition Facts

Serving Size 12 Pieces (40g)

Servings Per Container 10

Amount Per Serving

Calories 110 Calories from Fat 0

%Daily Value*

Total Fat 0g **0%**

Saturated Fat 0g **0%**

Trans Fat 0g

Cholesterol 0mg **0%**

Sodium 350mg **15%**

Total Carbohydrate 24g **8%**

Dietary Fiber 1g **4%**

Sugars 1g

Protein 3g

Vitamin A 0% • Vitamin C 0%

Calcium 4% • Iron 6%

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

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

Ingredients: UNBLEACHED ENRICHED WHEAT FLOUR [FLOUR, MALTED BARLEY FLOUR, REDUCED IRON, NIACIN, THIAMIN MONONITRATE (VITAMIN B1), RIBOFLAVIN (VITAMIN B2), FOLIC ACID], CHEDDAR CHEESE, WATER, FARINA, YEAST, SUGAR, SALT, SOYBEAN OIL, PRESERVATIVES (CALCIUM PROPIONATE, SORBIC ACID), GRAIN VINEGAR, MONOGLYCERIDES, NONFAT MILK, SOY FLOUR, WHEY.

Relay Whole Grain Labels (5)

Nutrition Facts	
Serving Size 1 Roll (43g)	
Servings Per Container 8	
Amount Per Serving	
Calories 100	Calories from Fat 10
%Daily Value*	
Total Fat 1g	2%
Saturated Fat 0g	0%
<i>Trans Fat</i> 0g	
Cholesterol 0mg	0%
Sodium 170mg	7%
Total Carbohydrate 21g	7%
Dietary Fiber 5g	20%
Sugars 2g	
Protein 5g	
Vitamin A 0%	• Vitamin C 0%
Calcium 6%	• Iron 6%
* Percent Daily Values are based on a 2,000 calorie diet. Your Daily Values may be higher or lower depending on your calorie needs:	
	Calories: 2,000 2,500
Total Fat	Less than 65g 80g
Sat Fat	Less than 20g 25g
Cholesterol	Less than 300mg 300mg
Sodium	Less than 2,400mg 2,400mg
Total Carb	300g 375g
Dietary Fiber	25g 30g

Ingredients: Ingredients: WHOLE WHEAT FLOUR, WATER, SUGAR, YEAST, CELLULOSE FIBER, WHEAT GLUTEN, FLAXSEED, POLYDEXTROSE, SALT, AMARANTH SEEDS, MALT, PRESERVATIVES (CALCIUM PROPIONATE SORBIC ACID), SOYBEAN AND/OR CANOLA OIL, NATURAL FLAVOR, WHEAT BRAN, MONOGLYCERIDES, DATEM

Nutrition Facts

Serving Size 2/3 Cup (56g)

Servings Per Container 7

Amount Per Serving

Calories 190 **Calories from Fat** 15

%Daily Value*

Total Fat 1.5g **2%**

Saturated Fat 0g **0%**

Trans Fat 0g

Cholesterol 0mg **0%**

Sodium 0mg **0%**

Total Carbohydrate 40g **13%**

Dietary Fiber 5g **20%**

Sugars 2g

Protein 7g

Vitamin A 0% • Vitamin C 0%

Calcium 2% • Iron 15%

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

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

Ingredients: Whole Wheat Flour, Egg

Nutrition Facts

Serving Size 1 Bag (0g)

Servings Per Container 1

Amount Per Serving

Calories 120 **Calories from Fat** 25

%Daily Value*

Total Fat 2.5g **4%**

Saturated Fat 1g **5%**

Trans Fat 0g

Cholesterol 0mg **0%**

Sodium 400mg **17%**

Total Carbohydrate 28g **9%**

Dietary Fiber 5g **20%**

Sugars 0g

Protein 4g

Vitamin A 0% • Vitamin C 0%

Calcium 0% • Iron 4%

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

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

Ingredients: Whole Grain Popcorn, Salt, Palm Oil, Natural And Artificial Flavor [Milk]

Nutrition Facts

Serving Size 1/4 Cup (42g)

Servings Per Container 11

Amount Per Serving

Calories 150 Calories from Fat 10

%Daily Value*

Total Fat 1g **2%**

Saturated Fat 0g **0%**

Trans Fat 0g

Cholesterol 0mg **0%**

Sodium 0mg **0%**

Total Carbohydrate 32g **11%**

Dietary Fiber 2g **8%**

Sugars 0g

Protein 3g

Vitamin A 0% • Vitamin C 0%

Calcium 0% • Iron 4%

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

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

Ingredients: Whole Grain Brown Rice

Nutrition Facts

Serving Size 1 Tortilla (70g)

Servings Per Container 8

Amount Per Serving

Calories 210 Calories from Fat 45

%Daily Value*

Total Fat 5g **8%**

Saturated Fat 2.5g **13%**

Trans Fat 0g

Cholesterol 0mg **0%**

Sodium 510mg **21%**

Total Carbohydrate 32g **11%**

Dietary Fiber 8g **32%**

Sugars 1g

Protein 9g

Vitamin A 0% • Vitamin C 0%

Calcium 10% • Iron 4%

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

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

Ingredients: Whole Wheat Flour, Water, Vital Wheat Gluten, Powdered Cellulose, Vegetable Shortening, Wheat Protein Isolate, Salt, Leavening, Cellulose Gum

Dear Parent or Caregiver,

Today your child learned about the Grains group on MyPlate. We learned about the importance of eating whole grains and the need to select half of our grain choices from whole grain foods to keep us healthy. We also learned that whole grains contain fiber, and we reviewed the parts of the body that fiber helps keep healthy. Good sources of whole grains include 100% whole-wheat bread, whole-wheat flour, oatmeal, popcorn, and brown rice.

It is recommended that children 4 to 8 years old eat 5 one ounce equivalents of grains each day. The following are examples of one ounce equivalents of grains:

- 1 regular slice of bread
- 5 crackers
- ½ English muffin
- ½ cup cooked oatmeal
- 1 cup ready-to-eat cereal
- ½ cup cooked rice or pasta
- 1 small flour tortilla



Remember to make half your grains whole grains by choosing whole grain foods. An easy way to determine if a food is made of whole grains is to look at the ingredients list. You can also look for the Whole Grain Stamps to make it easier to identify whole grain foods.

A snack recipe is included with this letter to provide you with an example of a way that you can include whole grains in your child's diet. Below is a list of activities that can help your child remember what they have learned today and improve their intake of whole grains.

- During this lesson, your child learned some exercise moves to help them remember the names of some popular whole grain foods like whole-wheat pasta, oatmeal, whole-wheat crackers, popcorn, and brown rice. Ask your child to show you these exercises and do them together.
- Let your child help you grocery shop and prepare simple meals and snacks. He or she can help you choose whole grain ingredients to add to your favorite recipes. When children are involved in choosing and preparing foods they are more likely to try them.

After learning about the Grains group on MyPlate we hope your child will come home excited to try adding more whole grain foods to their diet. To learn more about grains visit the USDA MyPlate website: www.ChooseMyPlate.gov. We hope this lesson has taught your child the importance of whole grains and that he or she will begin to eat more whole grains each day to stay healthy.

Sincerely,

LESSON 3



Fun with Fruits and Vegetables

Concept

Most children do not consume the recommended amounts of fruits and vegetables. To get the optimal health benefits from fruits and vegetables, it is important to consume a variety of foods from these two food groups. This lesson focuses on teaching children about the importance of eating a variety of fruits and vegetables and their health benefits in a way that is fun and engaging.



Background

The Fruits group is the red group and the Vegetables group is the green group on MyPlate. Children today are consuming too many calories and not enough of the nutrients their growing bodies need (1). Fruits and vegetables are an important part of a healthy diet because they are naturally cholesterol-free, low in fat and calories (2) and contain a variety of vitamins, minerals and fiber (3). Most children do not consume the daily recommended amount of fruits and vegetables (1). School-based nutrition education programs that focus on fruit and vegetable consumption have been well received, and children who participate in these programs have responded with a willingness to consume more fruits and vegetables (4). The focus of this lesson is to teach students about the Fruits and Vegetables groups on MyPlate as well as why these groups are essential for good health.

VITAMINS

Some of the key nutrients found in fruits and vegetables are vitamins A, E and C. Vitamin A is important for maintaining skin and eye health, and it plays a role in immunity, reproduction, bone growth and cell function (5). Vitamin E reduces cell damage, which is harmful to the body (6). Vitamin C is important for wound healing, teeth and gum health and for growth and repair of tissues (7). Vitamins A, E and C are considered antioxidants. Antioxidants protect cells from the negative effects of free radicals, which cause damage to human cells. Free radical damage can increase the risk for developing heart disease and cancer (8). A study published in the *Journal of the American Dietetic Association* found that increased consumption of fruits and vegetables consistently lowered the risk of certain cancers like lung, mouth, stomach and colon (9).

Folate is a B vitamin needed for making red blood cells and other types of cells. Folate is extremely important for women of childbearing age. Women, adolescents and young girls who can become pregnant need to get enough synthetic folic acid, a type of folate, before pregnancy and throughout their pregnancy to reduce the chance of having a baby with a serious type of birth defect (10). It is important for a pregnant woman to have a healthy diet, as her diet has a direct impact on the developing fetus. A child's health begins before it is even born (1).

MINERALS

Some fruits and vegetables contain important minerals such as iron, potassium and calcium (11). Like folate and other nutrients, iron is important in the development of red blood

cells because it carries oxygen throughout the body (12). An iron deficiency can lead to anemia, which can decrease red blood cell concentrations and increase fatigue, headaches and chest pain. Potassium helps to maintain a healthy blood pressure. Getting enough potassium may decrease the development of kidney stones and bone loss (2). Calcium is essential for the development and maintenance of healthy bones and teeth (11).

FIBER

Consuming fiber-rich fruits and vegetables helps to reduce constipation by maintaining proper bowel function, and it promotes satiety (2). Diets rich in fiber also may reduce the risk for cardiovascular disease (2), the leading cause of death in the United States. Evidence from multiple studies suggests that dietary fiber at intakes ranging from 12 to 33 grams per day may lower blood pressure and improve serum lipid levels (13).


DIABETES

Every year more young children are showing risk factors for diabetes. This trend is reflected in the number of teens who are actually diagnosed with this disease. Studies have shown a correlation between consumption of dark green leafy vegetables and vitamin C rich fruits and vegetables and a decrease in developing type 2 diabetes (14, 15). Studies also show a correlation among fruit and vegetable consumption, weight status and diabetes. People who eat enough fruits and vegetables are more likely to have a healthy weight status, which reduces their chances for developing diabetes (16).

RECOMMENDATIONS

Eating an adequate amount of fruits and vegetables has been shown to have numerous health benefits, but how many fruits and vegetables must be consumed to be considered adequate? The MyPlate website (www.choosemyplate.gov) provides recommendations based on age, sex and activity level (17).

The general recommendation for fruit intake in children is 1 to 1½ cups per day. For vegetables, children need 1½ cups per day (17). It's important to eat a variety of fruits and vegetables to supply the body with different nutrients (3). Additional guidelines include the recommendation to consume vegetables from each of the five subgroups every week. The subgroups include dark green vegetables, red and orange vegetables, beans and peas, starchy vegetables and other vegetables that don't fall into the other four subgroups



(1). The recommendations are provided in cups. One cup of a fruit or vegetable is defined as: 1 cup raw or cooked fruits or vegetables, 1 cup fruit or vegetable juice, ½ cup dried fruit, or 2 cups raw leafy greens (17).

In summary, it is important for children to eat enough of a variety of fruits and vegetables every day for good health. Fruits and vegetables contain numerous nutrients the body needs to function normally and to protect against chronic diseases. Including enough fruits and vegetables in the diet also will help children maintain a healthy weight.

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3rd Grade Lesson

LEARNING OBJECTIVE

The students will:

- state that fruits and vegetables contain fiber, potassium, folate and vitamins A and C.
- describe the health benefits of fiber, potassium, folate and vitamins A and C.
- illustrate that half your plate should be composed of fruits and vegetables.

BEHAVIORAL OBJECTIVES

The students will:

- eat more fruits and vegetables.
- eat a variety of fruits and vegetables.
- make half of their plates fruits and vegetables.

FLORIDA STANDARDS

HEALTH EDUCATION

HE.K.B.2.2.: The student will demonstrate listening skills to enhance health.

HE.K.C.1.1.: The student will recognize healthy behaviors.

HE.K.C.1.Pa.a.: The student will associate a behavior with health, such as brushing teeth (eating fruits and vegetables).

HE.K.C.1.Su.a.: The student will recognize a healthy behavior, such as brushing teeth or covering mouth for a cough or sneeze (eating fruits and vegetables).

SCIENCE

SC.K.N.1.in.c.: The student will observe, explore, and create a visual representation of real objects.

READING/LANGUAGE ARTS

LA.K.5.2.3.: The student will repeat auditory sequences (e.g., letters, words, numbers, rhythmic patterns).

PHYSICAL EDUCATION

PE.K.C.1.1.: The student will recognize locomotor skills.

PE.K.R.1.2.: The student will practice specific skills as assigned until the teacher signals the end of practice.

DANCE

DA.K.F.3.1.: The student will follow classroom instructions given by the teacher.

DA.K.S.3.2.: The student will imitate simple exercises for strengthening and stretching the body.



Learning Activity

MATERIALS

- 5 Nutrient reading passages: fiber, potassium, folate, vitamin A and vitamin C, provided
- 5 Fruit and vegetable pictures: orange, spinach, sweet potato, many fruits and vegetables, bananas, provided
- 5 Health function images, provided
- Nutrient passage worksheet, provided; print one for each student
- Nutrient worksheet answer key, provided
- Words to Review list, provided
- 5 MyPlate puzzle frames, provided
- 10 sheets of construction paper (8.5X11)
- Glue stick
- 20 Fruit and vegetable MyPlate puzzle pieces, provided
- 20 small pieces of Velcro
- Sticky tack, magnets or tape

PRIOR TO ACTIVITY

Print the nutrient reading passages, fruit and vegetable pictures, health function images, nutrient passage worksheets, puzzle frames and puzzle pieces. You will need (amounts needed for 18 students):


- 5 nutrient passages (one for each student assigned to be the “reader”). Glue each fruit and vegetable picture on one side of a piece of construction paper and the appropriate passage on the other.
- 13 health function images (of the five images provided, two will need to be copied twice and three will need to be copied three times; students reading the passages will not get one of the images; you may want to laminate these to increase durability)
- 18 nutrient passage worksheets
- 5 puzzle frames; glue each of the MyPlate puzzle frames onto a sheet of construction paper and place them on the chalk or dry erase board using sticky tack, magnets, or tape. Write the team name on the board above each puzzle (i.e., team names: folate, fiber, potassium, vitamin A, vitamin C).
- 20 puzzle pieces (you may want to laminate these to make them more durable); each team will get four fruit and vegetable puzzle pieces; place a piece of Velcro on the back of each puzzle piece and on the corresponding section of the puzzle.

ACTIVITY INTRODUCTION

Hi class! My name is _____. Today we’re going to learn about fruits and vegetables! Here is a picture of MyPlate. Raise your hand if you have seen MyPlate before. Great. Who can tell me the amount of fruits and vegetables MyPlate shows us we should eat every day?

(Call on a student.) Yes, that’s correct. Half of your plate should contain fruits and vegetables. Fruits and vegetables are important for good health because they contain vitamins, minerals and fiber. We are going to learn about the mineral called potassium (write “Potassium” on the board); three vitamins – folate, vitamin A and vitamin C (write “Folate”, “Vitamin A”, and “Vitamin C” on the board); and fiber (write “Fiber” on the board). We need fiber, vitamins and minerals every day to help our bodies stay healthy.

To help us learn about fiber and some of the vitamins and minerals in fruits and vegetables, we’re going to read short passages and complete a worksheet. Everyone will have a job to do. If I give you the story, you will be a reader. When I tell you, you will come to the front of the room and read the story to the class. I am here to help you if you have any trouble with the reading passage. I also have five cards with different pictures. Let’s look at them and call out what you see. (Show each card to the students and instruct them to call out the name of the objects they see on the cards.) Eyes – heart – band-aids, intestines and a drop of blood. That’s right – good job! If I give you a



picture card, your job is to listen to each story and come to the front of the room if the story being read mentions your picture. Each story is different, so you will need to listen carefully. (Note: The students who have pictures that match a particular passage will form a team for part two of the learning activity. Distribute each story to one of five students. Distribute the health function images to the remaining students. Distribute one worksheet to each student.) Each of you will also get a worksheet that looks like this. (Show the students what the nutrient passage worksheet looks like and distribute one to each student.) You will need to fill in the blanks on the worksheet while the passages are being read so you have to pay attention. The reading passages contain the missing information. Listen closely to the passages to discover the answers, then write the words on the blank lines on your worksheet. It's okay if you can't fill in all of the blank lines, but do your best to fill in as many as you can. After we have read all of the passages and you have completed your worksheet, you will use your answers as part of a puzzle making activity. Are there any questions so far? Let's begin! Let's start with the passage about folate. (Before each nutrient passage is read, list the words from the "Words to Review" sheet for that passage on the board.) Some new words in this passage include _____. Who has the folate reading passage? Come up to the front of the classroom and read the passage. Remember, if you have a picture card that is mentioned in the passage, come to the front of the room with your picture and stand next to the student reading the passage. (Note: The reader and the students with the picture cards that are mentioned in the folate reading passage will be called the folate team and will work together during the puzzle making activity. The same strategy will be followed for each of the remaining passages.) Remember, try to fill in as many blanks on the worksheet as you can! (Instruct the student to begin reading the passage.) Great job! You will be the folate team! You may now sit down with your teammates. Let's review what we learned in this passage. (Refer to the nutrient handout and discuss the main points under the "folate" section, making sure the students know the answers to each statement/question. Repeat this process for the remaining passages and form the rest of the teams in this order: Fiber, Potassium, Vitamin C, Vitamin A.)

Race to Fill MyPlate Activity (This activity uses the MyPlate puzzles previously placed on the board. You will need to distribute four puzzle pieces to each team. Using the questions from the worksheet, you will read one question at a time to the group. Each team will need to decide on their team's answer. Once an answer has been decided upon, the team captain will raise his/her hand signifying that they are ready. The first team to answer the question correctly will add one of their team's puzzle pieces to their team's puzzle frame. The first team to complete their puzzle is the winning team.)

Now, we're going to use the information we just learned about fruits and vegetables to do an activity called "Race to Fill MyPlate"! Each team will need a team leader. I will give you 10 seconds to select your team leader. (Count to ten.) Has everyone selected their team leader? Team leaders raise your hands. Great! Now, listen carefully to my instructions. Each team will have four puzzle pieces. (Distribute the puzzle pieces to each team.) Each team also has its own puzzle frame. (Point to the puzzle frames on the board and call out the name of each team.) The object of this activity is to be the first team to finish your puzzle. In order to put your puzzle pieces on the puzzle frame, you will need to answer the questions I ask about fiber, potassium, folate, vitamin A and vitamin C. The questions will come from the nutrient worksheet you just completed. After you hear the question, work with your team to decide on an answer. As soon as you have an answer, the team leader



should raise his or her hand. When I call on you, state your answer. The first team to answer the question correctly will come to the board and place one of your puzzle pieces on your team's puzzle. Let's do a practice question. Remember to raise your hand before you answer! How much of your plate should be filled with fruits and vegetables? (Call on first team to raise their hand. Correct answer: Half. Make sure the teams understand how to correctly play before starting the activity.) Remember, the team that completes the MyPlate puzzle by filling half of their plate with fruits and vegetables wins!! Are you ready to play? (Start the game by selecting one of the questions on the worksheet and continue until there is a winning team or as long as time permits.) Great job everyone! It looks like you have learned a lot about why fruits and vegetables are good for you! How much of your plate should be filled with fruits and vegetables? (Students: Half!) I hope you will make half of your plate fruits and vegetables every day to help ensure you get enough of the nutrients you need for good health!

Words to Review List

Fiber:

- intestines
- nutrients
- asparagus
- avocados
- broccoli

Folate:

- vitamin
- spinach
- turnip
- okra
- asparagus

Potassium:

- potassium
- mineral
- grapefruit
- blood pressure

Vitamin C:

- immune system
- cantaloupe
- cabbage

Vitamin A:

- vision
- apricots
- pumpkin

FIBER

Do you hear that? It sounds like thunder, but it's just my stomach growling because I am hungry! I should have eaten more fiber today. "Why?" you may ask. Listen to me carefully, and I will reveal to you the wonders of fiber!

Fiber is found in **plant** foods. Eating foods high in fiber helps our stomachs to feel **full**. Feeling full after we eat helps keep us satisfied so we don't eat more food than we need. Fiber also helps keep our intestines **healthy**. Healthy intestines are needed to help us use the nutrients we eat.

Fruits and **vegetables** contain lots of fiber! Berries, oranges, pears, apples, apricots, figs, and mangos are fruits that are good sources of fiber. Asparagus, avocados, broccoli, green beans, peas, and corn are vegetables that are high in fiber.

FOLATE

Did you know that dark **green leafy vegetables** contain a vitamin called folate? It's true. Dark green leafy vegetables, like spinach, have lots of this vitamin.

Folate is used by our bodies to make healthy **red blood cells**. Our bodies make new red blood cells every day, so it is important to eat foods that are high in folate.

Which foods have lots of folate? Dark green leafy vegetables like spinach, mustard greens and turnip greens are great sources of folate. Other vegetables that are high in folate include okra, asparagus, and tomato juice. Eating fruits like fresh strawberries, melons, and orange juice is another way to get the folate you need. So remember to eat your fruits and vegetables, especially ones that have a lot folate, to keep your blood healthy.

POTASSIUM
[puh-tas-ee-uhm]

Place two fingers along the side of your neck, right under your chin. Do you feel that? Thump, thump. Thump, thump. That is your heart beating! Making sure you have a healthy heart is important, and potassium is one of the things that helps you do that.

Potassium is a **mineral**. It has many important jobs. It helps keep your heart **beating**, and it helps you keep a healthy **blood pressure**. That's why it is so important to make sure you eat enough potassium.

How can you be sure to get enough potassium? It is easy - just make sure you eat lots of fruits and vegetables! Bananas are high in potassium. Other good sources of potassium include avocados, orange juice, grapefruit, leafy green vegetables and potatoes.

It is easy to get enough potassium by eating lots of fruits and vegetables. Remember, potassium keeps your heartbeat strong.

VITAMIN C

How many of you have ever fallen and cut your knee? Cuts and scrapes are not fun, which is why we are lucky that they heal quickly. Have you ever wondered what helps them heal? One of the things that helps cuts and scrapes **heal** is vitamin C. Vitamin C also helps keep your **immune system** strong! Having a strong immune system helps to keep us healthy.

It is important to eat foods with lots of vitamin C every day to keep your immune system strong so you don't get sick and to help heal your cuts and scrapes. Vitamin C is found in fruits like **oranges, limes, lemons, and grapefruits**. It also is in cantaloupes and strawberries. Vegetables that are high in vitamin C include tomatoes, green peppers, broccoli, and cabbage. **Cooking** fruits and vegetables can destroy the vitamin C in them, so it is best to eat them raw.

VITAMIN A

What is the color of the paper that I am holding up? The sense that we use to see this color is our **vision**. Having healthy vision is important for everyday life. Vitamin A is an essential vitamin that is needed for good vision. It keeps our eyes healthy so we can see our friends and family, look at pictures and do many other things. Vitamin A helps our **skin** and **teeth** stay healthy too.

Fruits and vegetables that are dark **orange** or yellow have lots of vitamin A. Some of the best sources include fruits like cantaloupe and apricots, and vegetables like carrots, pumpkin, sweet potatoes, and winter squash.

Remember, in order to have healthy eyes and skin, we need to eat enough foods with vitamin A. You can do this by choosing fruits and vegetables that are dark orange in color.

Nutrient Worksheet

Fiber:

- Fiber is a nutrient that is found in _____ foods.
- Eating fiber helps keep our stomachs _____ and our intestines _____.
- _____ and _____ have lots of fiber!

Folate:

- What types of vegetables contain lots of folate?

- What kinds of fruits contain lots of folate?

- What part of our body does folate help keep healthy?

Potassium:

- Potassium is a _____.
- Potassium helps our heart _____.
- Potassium helps us keep a healthy _____.
- A _____ is a great source of potassium!

Vitamin C:

- Vitamin C helps us _____ cuts and scrapes.
- Vitamin C helps keep our _____ strong so we can stay healthy.
- Vitamin C is found in fruits like _____.
- _____ fruits and vegetables destroys vitamin C.

Vitamin A:

- Vitamin A is needed for good _____.
- It helps keep our _____ and _____ healthy.
- Fruits and vegetables that are dark _____ in color have lots of vitamin A.

WORD BANK

immune system teeth healthy blood full orange cooking
vegetables green, leafy vegetables vision mineral plant fruits
beat energy blood pressure banana skin heal oranges
strawberries

Nutrient Worksheet KEY

Fiber:

- Fiber is a nutrient that is found in __plant_____ foods.
- Eating fiber helps keep our stomachs ___full_____ and our intestines ___healthy_____.
- ___Fruits_____ and ___vegetables_____ have lots of fiber!

Folate:

- What types of vegetables contain lots of folate? _Green, leafy vegetables_____
- What is an example of a fruit that contain lots of folate?
___strawberries_____
- What part of our body does folate help keep healthy?
___blood_____

Potassium:

- Potassium is a _mineral_____.
- Potassium helps our heart ___healthy_____.
- Potassium helps us keep a healthy _blood_____ _pressure_____.
- A __banana_____ is a great source of potassium!

Vitamin C:

- Vitamin C helps us __heal_____ cuts and scrapes.
- Vitamin C helps keep our __immune_____ __system_____ strong so we can stay healthy.
- Vitamin C is found in fruits like _oranges_____.
- ___Cooking_____ fruits and vegetables destroys vitamin C.

Vitamin A:

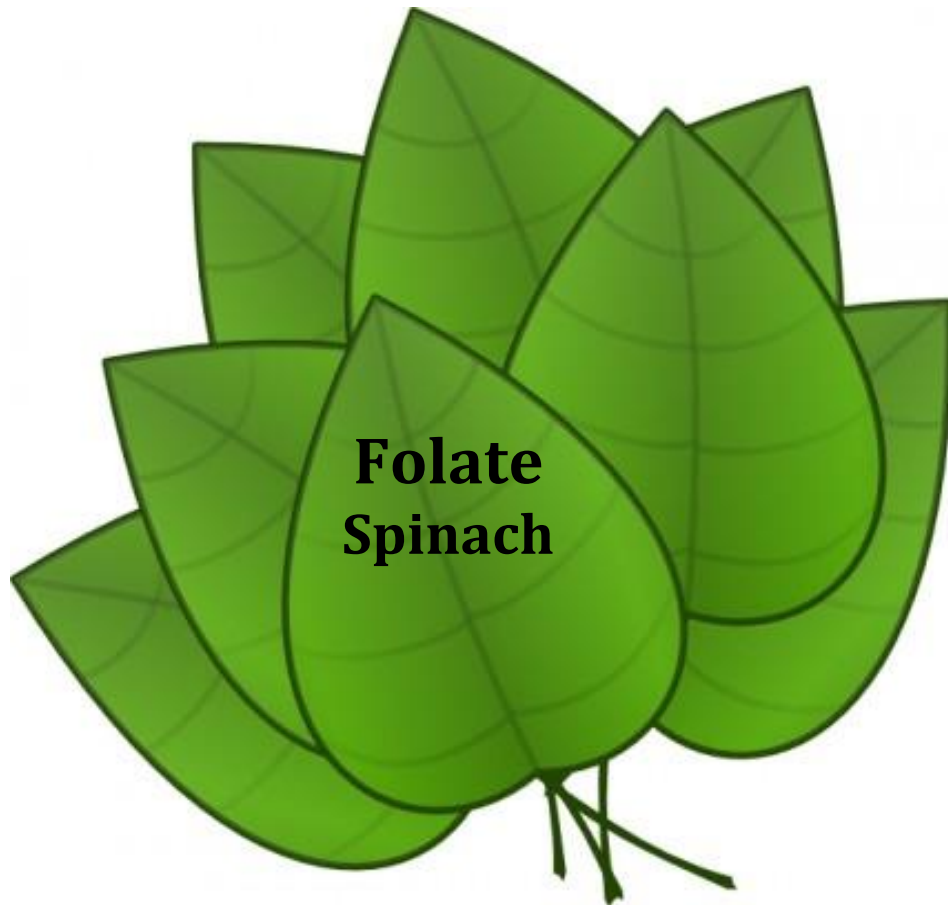
- Vitamin A is needed for good ___vision_____.
- It helps keep our __skin_____ and __teeth_____ healthy.
- Fruits and vegetables that are dark __orange_____ in color have lots of vitamin A.

WORD BANK

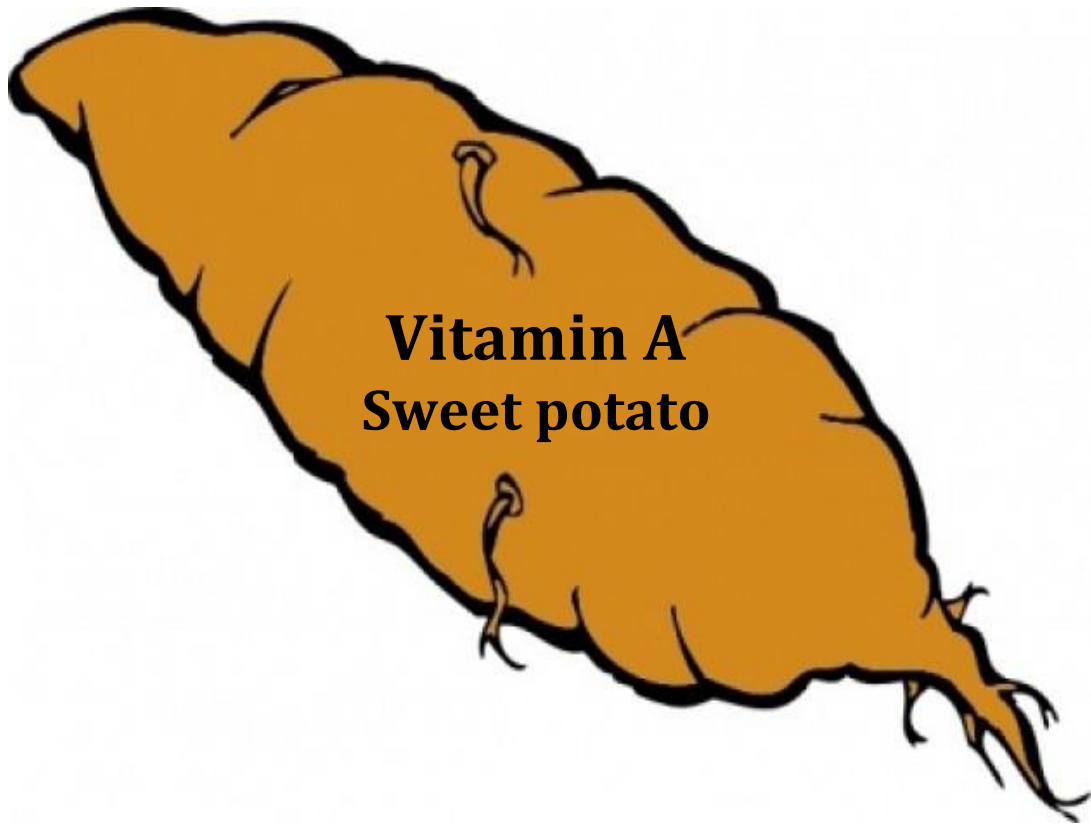
immune system teeth healthy blood full orange cooking
vegetables green, leafy vegetables vision mineral plant fruits
beat energy blood pressure banana skin heal oranges
strawberries



Vitamin C
Orange



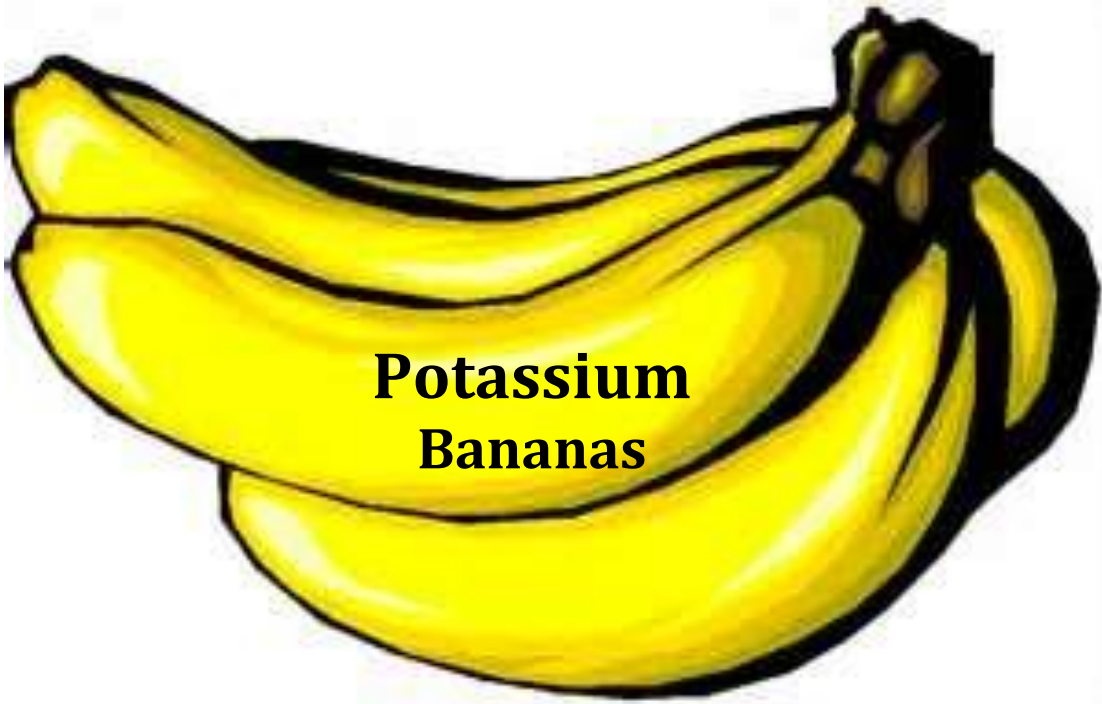
Folate
Spinach



Vitamin A
Sweet potato

Fiber
Many fruits and
vegetables





**Potassium
Bananas**



Healthy eyes



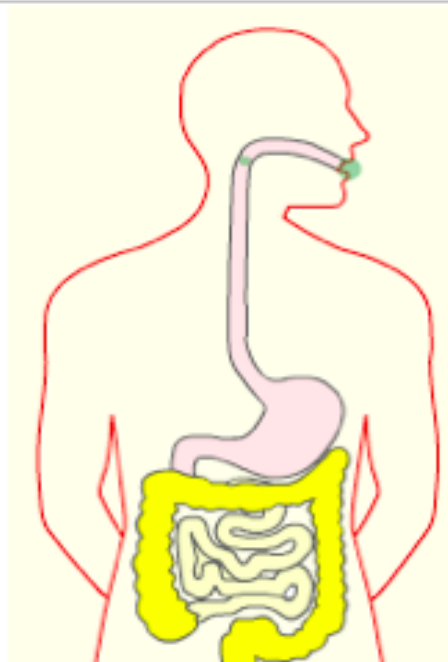
Strong heartbeat



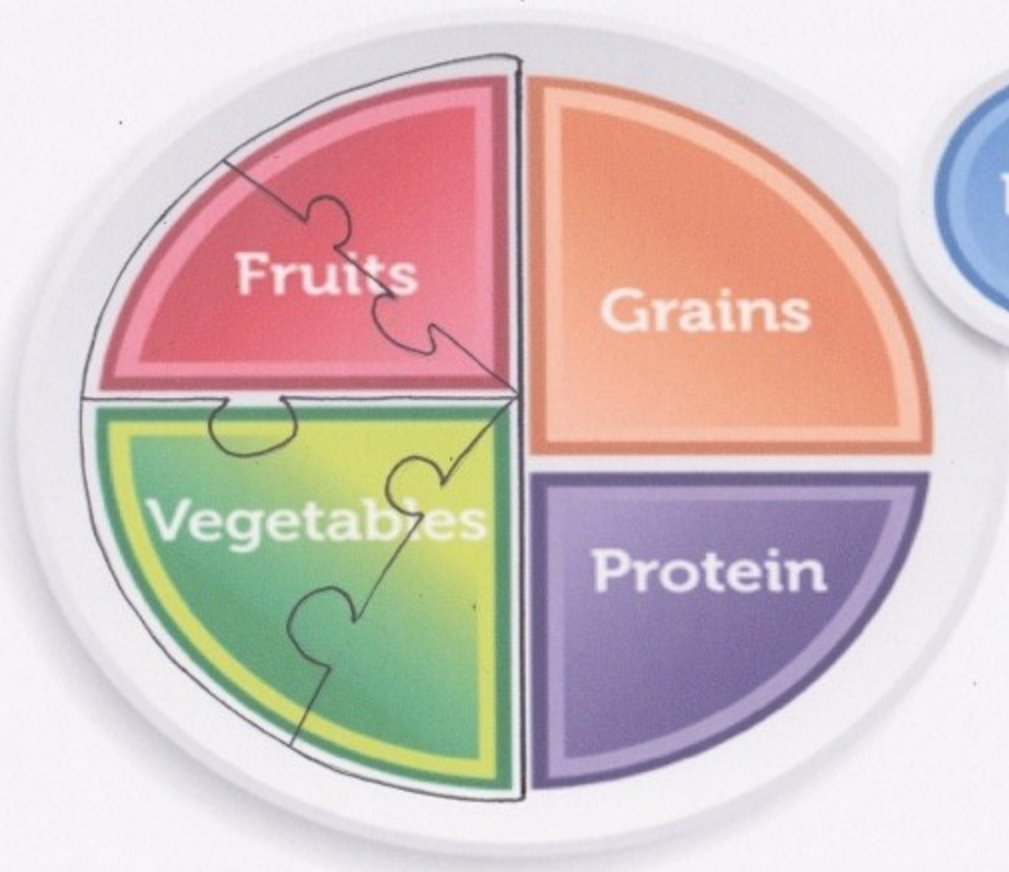
Healthy blood

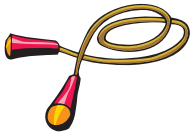


**Heals cuts and
scrapes**



**Full stomach and
healthy intestines**





Physical Activity: Fruit & Veggie Balloon Blast



PRIOR TO THE ACTIVITY

Choose one red fruit or vegetable picture card. Choose one orange fruit or vegetable picture card. Choose one yellow card, one green card, etc. There should be a total of six fruit and vegetable picture cards (one card for each color of the rainbow). Make sure to have a good mix of fruit and vegetable pictures. Place sticky tack on the side of the card with the picture. Do this for the six picture cards. Stick the cards, blank side up, on different walls around the room.

ACTIVITY INSTRUCTIONS

Has anyone played Follow the Leader? Today we are going to play Fruit and Veggie Follow the Leader. I'm going to be the leader, and I want everyone to line up behind me. Instruct the students to form a single file line. If the class is too large have the students line up in pairs. *Together we are going to find the fruits and vegetables around the room. I'm going to do a movement, and I want everyone to follow what I'm doing. Is everyone ready? Okay, let's go.*

Since there are six picture cards around the room, you will be doing six different movements. Use a different movement to get to each picture card. There are six movements listed below, but feel free to be creative and change any of the movements.

MOVEMENTS


1. March
2. Bunny hop
3. Walk while doing arm circles Note: If the students are lined up in pairs, have them do arm raises – arms are bent at your chest, straighten them above your head, bring them back down to your chest, and repeat.
4. Lunges
5. Skip
6. March with high knees

We are going to start out by marching. March to any card posted on the wall, but try to pick the one furthest away from the starting point. This allows the students to have a longer marching distance. *Here is our first picture.* Show the picture card to the students. *Can anyone tell me what this picture is?* The name of the fruit or vegetable. For example, tomato. *What color is this picture?* The color of the fruit or vegetable. For example, red. *Is it a fruit or a vegetable?* It is a vegetable. *Now I want everyone to do five jumping jacks, and I want everyone to count with me. Ready... 1, 2, 3, 4, 5. Good job, now we are going to find the next fruit or vegetable.* Note: If the next picture card is too close, keep doing the movement while the students are answering the questions.

Use another movement from the six listed above to get to the next fruit or vegetable picture card. When you reach each picture card you will ask these three questions. *What is this picture? What color is this picture? Is it a fruit or vegetable?*

MATERIALS:

- Laminated fruit and vegetable picture cards from learning activity
- Sticky tack



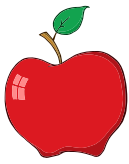
After you have asked the three questions, you will incorporate more physical activity into the lesson. Because there are six picture cards, you will do six different physical activities at each station. There are six physical activities listed below, but be creative. Feel free to change any of the activities or the number of repetitions completed. Have the students count along with you.

ACTIVITIES

1. 5 jumping jacks
2. 5 sit-ups
3. 5 toe touches - hands are all the way up in the air and you bend down to touch our toes.
4. Run in place for 5 seconds
5. 5 jumps - jump as high as you can
6. 5 squats

SUMMARY

Today we learned that fruits and vegetables come in all colors of the rainbow. What are the colors of the rainbow? (Red, orange, yellow, green, blue, and purple). The main thing I want you to remember when you go home is to eat fruits and vegetables from every color of the rainbow. You might even try some new fruits and vegetables that we learned about today.



Snack: Creamy Dreamy Fruit Pizza

SERVINGS: 2

INGREDIENTS

- 1 whole grain English muffin
- 2 tablespoons reduced fat strawberry cream cheese
- ¼ of one small banana, sliced (about 7 to 8 slices)
- ¼ cup mandarin orange sections, canned in light syrup or water and drained
- ¼ cup fresh strawberries, sliced
- 2 tablespoons blueberries

UTENSILS AND SUPPLIES

- Knife
- Cutting board
- Toaster or toaster oven
- ¼ cup dry measuring cup
- 1 Tablespoon measuring spoon
- Plate

DIRECTIONS

1. Slice English muffin in half and toast until golden brown.
2. Spread 2 tablespoons of strawberry cream cheese evenly on both halves of the toasted English muffin.
3. Top English muffin halves with banana slices, mandarin orange sections, blueberries and strawberry slices.

NOTE TO EDUCATOR

When making this recipe in class, slice each English muffin half in quarters. This is the class snack size, which will serve eight students.



ALTERNATIVE FRUIT COMBINATIONS

Each alternative recipe still contains 1 whole grain English muffin and 2 tablespoons of reduced fat strawberry cream cheese, but the fruits can be changed. Try these different fruit combinations.

Combination 1:

- ¼ cup pineapple chunks, canned in light syrup and drained
- ¼ cup mandarin orange sections, canned in light syrup or water and drained
- ½ of one small banana, sliced
- 1 tablespoon dried, shredded coconut

Combination 2:

- ½ of one small banana, sliced
- ¼ cup mandarin orange sections, canned in light syrup or water and drained
- 2 tablespoons blueberries

Combination 3:

- ¼ cup strawberries, sliced
- ½ of one small banana, sliced
- ¼ cup green, seedless grapes, sliced
- 2 tablespoons granola

NUTRITION ANALYSIS PER SERVING

Nutrition Facts

Serving Size (111g)		Servings Per Container	
Amount Per Serving			
Calories 120	Calories from Fat 25		
% Daily Value*			
Total Fat 2.5g	4%		
Saturated Fat 1.5g	8%		
Trans Fat 0g			
Cholesterol 10mg	3%		
Sodium 140mg	6%		
Total Carbohydrate 24g	8%		
Dietary Fiber 6g	24%		
Sugars 9g			
Protein 4g			
Vitamin A 10%	Vitamin C 35%		
Calcium 8%	Iron 4%		
<small>*Percent Daily Values are based on a 2,000 calorie diet. Your daily values may be higher or lower depending on your calorie needs:</small>			
	<small>Calories:</small>	<small>2,000</small>	<small>2,500</small>
<small>Total Fat</small>	<small>Less than</small>	<small>65g</small>	<small>80g</small>
<small>Saturated Fat</small>	<small>Less than</small>	<small>20g</small>	<small>25g</small>
<small>Cholesterol</small>	<small>Less than</small>	<small>300mg</small>	<small>300mg</small>
<small>Sodium</small>	<small>Less than</small>	<small>2,400mg</small>	<small>2,400mg</small>
<small>Total Carbohydrate</small>	<small>Less than</small>	<small>300g</small>	<small>375g</small>
<small>Dietary Fiber</small>	<small>Less than</small>	<small>25g</small>	<small>30g</small>
<small>Calories per gram:</small>			
	<small>Fat</small> 9	<small>Carbohydrate</small> 4	<small>Protein</small> 4



COMMONLY ASKED QUESTIONS

Q: What is the difference between fruits and vegetables?

A: A fruit is the part of a flowering plant that contains the seeds and a vegetable is the other part of the plant (root, leaf and stem) not including the fruit. This definition classifies squash, pumpkins, cucumbers, tomatoes, peas, beans, corn, eggplants, sweet peppers and avocados as fruits. However, the culinary world defines fruits and vegetables a little differently. They classify a fruit as any part of the plant with a sweet flavor and a vegetable as any part of the plant with a savory flavor. In this lesson, we will be using the culinary definition to classify fruits and vegetables. However, do not explain to the students that fruits are sweet and vegetables are savory. This may cause the students to only eat fruits and to avoid vegetables even though vegetables can be sweet like sweet peppers.

Q: Is corn a vegetable or a grain?

A: Corn can be classified as a vegetable or a grain. The Whole Grains Council explains that fresh corn is usually considered a vegetable and dried corn, including popcorn, is considered a grain.

Q: Are dried beans and peas vegetables or protein foods?

A: Dried beans and peas can be classified as vegetables or protein foods. Typically, individuals who eat meat count dried beans and peas as vegetables. Individuals who don't eat meat (vegetarians) count dried beans and peas as protein foods because they are an excellent source of protein.

Q: Why is there only one blue fruit?

A: In this lesson, we classified fruits and vegetables using the color pattern of the rainbow. Usually blue and purple fruits and vegetables are classified together. When the two colors were split there became fewer blue fruits and vegetables.

Q: What about the white and brown fruits and vegetables?

A: In this lesson, we classified fruits and vegetables using the color pattern of the rainbow. However, this color pattern excluded white and brown fruits and vegetables including potatoes, cauliflower, mushrooms and onions. Also, we categorized a banana as a yellow fruit, but it's really a white fruit. Usually, fruits and vegetables are categorized by these colors: red, yellow/orange, white or tan/brown, green, and blue/purple.

Q: What other major nutrients do fruits and vegetables contain?


A: This lesson only focuses on vitamin A and vitamin C, but fruits and vegetables also may contain vitamin E, calcium, fiber, folate, potassium, magnesium and/or iron.

Q: How else does vitamin A help the body?

A: This lesson explains that vitamin A helps our eyes so we can see. However, vitamin A is needed for skin health, immunity, bone growth, reproduction and proper cell function.

Q: How else does vitamin C help the body?

A: This lesson explains that vitamin C aids in healing our cuts and scrapes. However, vitamin C is also important for teeth and gum health, growth and repair of tissues and iron absorption.



Dear Parent or Caregiver,

Today your child learned about the Fruit group and the Vegetable group of MyPlate. Your child learned that fruits and vegetables contain fiber, vitamins and minerals, all of which are needed to maintain good health. In particular, your child learned about fiber, potassium, folate, vitamin A, and vitamin C by reading and listening to educational passages. The key messages from each passage include the following:

- Folate is found in dark green, leafy vegetables, and is needed to keep your blood healthy.
- Potassium keeps our heart beating and is important for maintaining a healthy blood pressure. Bananas are a great source of potassium.
- Fiber was described as being important for keeping your stomach full and your intestines healthy. Fiber can be found in many different fruits and vegetables.
- Vitamin A is important for proper eye health/vision. Some of the best sources of vitamin A are foods with a deep orange color, such as sweet potatoes and carrots.
- Vitamin C is important for healing cuts and scrapes, as well as keeping your immune system strong. Vitamin C can be found in citrus fruits such as oranges and grapefruits, as well as a variety of other fruits and vegetables.

Today, we also learned that fruits and vegetables should make up half of your plate, according to the USDA's MyPlate. As parents or caregivers, you play a big part in helping your child develop good eating habits. Children between the ages of 4 and 8 years old should eat 1 to 1½ cups of fruits and 1½ cups of vegetables every day. Girls between the ages of 9 and 13 should eat 1½ cups of fruits and 2 cups of vegetables every day. Boys between the ages of 9 and 13 should eat 1½ cups of fruits and 2½ cups of vegetables every day. There is a recipe for a healthy snack on the back of this letter that may help you get started. The following are suggestions for other ways that you can reinforce the lesson that we taught today and help your child eat more fruits and vegetables:

- Ask your child to show you what he/she learned today. If they have trouble remembering, prompt them with the key messages listed above. Let your child help with meal planning. When shopping for fruits and vegetables, ask your child which fruits and vegetables he/she likes and let them help you wash them. Children are more likely to eat the foods they help choose and prepare.
- Introduce new fruits and vegetables every time you go to the grocery store. Children like to eat fruits and vegetables that are familiar to them. Introducing new fruits and vegetables to your child increases the chance that they will eat a wider variety of fruits and vegetables.

With the lesson your child learned today and these at-home activities, we hope that your child will recognize why fruits and vegetables are good for them and that they will fill half of their plates with fruits and vegetable every day. To learn more about fruits and vegetables, visit the USDA MyPlate website: www.ChooseMyPlate.gov.

Sincerely,

LESSON 4



Delicious Dairy

Concept

Foods from the Dairy group provide children with important nutrients such as calcium, which is needed for strong bones and teeth. This lesson introduces children to the foods in the Dairy group and teaches them how much they need and why dairy foods are important for their bodies.

Background

The Dairy group is the blue group on the MyPlate symbol. It is important for children to consume the recommended amount of Dairy group foods every day for a healthy body. This group includes milk, yogurt, cheese, pudding and ice cream (1). Dairy group foods provide nutrients such as calcium, vitamin D, potassium and magnesium. These nutrients are important for developing and maintaining strong bones and teeth in young children (2-5). Low-fat and fat-free Dairy group foods provide the health benefits without adding extra fat and calories in the diet. It is important to teach children how much they need and to choose lower fat varieties of Dairy group foods so they can stay within their calorie needs and maintain a healthy body weight.

The recommended amount of Dairy group foods varies depending on a child's age. Children between the ages of 4 and 8 need two and one-half cups per day (6). These intake recommendations can be achieved by consuming fluid milk or by consuming varying amounts of other Dairy group foods. Even though flavored milk, such as chocolate or strawberry milk has added sugar, it is one way to provide calcium to children who do not like white milk. While one cup of milk is easy to measure, knowing how much other Dairy group foods count as 1 cup of milk is more difficult. Each of the following foods counts as 1 cup of Dairy group foods (1):

WHAT COUNTS AS 1 CUP OF DAIRY?

yogurt	8 ounce container
cottage cheese	$\frac{1}{3}$ cup
shredded cheese	$\frac{1}{3}$ cup
low-fat ice cream	1 $\frac{1}{2}$ cups or 3 scoops
pudding made with milk	1 cup
low-fat milk	1 cup
calcium fortified soy milk	1 cup
frozen yogurt	1 cup
non-processed cheese slices	2 ounces (2 slices)
processed cheese	3 ounces (3 slices)

It is important to note that some foods that have milk in their name are not Dairy group foods. For example, soy milk and almond milk are not Dairy group foods unless they are fortified with calcium and vitamins A and D. In addition, some foods made from milk do not have enough calcium to be included in the Dairy group. These include butter, sour cream, and cream cheese (1).

The Dairy group is included on the MyPlate symbol because milk is a great source of calcium, vitamin D, potassium and magnesium. Calcium is needed by children to make and maintain strong bones and teeth. This mineral is especially important for children because they are growing rapidly at this age. Eating an adequate amount of calcium early in life has been shown to decrease the risk for osteoporosis (os-tee-oh-puh-ROH-sis) with advancing age. Osteoporosis is a disease in which the bones become brittle, which makes them more susceptible to breakage (3). Vitamin D promotes calcium absorption and helps the body maintain the right amount of calcium in the blood (4). Milk, soy milk, almond milk, breakfast cereals, and yogurt that have been fortified with vitamin D are excellent sources of this nutrient (1). In addition, getting 5-30 minutes of sun exposure without sunscreen twice per week can lead to sufficient vitamin D production (4). Like calcium, potassium and magnesium are minerals that are needed by the body. Potassium is important for controlling blood pressure and allowing nerves and muscles to communicate (5). Magnesium is needed for over 300 reactions in the body, including maintaining strong bones, supporting a healthy immune system, and controlling blood pressure (6). While Dairy group foods provide other nutrients, these four are the most noteworthy.

When encouraging children to consume Dairy group foods, focus on low-fat and fat-free milk products. Saturated fat is naturally present in whole milk and other Dairy group foods made with whole milk. Saturated fat is a type of fat that should be limited. Choosing low-fat and fat-free Dairy group foods is a good way to reduce calorie and fat intake. As the incidence of childhood obesity continues to rise, finding ways to cut excess fat and calories from the diet is increasingly important.

Although a large portion of the population can eat and drink Dairy group foods without experiencing any problems, some people must limit or avoid consumption of Dairy group foods because of milk allergies and/or lactose intolerance. It is essential to understand the differences between these conditions and what can be done to ensure proper intake of calcium in those who have either or both of these problems. A milk allergy is caused when the body has a negative reaction to the protein found in Dairy group foods. The allergic response can range from minor symptoms, such as a rash, to more deadly symptoms, such as shock or a blockage of the airway. Before encouraging children to try Dairy group foods, be sure to find out if there are any students in the



class who have a milk allergy. If a child has a milk allergy, urge them to consume other foods rich in calcium, such as 100% fruit juice fortified with calcium, calcium fortified soy milk (providing they don't have an allergy to soy), and certain vegetables like spinach, broccoli, and bok choy in place of Dairy group foods. Lactose intolerance, on the other hand, is not as harmful as a milk allergy. Individuals with lactose intolerance cannot digest lactose, a natural sugar found in milk. This leads to cramping, bloating, and gas (7). Unlike children with a milk allergy, children who are lactose intolerant are able to eat milk products low in lactose or free of lactose such as yogurt, cheese and lactose-free milk (8).

In summary, the amount of Dairy group foods needed every day to help ensure an adequate intake of nutrients such as calcium, vitamin D, potassium and magnesium varies based on age. Children between the ages of 4 and 8 need two and one-half cups per day, while children between the ages of 9 and 13 need three cups per day (2). Choosing low-fat and fat-free Dairy group foods is a great way to get the nutritional benefits associated with these products without the extra fat and calories. Dairy group foods may not be an option for those who have a milk allergy, so it is important to promote other foods rich in calcium for children who have a milk allergy. Children who are lactose intolerant can choose foods low in lactose or drink lactose-free milk.

*For a more complete list of foods, see Appendix 14 of the 2010 Dietary Guidelines for Americans (9).

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3rd Grade Lesson

LEARNING OBJECTIVES

The students will state that:

- state that foods from the Dairy group contain calcium.
- identify the Dairy group foods that contain the most vitamin D.
- recognize that we need calcium and vitamin D to build strong bones.
- recognize that it is best to choose low-fat and fat-free Dairy group foods.

BEHAVIORAL OBJECTIVE

The students will:

- consume at least 3 cups of Dairy group foods every day.
- choose low-fat and fat-free foods from the Dairy group.

RECOMMENDED BOOK

Eating Right with MyPlate: Dairy, by Megan Borgert-Spaniol

Available for purchase at <http://www.bellwethermedia.com/blastoff/eating-right-with-myplate/dairy-group>

FLORIDA STANDARDS LEARNING ACTIVITY

LACC.3.RF.4.4 Read with sufficient accuracy and fluency to support comprehension.

- a. Read grade-level text with purpose and understanding.
- b. Read grade-level prose and poetry orally with accuracy, appropriate rate, and expression.
- c. Use context to confirm or self-correct word recognition and understanding, rereading as necessary.

LACC.3.RI.1.1 Ask and answer questions to demonstrate understanding of a text, referring explicitly to the text as the basis for the answers.

LACC.3.RI.3.7 Use information gained from illustrations (e.g., maps, photographs) and the words in a text to demonstrate understanding of the text (e.g., where, when, why, and how key events occur).

LACC.3.RL.1.3 Describe characters in a story (e.g., their traits, motivations, or feelings) and explain how their actions contribute to the sequence of events.

LA.3.2.2.2 The student will use information from the text to answer questions related to explicitly stated main ideas or relevant details;

PHYSICAL EDUCATION

- PE.3.R.1.1 Work cooperatively with peers of differing skill levels.
- PE.3.R.1.2 Willingly try new activities.
- PE.3.R.2.3 Choose to participate in group physical activities.



Learning Activity

MATERIALS

- Detective Notebook (pdf file)
- Suspect cartoon characters (pdf file)
- “The Mystery of the Missing Fat-free Milk”, provided as a pdf file
- Roll of magnetic adhesive/tape or some other adhesive that can adhere to a whiteboard/blackboard

PRIOR TO THE ACTIVITY

Print one copy of the Detective Notebook and “The Mystery of the Missing Fat-free Milk” story for each student. Print one copy of each suspect cartoon character. Place a magnet on the back of each cartoon character.

ACTIVITY INSTRUCTIONS


Instruct students to sit at their desks, if they aren’t already seated. *Hi everyone, today we are going to talk about the Dairy group. You might remember learning about the Dairy group in second grade. Who can tell me the color that represents the Dairy group?* Correct answer: blue. *Who can name a food that belongs in the Dairy group?* Allow students to answer. Correct answers include: milk, cheese, yogurt, pudding, ice cream, calcium-fortified soy milk. *Very good! Milk, cheese, yogurt, pudding, ice cream and calcium-fortified soy milk all belong to the Dairy group. Raise your hand if you can tell me how many cups of Dairy group foods you need every day. I’ll give you a hint: it’s just a little bit more than what you needed in second grade.*

Allow students to try to answer. They need at least 3 cups of Dairy group foods every day. *Good, third graders need at least 3 cups of Dairy group foods every single day. Who knows what important mineral is found in all Dairy group foods?* Allow students to answer. The correct answer is calcium. *Very good! We need to eat Dairy group foods because they contain calcium. Who can tell me why we need calcium?* Allow students to answer. *We need calcium to help our bodies build strong bones and teeth. That’s right; we need calcium to help our bodies build strong bones and teeth.*

Now, who remembers what kind of Dairy group foods we should eat? Allow students to try to answer before giving them a hint. *I’ll give you a hint: all Dairy group foods are good choices, but _____ and _____ Dairy group foods are the best choices.* Allow students to try to answer again. The correct answer is that low-fat and fat-free Dairy group foods are the best choices for us. *We should choose low-fat and fat-free Dairy group foods—like fat-free milk, low-fat cheese, and fat-free or low-fat yogurt—because they have less fat, which is better for us. Low-fat and fat-free Dairy group foods make it easier for our bodies to stay healthy and strong.*

We know that Dairy group foods contain calcium. Some Dairy group foods also contain a vitamin called vitamin D. Let’s say the name of this vitamin together – “vitamin D.” Milk and yogurt are the two Dairy group foods that have the most vitamin D. Raise your hand if you know why we need vitamin D. Allow students to try to answer. The students will probably not know, but allow them to guess anyway. *Those are good guesses. We need vitamin D because it helps our bodies build and maintain strong bones. Doesn’t that sound familiar? What else is in Dairy group foods that helps us build strong bones?* Students should answer with calcium. *Very good! We need calcium AND vitamin D to build strong bones. They work together to keep us strong.*

Who remembers the two Dairy group foods that have the most vitamin D? Allow students to answer. Milk and yogurt contain the most vitamin D. *Good job. We can get vitamin D by eating milk and yogurt, but we also can get vitamin D another way. Raise your hand if you know how else we can get vitamin D.* Allow a few



students to try to answer before giving them a hint. *I'll give you a hint: it's up in the sky.* Allow more students to try and answer. *We can also get vitamin D from being outside in the sun. Our bodies can make vitamin D just by standing outside in the sun! Does this mean that we can stand outside all day without any sunscreen?* Prompt students to say no. *That's right. We would hurt our skin if we stood outside all day without sunscreen.*

Now, we're going to do a fun activity that will help you remember why our bodies need calcium AND vitamin D to build strong bones. We are going to read a story called, "The Mystery of the Missing Fat-free Milk". This story has several characters. Let me introduce you to two of the characters of the story. They are: Fat-free Milk and Cheddar Cheese. Show the pictures of the Fat-free Milk and Cheddar Cheese characters and attach each character to the board. *You will meet the rest of the characters later. In this story, Fat-free Milk is missing from the dairy shelf, and Cheddar Cheese, the official detective for the refrigerator, is trying to find out what happened to him. We are going to do some detective work with your team to try to solve "The Mystery of the Missing Fat-free Milk." Each of you will get a copy of the story and your own Detective Notebook.* Distribute a reading passage and a Detective Notebook to each student. Read the passage together as a class, choosing a volunteer for each paragraph. *Who would like to volunteer to read the first paragraph?* Select a student to read. *Very good. Thank you.*

Who would like to read the second paragraph? Select a student to read the second paragraph. When the student gets to the line that says, "Now, let's write these clues in your Detective Notebook!" direct the students to look at their Detective Notebook. *Great job! Fat-free Milk was food-napped. Who knows what that means?* Call on students. *That's correct, it's like being kidnapped, but in this case, we are talking about a food that was stolen against its will, so the author chose the words, food-napped. Now, let's look at your Detective Notebook. Why would someone want to food-nap Fat-free Milk? What do you know from reading the story? There are three reasons. You need to fill in the missing words for each of these reasons. Let's look at the first reason. The first reason says, "Fat-free milk is a f_____ -f_____ dairy food." The word we are looking for has two parts. The first part starts with an f and the second part starts with an f as well. Look at the paragraph we just read and look for the word that fits.* Give the students time to search for and write the words their Detective Notebook. *Who found the words that are part of the first reason or motive?* Call on a student. The correct answer is fat-free. If the answer given was not correct say something appropriate like "I think there is a better answer", and call on another student. Repeat the same scenario for the next two motives using the strategy outlined above.

Think about what we just read and fill in the missing words for the first clue. The first clue has four missing words that were clues you read in the story. It says that the food-napper is not f_____ -f_____ and not l_____ -f_____. The first missing word has two parts. The first part starts with an f and the second part starts with an f as well. Look at the paragraph we just read and look for the clue that fits. Give the students time to search for and write the words in their Detective



Notebook. *Who found the clue that fits?* Call on a student. The correct answer is fat-free. If the answer given was not correct say something appropriate like “I think there is a better answer”, and call on another student. Repeat the same scenario for the next two words that are part of the first clue, then move on to clues 2 and 3, using the strategy outlined above. *We have one more thing to do before we read the next part of the story. There is an important message to remember in this story. Who can tell me what it says?* Call on a student. The words that are needed to complete the sentence are calcium, vitamin D and bones. *Good job! Calcium and vitamin D help your body build strong bones!*

Let’s continue reading the story. Who would like to read the next paragraph? Select a student to read the third paragraph. Stop after this paragraph and use the strategy outlined above to answer clues 4 and 5 and

I need one more volunteer to finish reading the story. Who wants to be our next reader? Select a student to read the rest of the story.

Okay class, let’s try to solve the mystery together. You already met Fat-free Milk and Cheddar Cheese, but there are other characters who hang out in the refrigerator who could be the food-napper. Let me introduce them to you. They are: Swiss Cheese, Fat-free Chocolate Milk, Whole Milk Yogurt, Lemonade, Chocolate Pudding and Soda. I am going to ask you some questions to get you started. If the answer to the question is “TRUE”, you will put a check mark in a certain box in your Detective Notebook. If the answer is “FALSE”, you will leave it blank. This is how we will help Cheddar Cheese solve the mystery of who is guilty of food-napping Fat-free Milk. One of our characters is guilty and the rest are innocent. Write the words Guilty and Innocent on the board. The character who has a check mark in every box is probably guilty. Are you ready?

Let’s talk about each of our suspects, starting with Swiss Cheese. Is Swiss Cheese dark in color? True or false? Call on a student for the answer. *That’s correct. Swiss Cheese is light in color, so the answer is FALSE, which means we will NOT put a check mark in the first row under the column labeled “dark color”.* Show the students the box to which you are referring by pointing it out on your Detective Notebook.

Let’s continue. Is Swiss Cheese sweet? Call on a student for the answer. *Right again. The answer is FALSE. Swiss Cheese is not sweet, which means we will NOT put a check mark in the first row under the column labeled “dark color”.* Show the students the box to which you are referring by pointing it out on your Detective Notebook.

The next one is a little tricky, so listen carefully. True or false? Swiss Cheese is NOT a fat-free or low-fat dairy food? Call on a student for the answer. *The answer is TRUE. Swiss Cheese is not a fat-free or low-fat dairy food, so you should put a check mark in the first row under the column that says, “Is not a fat-free or low-fat dairy food”.*

Now, is this statement true or false? Swiss Cheese does not provide calcium. Call on a student for the answer. Swiss Cheese does provide calcium, so this is a false statement, which means you should NOT put a check mark in this column.

Finally, Swiss Cheese is NOT a good source of vitamin D? True or false? Call on a student for the answer. *The answer is TRUE. Swiss Cheese is not a good source of calcium, so put a check mark in the first row under the last column. By the way, who*



remembers which foods are good sources of calcium? Call on a student for the answer. *That's right. Milk and yogurt are good sources of calcium.*

So, for Swiss Cheese, you should have a check mark under the third and fifth columns. Check to see if this is what you have. Do you think Swiss Cheese is guilty or innocent? Let the students answer. Put the picture of the character under the heading guilty or innocent heading you wrote on the board.

Continue to use the strategy outlined above for each of the suspects shown in the Detective Notebook. Once the students determine the guilty party correctly, say, *That's right! Soda is the guilty party! Great job everyone! You are fantastic detectives!*

Now, there is one more question to answer in your Detective Notebook.

DETECTIVE NOTEBOOK

MOTIVE

Name 3 reasons why Fat-free Milk was food-napped.

1. Fat-free milk is a f_____ - f_____ dairy food.
2. Fat-free milk as v_____.
3. Fat-free milk has c_____.

IMPORTANT MESSAGE: C_____ and
v_____ help your body build
strong b_____.



CLUES

Write 5 clues from the story that will help Cheddar Cheese find the food-napper.

The food-napper:

1. is not a f_____ - f_____ or
l_____ - f_____ dairy food.
2. does not have c_____.
3. does not have v_____.
4. is d_____ in color.
5. is sw_____.

DETECTIVE NOTEBOOK

MOTIVE

Name 3 reasons why Fat-free Milk was food-napped.

1. Fat-free milk is a **fat-free** dairy food.
2. Fat-free milk as **vitamin D**.
3. Fat-free milk has **calcium**.

IMPORTANT MESSAGE: Calcium and vitamin D help your body build strong bones.



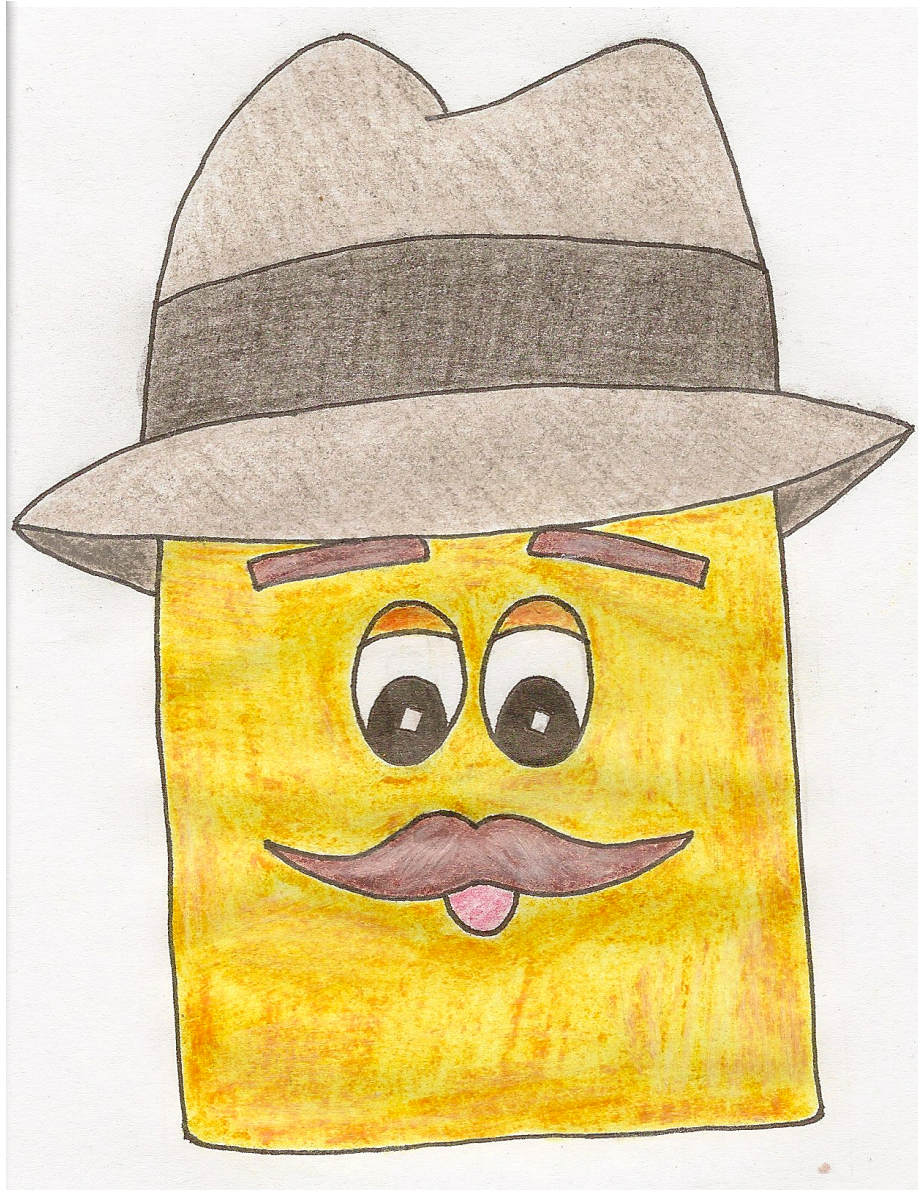
CLUES

Write 5 clues from the story that will help Cheddar Cheese find the food-napper.

The food-napper:

1. is not a **fat-free** or **low-fat** dairy food.
2. does not have **calcium**.
3. does not have **vitamin D**.
4. is **dark** in color.
5. is **sweet**.





The Mystery of the Missing Fat-free Milk



WORD BANK

1. Expiration Date	The date after which a food should no longer be good to eat
2. Food-nap	To steal a food product
3. Food-napper	The name used to refer to the character that stole a food product
4. Suspicious	Causing questions or doubt; fishy

The refrigerator is colder than usual this morning, and I know it's because the Fat-free Milk has gone missing overnight. As the sharpest block of Cheddar Cheese around, I know the other dairy foods are counting on me to find him. I've been lead detective in this fridge for weeks, and I've solved every case. Foods around here know they can count on me. You may be wondering why I've asked for your help with this case. Well, my **expiration date** is coming soon. I'm just not as fresh as I used to be. Can I count on you to help me solve the case? Use your detective notebook to write down clues and other information to help me find fat-free milk!

Let's go to work. Why would someone **food-nap** Fat-free Milk? First of all, he's fat-free which makes him one of the best dairy food choices. Whoever did this is not a fat-free or low-fat dairy food. I think fat-free milk was food-napped because he has calcium and vitamin D. Calcium and vitamin D work together to build strong bones. Remember, not all dairy foods are good sources of vitamin D—yogurt and milk have the most. The food-napper must be jealous of Fat-free Milk. We are looking for a food-napper that:

1. Is NOT a fat-free or low-fat dairy food
2. Does NOT have calcium
3. Does NOT have vitamin D




Now, let's write these clues in your Detective Notebook!

There are probably more clues near the dairy shelf. Let's take a look and see what we find. Aha! I see a dark puddle coming from the dairy shelf. This is very **suspicious**, don't you agree? Let's see what this puddle tastes like. Interesting—it's sticky and very sweet!







Wait a second, do you hear that? Listen closely. Someone is yelling! It's coming from the fruit drawer—quick, let's go!

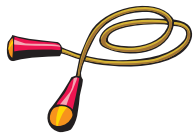
Oh no, we're too late! The food-napper must have known we were on the trail because fat-free milk has been spilled everywhere. The entire fruit drawer is a sea of white, delicious liquid. An innocent dairy product has been lost far too soon before his expiration date.

Now more than ever we have to find the food-napper! I've rounded up a group of suspects. Now it's up to you to find out who did this to Fat-Free milk. Use your detective notebook to help us solve the case.

	Dark Color (True or False?)	Sweet (True or False?)	Is not a fat-free or low-fat dairy food (True or False?)	Does not provide calcium (True or False?)	Is not a good source of Vitamin D (True or False?)
Swiss Cheese 					
Fat-free Chocolate Milk 					
Whole Milk Yogurt 					
Lemonade 					
Chocolate Pudding 					
Soda 					

The USDA and the University of Florida IFAS Extension are equal opportunity providers and employers. The Supplemental Nutrition Assistance Program (SNAP) provides nutrition assistance to people with low income. It can help you buy nutritious foods for a better diet. To find out more, contact 1-866-762-2237. TTY/TTD/FRS dial 711. This material was funded by USDA's Supplemental Nutrition Assistance Program – SNAP.

	Dark Color (True or False?)	Sweet (True or False?)	Is not a fat-free or low-fat dairy food (True or False?)	Does not provide calcium (True or False?)	Is not a good source of Vitamin D (True or False?)
Swiss Cheese 	F	F	T	F	F
Fat-free Chocolate Milk 	T	T	F	F	F
Whole Milk Yogurt 	F	T	T	F	F
Lemonade 	F	T	T	T	T
Chocolate Pudding 	T	T	T	F	T
Soda 	T	T	T	T	T



Physical Activity

MATERIALS

- Blue balloons (enough so that exactly half of the students have one)
- List of applicable body parts (below)
- Blow up the balloons beforehand. If balloons are too difficult to incorporate into the lesson, a list of alternatives can include (but are not limited to):
- Mini playground balls (available at <http://www.walmart.com/ip/Little-Tikes-Mini-Playground-Balls-Set-of-3/22717036>)
- Stress balls (available at <http://www.officeplayground.com/Round-Stress-Ball-P1661.aspx>)
- Styrofoam balls (available in a variety of sizes at <http://www.save-on-crafts.com/styrofoamballs.html>)
- Bean bags (available at <http://www.thefind.com/family/browse-square-bean-bags>)
- Preferably, the object should be round so that it is a bit harder for the children to balance it. It is okay if the objects are not blue; however, blue objects would reinforce the message that the Dairy group is the blue portion of MyPlate. Size of the object is not crucial, although it should be large enough and light enough so that the activity is not impossible. For example, a ping pong ball may be too small and a soccer ball may be too heavy.

ACTIVITY INTRODUCTION

Instruct students to return to their desks, if they are not already seated. *In our last activity, you learned which Dairy foods contain the most vitamin D. Who can tell me which Dairy foods contain the most vitamin D?* Allow students to answer. Milk and yogurt contain vitamin D. *Wonderful! Raise your hand if you can tell me why we need vitamin D.* Call on students. We need vitamin D because it helps us build strong bones. We need calcium AND vitamin D to build strong bones. *Correct. We need vitamin D because it works with calcium to build strong bones. Together, they keep us healthy and strong. Now, we're going to do an activity to help you remember that vitamin D and calcium work together to help us build strong bones.*

Move the desks so that there is a large amount of space in the middle of the classroom. Instruct the students to number off as "1, 2, 1, 2, etc." Once everyone has a number, instruct the "1's" to form a line. Then, instruct the "2's" to form a line across from the "1's" line. Give everyone in one of the lines a balloon. Instruct the two lines to face each other. Note: if there is not enough room in the classroom to form two lines, have each set of partners find their own space somewhere in the classroom. *Everyone in this line raise your hand* (choose a line). *All of you are "calcium."* *Everyone in this line raise your hand* (choose the other line). *All of you are "vitamin D."* *The person standing across from you is your partner. When I call out a body part, you and your partner must keep the balloon between you using the body part that I called out, and you need to do this without popping the balloon and without letting the balloon touch the floor. So, if I call out "elbow," you and your partner must use your elbows to keep the balloon off of the ground. Remember, do not let your balloon pop!* Demonstrate what they need to do or have two of the students demonstrate with guidance from you. Make sure everyone understands the directions before beginning.

Call out the first body part (body parts are listed below). When the students are situated with the first body part, instruct the pairs to do a movement together while keeping the balloon steady (movements are listed below). For example, if students are keeping the balloon steady with their elbows, it would be fun and challenging to instruct them to move their arms up and down like a bird. Call out the next body part and instruct the students do a different movement. Continue until the students begin to lose interest.

BODY PARTS

Right Thumb

Left Thumb

Right index finger

Left index finger

Right pinky

Left pinky

Forehead

Stomache

Knee

Palm of hand

Bottom

Back

Elbow

Ear

Shoulder

Foot



MOVEMENTS

Move in the same direction (point in the direction which you want the students to move)

Bend down and touch the ground

Take a step closer to one another

Take a step farther apart

Jump up and down

Flap arms like a bird (for body parts like elbows, fingers, hands)

Twist torso (for body parts like the bottom, back, shoulders, forehead)

Move knees back and forth (for knees)

SUMMARY

Instruct students to return to their seats. Collect the balloons. *Wasn't that fun, everyone? Let's talk about the game you just played. Was it hard to balance the balloon between you and your partner?* Allow students to give you feedback. Ask questions such as what the hardest part was and why it was difficult. *Could you have balanced the balloon without your partner?* Students should answer "no." *That's right. It would have been extremely difficult or impossible to balance the balloon with those body parts by yourself. Remember, calcium and vitamin D work together to help your body build strong bones, just like you worked with your partner to keep the balloon between yourselves.*



Dear Parent or Caregiver,

Today your child learned about the Dairy group. The Dairy group includes milk, cheese, yogurt, pudding, and ice cream. Dairy group foods contain many nutrients, but are especially important because they contain calcium. Calcium plays an important part in keeping our teeth and bones strong and healthy. All of the foods from the Dairy group contain calcium, but it is best to choose low-fat and fat-free Dairy group foods. Low-fat and fat-free dairy foods have less saturated fat and calories. Eating too much saturated fat and more calories than needed can have a negative effect on your child's long-term health.

As parents or caregivers, you play a big part in helping your child develop good eating habits. Children between the ages of 4-8 need at least 2 ½ cups of dairy foods every day, while children between the ages of 9 and 13 need at least 3 cups of dairy foods every day. The snack recipe on the back of this letter can help you get started. If your child is lactose intolerant or has a milk allergy, there are other ways to get calcium. Try giving your child calcium-fortified almond milk, soy milk, or orange.

Doing the following activities with your child is a great way to help your child learn about Dairy foods and help them remember what they learned about calcium. It may even help them improve their eating habits.

- During this lesson, your child learned the importance of calcium and vitamin D. Your child read a short mystery story that reinforced important information about Dairy group foods and acted as a detective to solve the mystery.
- During this lesson, your child worked with a partner to balance a balloon between two body parts, such as their elbows. This helped demonstrate the partnership between calcium and vitamin D—they work together to build strong bones.
- Let your child help you grocery shop. Allow him or her to choose low-fat and fat-free dairy foods at the store. When children help choose their foods, they are more likely to eat them.

We hope that the lesson your child learned today and the activities we suggest for doing at home will motivate your child to eat a variety of Dairy group foods, foods that are calcium-rich and provide a variety of other nutrients as well. To learn more about the Dairy group and calcium visit the USDA MyPlate website: www.ChooseMyPlate.gov.

Sincerely,

LESSON 5



The Power of Protein Foods

Concept

Although most children consume enough protein on a daily basis, many have never learned what foods provide protein and where those foods come from. This lesson teaches children about the sources of protein foods and why protein foods are an important part of the diet.



Background

The Protein Foods group is the purple section on MyPlate. It includes foods such as lean cuts of beef, pork, chicken, turkey, fish, eggs, nuts, seeds, and dried peas and beans (i.e., legumes like split peas, black beans, pinto beans, kidney beans and others). These foods are grouped together because they are the main sources of protein in the diet. The www.choosemyplate.gov website includes helpful tips for choosing and preparing foods from the Protein Foods group. In order to get the most nutritional benefit from protein foods, it is important to choose lean cuts of meat, eat a variety of foods, use low-fat cooking methods, and practice safe methods for handling, storing and cooking these foods (1).

The Protein Foods group is unique because it is the main source of protein in the diet. Protein is made from building blocks called amino acids. Amino acids are needed by the body to build different types of proteins that have different functions. Every type of protein made from the protein foods you eat is unique and plays a special role in the body to maintain health. Each food from the Protein Foods group contains different combinations of amino acids, and this is the reason that MyPlate suggests eating a variety of foods from this group (2). Children grow at a rapid rate, and they need the right nutrition to keep their bodies healthy while they are growing. Protein plays many roles in the body. Although it is best known for the role it plays in building healthy muscles, it also serves as building blocks for bone, cartilage, skin, and blood. Protein also is needed for hormone and enzyme synthesis by the body (3). As mentioned above, muscles are built from the amino acids that come from foods in the Protein Foods group. Eating different kinds of foods from this group provides the body with the building blocks for healthy muscle growth in a developing child. Foods in the Protein Foods group are good sources of protein, vitamins and minerals. Meats can also be a source of unhealthy types of fat, which is why it is important to choose lean cuts of meat. Fat from animal products is considered unhealthy because it has high levels of saturated fat and cholesterol. High intakes of these fats can lead to heart disease, and high intakes of fat in general can lead to weight gain. Choosing lean cuts of meat is the first step toward avoiding too much animal fat. In addition, the 2010 Dietary Guidelines for Americans recommend replacing some meat and poultry with seafood to decrease the amount of fat consumed (4). When it is time to cook, extra fat should be cut off the meat and a low fat cooking method should be used. Using low fat cooking methods such

as baking and grilling means that less oil or other types of fat will be added, which also helps to limit the fat content of the meal. Choosing and preparing low-fat meats ensures that the health benefits from the Protein Foods group will not be overshadowed by the harmful effects of eating too much fat, especially saturated fat.

Some people choose a vegetarian diet, which means that they may not eat meat or animal products. These people can still get plenty of protein by including beans, nuts, and seeds in their diets. Protein that does not come from animals may have low amounts of some amino acids and nutrients, so it is especially important for vegetarians to eat a wide variety of foods (5). Children that do not eat animal products may not be getting enough of certain nutrients such as iron, zinc, calcium and B vitamins (6–8). Most of these nutrients are found in small amounts in most plant foods, so by combining a variety of foods in the diet, the body can get most of the nutrition that it needs. A possible exception is vitamin B12. Children who eat a vegan diet (a type of vegetarian diet that includes only plant foods with no milk, cheese, eggs, etc.) may not get enough vitamin B12 unless they consume cereals, bars, soy milk, or other foods that are fortified with vitamin B12 or unless they take a vitamin B12-containing supplement. If a child who is a vegetarian is not eating a balanced variety of foods, it may be wise to talk to a doctor and find out if a multi-vitamin and mineral supplement is needed.

The amount of protein needed on a daily basis depends on your age, sex, and level of physical activity. MyPlate recommends that children between the ages of four and eight consume four ounces of food from the Protein Foods group every day (1). One-ounce protein equivalents include one ounce of meat, poultry or fish, one egg, one tablespoon of peanut butter, or one-fourth cup of cooked beans. Children in America usually eat more than enough protein, so getting the recommended amount is not a big concern. It is most important to make sure that children are eating a variety of lean choices from the Protein Foods group so that they get all of the amino acids, vitamins, and minerals their bodies need without too much fat. Children should learn that it is fun to try new foods, and if they want to keep their growing bodies healthy, they should eat the recommended amount of a variety of foods from the Protein Foods group every day.



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3rd Grade Lesson

LEARNING OBJECTIVES:

The students will:

- distinguish between lean protein foods and higher-fat protein foods.
- recognize preferred preparation and cooking methods with protein foods.
- identify a key nutrient found in protein foods.
- state that protein foods help keep your muscles strong and healthy.

BEHAVIORAL OBJECTIVE

The students will:

- eat a variety of foods from the Protein Foods group.

RECOMMENDED BOOK

Your Healthy Plate Protein by Katie Marsico

FLORIDA STANDARDS

MATHEMATICS

MA.3.A.1.1: The student will model multiplication and division including problems in context: repeated addition, multiplicative comparison, array, how many combinations, measurement, and partitioning.

MA.3.A.1.2: The student will solve multiplication and division fact problems by using strategies that result from applying number properties.

MA.3.A.2.3: The student will compare and order fractions, including fractions greater than one, using models and strategies.

MA.3.A.6.2: The student will solve non-routine problems by making a table, chart, or list and searching for patterns.

HEALTH EDUCATION

HE.3.B.3.1: The student will recognize circumstances that can help or hinder healthy decision-making.

HE.3.B.3.3: The student will list healthy options to health-related issues or problems.

HE.3.B.3.5: The student will find a healthy option when making a decision for himself.

HE.3.C.1.1: The student will describe healthy behaviors that affect personal health.

LANGUAGE ARTS

LA.3.1.6.1: The student will use new vocabulary that is introduced and taught directly.



LA.3.1.6.2: The student will listen to, read, and discuss familiar and conceptually challenging text.

LA.3.1.6.5: The student will relate new vocabulary to familiar words.

PHYSICAL EDUCATION

PE.3.L.2.1: The student will describe how muscular strength and endurance enhance performance in physical activities.

PE.3.L.2.9: The student will know how to safely stretch major muscle groups.

PE.3.R.2.3: The student will choose to participate in group physical activities.



Learning Activity: Protein Foods Baseball

PRIOR TO ACTIVITY

Print the Protein Foods Baseball poster, to a size of 24 inches x 36 inches. Using clip-on magnets, Velcro, or sticky tack, attach the poster to a whiteboard/ chalkboard. Print the Protein Foods questions and cut them into individual strips. Staple or use a paperclip to hold three copies of each question together. Place them in a baseball cap (suggested material) or in a bag or box. Print the blue and red baseball caps and cut them out. The caps will be the baseball 'runners' for each team. If possible, laminate all materials for future use. Hang the MyPlate poster in the front of the room. Cut two small (1" x 1") squares of Velcro and attach one to each baseball cap. Cut eight small (1" x 1") squares of Velcro and attach two squares to each base on the baseball poster board. Set aside scratch paper and pencils for the students. Review the attached rules and Protein Foods Baseball questions. Create the Protein Foods Poster Board by writing Protein Foods across the top of the poster board and cutting and pasting graphics on the board.

ACTIVITY INTRODUCTION

Hello everyone! Today we will be learning about the Protein Foods group. As a quick review, the Protein Foods group is the purple group on MyPlate, (Point to the Protein Foods Group on the MyPlate poster) and it includes foods such as chicken, almonds, ham, turkey, seafood, eggs, steak and beans like black beans, pinto beans, kidney beans and others. Point to Protein Foods Poster as you review the foods. Did you know that there are lean choices and higher fat choices in this group? Can anyone give me some examples of both? Allow the students to raise their hands and answer questions. Great job. The leanest choices are the plant sources such as beans, peas, and soy products. There are also lean animal products such as boneless, skinless chicken breasts, pork loin, lean turkey, lean ground beef, lean cuts of beef, and lean luncheon meats. Some higher fat choices include bologna or salami, higher fat ground beef and higher fat cuts of beef. What would be the healthiest way to cook our protein foods? Allow children to answer. That's right. Baking, grilling and broiling are all much healthier ways to cook these foods than frying them. Plus, you don't want to drown your protein foods in a lot of high-fat sauces or gravies. There are a lot of great things to learn about protein foods, and we are going to do this by jumping right into our learning activity, which is 'Protein Foods Baseball!' I will explain the rules of the game now, so pay close attention!

ACTIVITY DIRECTIONS

Protein Foods Baseball rules

1. *First, I am going to split the class into two teams.* Split the class into two teams. This might be done by having the students count off one, two, one, two, etc. until every student has a number. All of the students who are "ones" will form one team; the "twos" will form the other team. Students on the same team will need to be sitting close together on the floor or sitting with their desks together.
2. *Each team will have its own baseball cap. The cap is your team's base runner.* Distribute the red cap to one team, and the blue cap to the opposite team.

MATERIALS

- Protein Foods Baseball poster, provided
- Blue and red baseball caps graphics (runners), provided
- Assorted Protein Foods question strips (three of each question – the last copy has the answer), provided
- Protein Foods Baseball Runs Key, provided
- Scratch paper and pencils
- Two dice (one die per team) found online at:
 - http://www.staples.com/dice/directory_dice?
- Velcro (to attach baseball caps to the Protein Foods Baseball poster) found online at:
 - http://www.staples.com/VELCRO-Brand-Sticky-Back-Tape-Black-15-ft/product_613240
- Poster board
- Protein Foods graphics found online at: <http://www.choosemyplate.gov/food-groups/protein-foods.html#>. Print up graphics that are available on this page. You may also add others if you have access to graphics. Focus on lean choices.
- MyPlate Poster

SUGGESTED MATERIALS

- Baseball cap to place question strips in and/or to wear during activity



3. *Here is a die for each team. Hand a die to each team. I will ask a question to you, and every time your team answers the question correctly, your team will be allowed to roll the die. The key to how many bases your team can move is listed on the baseball poster. Point to the runs key on the baseball poster. For example, if your team rolls a 3, then someone from your team will move your baseball cap three bases. So if you are at home plate, and your team rolls a 3, then your baseball cap will move to third base. If you are at second base and your team rolls a 3, then your baseball cap will cross home plate for a run and then land on first base. The object of this game is to score the most runs. Now I will choose one student to be the team captain, and one student to record the number of runs for your team. Select one student on each team to be the captain and another to record their teams' runs on the board. The captain is the only person who is allowed to respond with the team's final answer to each of the questions I ask. The captain will raise his/her hand when your team has agreed upon an answer to the question. The recorder will come up to the board and put a tally mark each time your team scores a run. Remember, whenever your base runner lands on OR crosses home plate, your team will earn a run. Point to home plate on the poster when you explain this. I will also choose one student on each team to move their baseball cap around the bases when your team has a chance to roll their die. Choose one student on each team for this. Answer any questions students may have at this point.*
4. *I have made up a bunch of questions about Protein Foods and the Protein Foods group that I have put them in this baseball cap. Show the baseball cap to the students. I will choose one question at a time and read it aloud to you. Then I will give each team a copy of the question after I read it. The team that is the first to answer the question correctly will be allowed to roll their die to see how many bases they can move their base runner. Remember, your base runner is represented by the baseball cap that your team has. We have the red team (point to the red team and hold their base runner in the air) and the blue team (point to the blue team and hold their base runner in the air). Remember, everyone needs to work together to come up with the answers to the questions, but that only the team captain can tell raise his/her hand and answer the question. If you need to figure something out on paper, use the paper and pencils I am giving to you. (Distribute scratch paper and pencils to each team.)*
5. *If the first team to raise their hand and be called on to answer the question answers incorrectly, the second team will be given a chance to answer the same question. If neither team answers the question correctly, I will tell you the answer, but neither team will have a chance to roll their die.*

Just to review one last time before we begin, a run counts whenever your team's baseball cap lands on OR crosses home plate. The number of runs for each team will be tallied on the board during the game. The team that scores the most runs when all of the questions have been asked or when we run out of time, will be declared the winner of Protein Foods Baseball! Any questions? Answer any questions at this point.

Let's play ball!



Choose the first question from the baseball cap/bag/box and read it aloud to the class. If necessary, distribute a copy of the question to each team. **MAKE SURE YOU KEEP THE COPY OF THE QUESTION WITH THE ANSWER FOR YOURSELF.** Allow the team captains to raise their hands and answer for their team when they are ready. Place each question in a pile to the side once it has been read. Go through all of the questions or as many questions as time allows. Tally the number of runs each team has recorded at the end of the game, and declare a winner of Protein Foods Baseball.

PROTEIN FOODS BASEBALL

1 = Advance one base

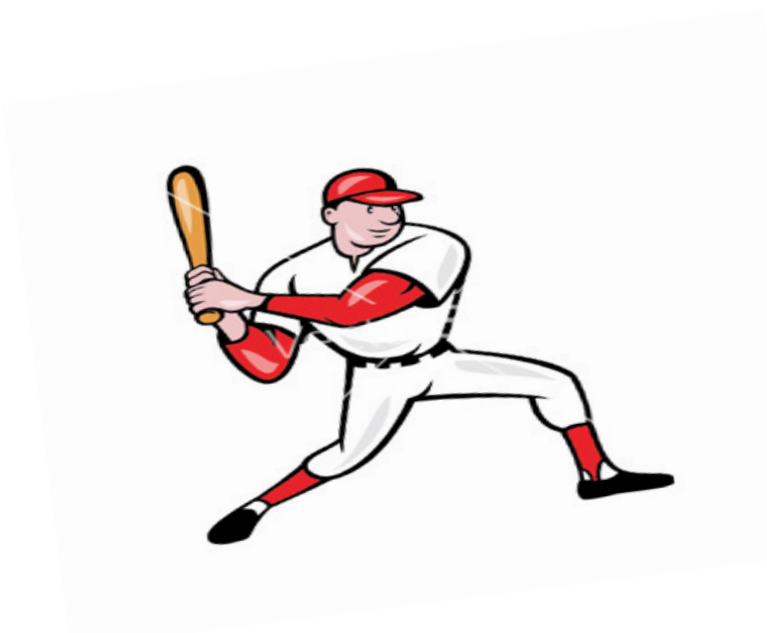
2 = Advance two bases

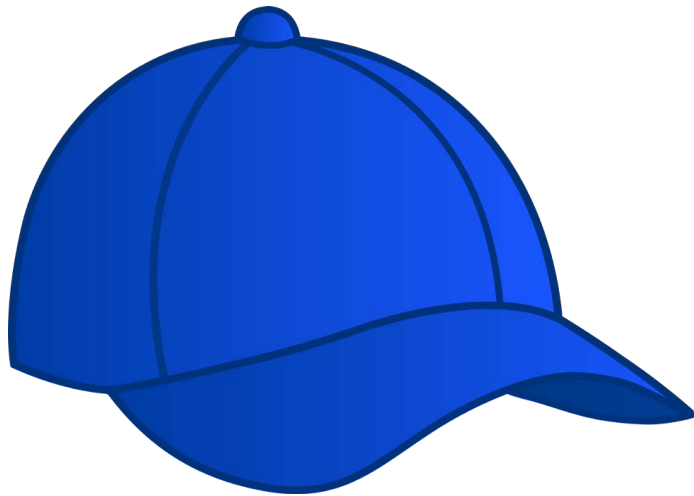
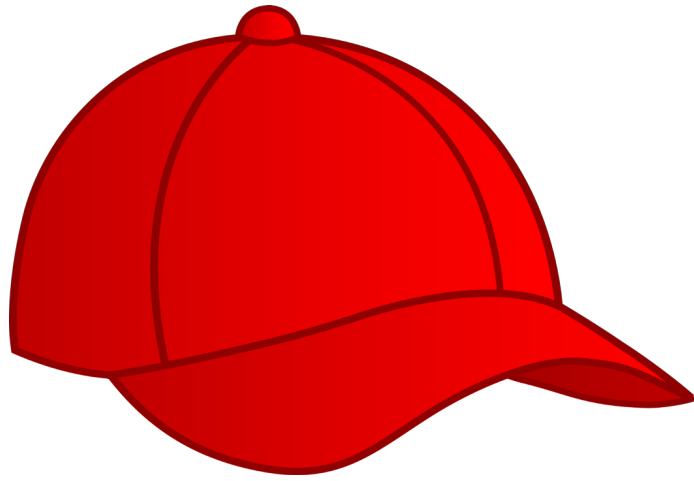
3 = Advance three bases

4 = Advance four bases

5 = OUT! Do not advance

6 = Advance to home plate!





Proteins Foods Baseball Runs - Key

1 = advance one base

2 = advance two bases

3 = advance three bases

4 = advance four bases

5 = an OUT, do not advance

6 = advance to home plate.

Proteins Foods Questions Strips

NOTE TO EDUCATOR: For the spelling questions, the students will need to work together to spell out the word on a piece of scratch paper that you will provide to them. They will show this paper to you when their team captain raises his hand.

- Joey eats **one** roast beef sandwich for lunch, **five** days a week. Each sandwich Joey eats has **three** slices of roast beef on it, with lettuce and tomato. How many **slices** of roast beef does Joey eat at the end of the five days?
- Joey eats **one** roast beef sandwich for lunch, **five** days a week. Each sandwich Joey eats has **three** slices of roast beef on it, with lettuce and tomato. How many **slices** of roast beef does Joey eat at the end of the five days?
- Joey eats **one** roast beef sandwich for lunch, **five** days a week. Each sandwich Joey eats has **three** slices of roast beef on it, with lettuce and tomato. How many **slices** of roast beef does Joey eat at the end of the five days?

ANSWER: 15 slices of roast beef

- I bring a bag of mixed nuts to school as my snack for the day. I have **six** peanuts, **five** almonds and **three** walnuts. What fraction of the mixed nuts are **almonds**?
- I bring a bag of mixed nuts to school as my snack for the day. I have **six** peanuts, **five** almonds and **three** walnuts. What fraction of the mixed nuts are **almonds**?
- I bring a bag of mixed nuts to school as my snack for the day. I have **six** peanuts, **five** almonds and **three** walnuts. What fraction of the mixed nuts are **almonds**?

ANSWER: 5/14 is almonds

- For breakfast this morning, I ate two scrambled eggs, a slice of whole-wheat toast with peanut butter and fresh blueberries. How many different protein foods did I eat in my breakfast?

- For breakfast this morning, I ate two scrambled eggs, a slice of whole-wheat toast with peanut butter and fresh blueberries. How many different protein foods did I eat in my breakfast?
- For breakfast this morning, I ate two scrambled eggs, a slice of whole-wheat toast with peanut butter and fresh blueberries. How many **different** protein foods did I eat in my breakfast?

ANSWER: 2 different protein foods – eggs and peanut butter

- **One** cup of bean soup is equal to **two** ounces of protein. Lilly eats **one** cup of black bean soup for lunch and **two** cups of white bean soup for dinner. How many **ounces** of protein has Lilly eaten altogether?
- **One** cup of bean soup is equal to **two** ounces of protein. Lilly eats **one** cup of black bean soup for lunch and **two** cups of white bean soup for dinner. How many **ounces** of protein has Lilly eaten altogether?
- **One** cup of bean soup is equal to **two** ounces of protein. Lilly eats **one** cup of black bean soup for lunch and **two** cups of white bean soup for dinner. How many **ounces** of protein has Lilly eaten altogether?

ANSWER: 6 ounces of protein

- Melvin and his friends are having a picnic this afternoon. They have **30** lean hamburgers to bring to the picnic. They put **six** hamburgers in each picnic basket. How many picnic baskets will they need?
- Melvin and his friends are having a picnic this afternoon. They have **30** lean hamburgers to bring to the picnic. They put **six** hamburgers in each picnic basket. How many picnic baskets will they need?

- Melvin and his friends are having a picnic this afternoon. They have **30** lean hamburgers to bring to the picnic. They put **six** hamburgers in each picnic basket. How many picnic baskets will they need?

ANSWER: 5 picnic baskets

- 12 almonds are equal to one ounce of protein. 1 egg is also equal to one ounce of protein. If I eat **24** almonds and **2** boiled eggs, how many total ounces of protein have I eaten?
- 12 almonds are equal to one ounce of protein. 1 egg is also equal to one ounce of protein. If I eat **24** almonds and **2** boiled eggs, how many total ounces of protein have I eaten?
- 12 almonds are equal to one ounce of protein. 1 egg is also equal to one ounce of protein. If I eat **24** almonds and **2** boiled eggs, how many total ounces of protein have I eaten?

ANSWER: 4 ounces total

Spell the word *scallop*. (Do not hand this question to the students.)

Spell the word *vegetarian*. (Do not hand this question to the students.)

List **two** plant protein foods and **two** animal protein foods.

ANSWER: Any of the following plant proteins: nuts, seeds, peas, peanut butter, beans, tofu, veggie burgers.

Any of the following animal proteins: steak, hamburger, chicken, eggs, turkey, ham, pork chop, any type of fish or shellfish.

Protein foods help to build your muscles and keep them strong and healthy. Another name for your shoulder muscle is your **deltoid**. Spell the word **deltoid**. (Do not hand this question out to the students.)

Meats, poultry, fish, eggs and nuts provide our bodies with the protein it needs to keep our muscles strong and healthy. A key protein food found in meats, poultry, fish, eggs and nuts is _____.

- a. Calcium
- b. Vitamin D
- c. Iron

Meats, poultry, fish, eggs and nuts provide our bodies with the protein it needs to keep our muscles strong and healthy. A key protein food found in meats, poultry, fish, eggs and nuts is _____.

- a. Calcium
- b. Vitamin D
- c. Iron

Meats, poultry, fish, eggs and nuts provide our bodies with the protein it needs to keep our muscles strong and healthy. A key protein food found in meats, poultry, fish, eggs and nuts is _____.

- a. Calcium
- b. Vitamin D
- c. Iron**

Sally is making a sandwich to take to school for her lunch. She knows that some sandwich meats are better for her because they are **leaner**, which means they have less fat. From the following, which sandwich meat is the **leanest**?

- a. Salami
- b. Bologna
- c. Turkey

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- a. Salami
- b. Bologna
- c. Turkey

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- a. Salami
- b. Bologna
- c. Turkey**

Bobby and his dad want to make trout for dinner. They want to cook it the healthiest way that they can. Which of the following cooking methods should Bobby and his father choose to cook their fish? (*Hint: There is more than one correct answer.*)

- a. Frying
- b. Grilling
- c. Baking

Bobby and his dad want to make trout for dinner. They want to cook it the healthiest way that they can. Which of the following cooking methods should Bobby and his father choose to make their fish? (*Hint: There is more than one correct answer.*)

- a. Frying
- b. Grilling
- c. Baking

Bobby and his dad want to make trout for dinner. They want to cook it the healthiest way that they can. Which of the following cooking methods should Bobby and his father choose to make their fish? (*Hint: There is more than one correct answer.*)

- a. Frying
- b. Grilling**
- c. Baking**

Physical Activity: Protein Foods Pilates

Materials

- Images of Pilates poses and script, provided
- Sufficient room and floor space for all students to perform the Pilates poses

Prior to Activity

Arrange desks so that there is ample room and floor space for all of the students to gather in front of you and perform the Pilates poses.

Review images of Pilates poses and pose descriptions included in the lesson materials until you are familiar and comfortable with performing the various poses.

Activity Introduction

Now that we know that all protein foods are needed to keep your muscles strong and healthy, let's put your muscles to the test. Today, we are going to do Protein Pilates! Pilates is a type of exercise. Has anyone heard of yoga or done yoga before? Allow students to answer. Pilates is similar to yoga, but it focuses more on strength. I am going to demonstrate five Pilates poses, so everyone gather around in front of me so I can show you what to do. Make sure you have a good amount of space between you and anyone next to you.

Gather students in front of you (all students should be facing you).

Activity Instructions

As I demonstrate each pose for you, I want everyone to perform the pose along with me. I will describe it to you and tell you how long to hold it. Let's begin!



The first pose is the Protein Squat. Stand next to the support, feet more than hip-width apart, toes turned out. Lower your body about six inches. Slowly move down and up by an inch for 30 seconds. Continue, smaller and faster, for 30 seconds. With knees bent, rise onto the balls of your feet, then lower your feet; continue for 30 seconds.

The Statue



The next pose is the Statue. Place your hands on your hips or hold on to your chair so you do not fall. Slowly lift your left leg and place your foot by your knee as shown here. Hold for 30 seconds. The Statue strengthens your abdominal muscles and your leg muscles! Repeat the swan 2 times on each leg.

The Warrior



The next pose is the Warrior. Stand straight and spread your feet apart wider than your shoulders. As you extend your right leg out to the right side of your body, bend your right knee so that you are now in a lunging position. Extend both arms straight out to the sides. Hold the warrior pose for 10 seconds. The Warrior stretches your hips, hamstring muscles and arms. Now, let's repeat the Warrior pose, but this time we will lunge with our left leg.

The Extended Warrior



Last pose. From the Warrior Pose, move into the Extended Warrior. Turn your body towards the front of the room and straighten your legs. Bend to the side, arm straight, and grab your right ankle with your right hand. Extend your left arm straight into the sky. Your ankle, arms, and shoulders should all be in line as shown here.

Dear Parent or Caregiver,

Today your child learned about the Proteins Foods group. The Protein Foods group is one of the five food groups on MyPlate. We learned that there are a variety of protein foods. Although there are a variety of protein foods, we learned that protein foods can be categorized depending on the amount of fat in them. Some protein foods are considered *lean*, which means they naturally have or have been prepared with a low amount of fat. On the other hand, there are higher-fat protein foods, which mean that they naturally have or have been prepared with a high amount of fat.

Examples of lean protein foods include turkey cutlets, skinless, boneless chicken breast, deli meats such as roast beef and turkey, most types of fish, ham, pork loins and extra lean ground beef. The label must read “90% lean” or greater for it to be considered a lean protein food.

Examples of higher-fat protein foods include deli meats such as bologna and salami, breaded and fried protein foods like chicken nuggets, bacon, hotdogs, sausages and ground beef that is less than “90% lean.”

Another thing we learned is that protein is important for building strong and healthy muscles. Eating a variety of the protein foods mentioned above will ensure that your body has plenty of protein and other nutrients to build and maintain the muscles in your body. When given a choice though, it is best to choose lean protein foods over protein foods with more fat in them.

As parents or caregivers, you play a big role in helping your child develop good eating habits. MyPlate recommends that children between the ages of four and eight consume four ounces of food from the Protein Foods group every day. Children in America usually eat more than enough protein, so getting the recommended amount is not a main concern. It is important to make sure that children are eating a variety of Protein Foods choices and that they are choosing lean protein foods.

Trying the following activities with your child can help your child learn more about the different protein foods and help them to remember what they learned in class:

- When eating breakfast or dinners together, ask your child to point out which protein foods, if any, are part of his meal. Furthermore, ask whether each protein food is lean or high in fat.
- At the grocery store, ask your child which foods in the cart, if any, are protein foods. Proceed to ask him if he would like to choose a lean protein food for dinner.
- Your child learned that all protein foods are important for keeping muscles strong and healthy. Your child learned different Pilates exercises in class today. Ask him to demonstrate a few of the exercises for you. You might even try doing them together!

With the lesson your child learned today, along with the above activities, we hope that your child will keep in mind the importance of choosing a variety of lean protein foods. If you would like to learn more about the Protein Foods group, feel free to visit the MyPlate website at www.ChooseMyPlate.gov.

Sincerely,

LESSON 6



Create Your Plate

Concept

In addition to eating healthier foods, it is important for children to eat the right amount of foods from each food group. Children and caregivers are often unaware of how much food children actually need. This lesson teaches children to eat the right amount of foods from each food group at every meal.

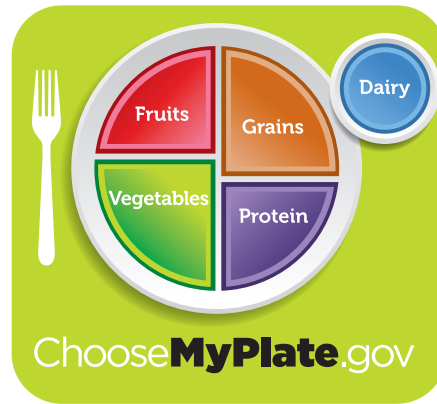
Background

The incidence of obesity has increased over the last 40 years across all classifications of age, sex, race and ethnicity. This increase in overweight and obesity in children can be attributed to many causes, but genetics and the environment are two broad factors that play a role (1). Since genes are inherited from parents and do not change quickly enough to be the main culprit, the environment must be the focus of lifestyle changes to promote a healthy weight. The environment includes everything that affects how, when and what children eat. Children in the United States are consuming too many empty calories – calories that have few essential nutrients, and they are not getting enough exercise (2). The three top sources of calories for children and adolescents ages 2 to 18 years are grain-based desserts, pizza and soda/energy drinks/sports drinks (2). Children do not have much control over their environment, but what little they have is an important place to start in order to foster healthy eating habits. Although www.ChooseMyPlate.com recommends specific child-sized serving equivalents of foods from each food group, the concept is not easy for younger children to understand, so a simpler approach is needed to educate this age group.

According to the Dietary Guidelines for Americans, 2010, children consume less than the recommended amounts of fruits and vegetables, whole grains and lean protein sources (2). Each of these food groups are important because they contain essential nutrients that cannot be found in other food groups. Fruits and vegetables are high in fiber and antioxidants and do not contribute many calories. Whole grains are high in fiber and certain minerals. Lean protein sources are high in protein and many vitamins and minerals (2). Eating the correct amounts of these foods can help maintain a healthy weight, which can decrease the risk of type 2 diabetes, certain cancers and other diseases (3).

In order to help Americans meet their needs for fruits and vegetables, the Dietary Guidelines for Americans, 2010, recommends filling half the plate with fruits and vegetables at every meal (2). To help Americans visualize this recommendation, the US Department of Agriculture recently released the newest food guide: MyPlate, which replaces MyPyramid as the nation's symbol for proper nutrition (4). The MyPlate symbol is a plate containing the Grains, Vegetables, Fruits, and Protein Foods groups and a cup representing the Dairy group. According to the MyPlate symbol half of the plate should be filled with vegetables and fruits with more vegetables than fruits. The other half of the plate is divided

between the Grains and Protein Foods groups. This visual representation of nutrition recommendations can be useful to help children consume the correct amounts of foods from the food groups included on MyPlate at every meal. Although MyPlate is informative it is one component of the USDA's food guidance system, which also incorporates the ChooseMyPlate.gov website that provides nutrition recommendations, as well as a variety of other evidence-based information and tools that consumers can use to make better food and physical activity choices (4).




Research has shown that the amount of food on a person's plate influences the amount of food consumed (5-7). If fruits and vegetables make up the largest part of a child's plate, then they will be consumed in the greatest amount. Whole grains and lean protein sources each make up a quarter of the plate, so in general children should eat more fruits and vegetables than grains or lean protein sources during each meal. To ensure that all food groups are represented on the MyPlate symbol, the Dairy group is depicted as a smaller circle to the top right of the plate. This emphasizes the importance of consuming foods from this group as well.

Learning to eat the right amount of food in school can help children know what to do at home. Following the MyPlate guidelines may help to reduce the caloric content of meals and increase the variety of foods consumed. These healthy changes can help to decrease the percentage of overweight and obese children in the United States today.

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3rd Grade Lesson

LEARNING OBJECTIVES

The students will:

- state the key messages of MyPlate.
- brainstorm effective strategies to meet the key messages of MyPlate.

BEHAVIORAL OBJECTIVE

The students will:

- choose appropriate foods and portion sizes to meet the key messages of MyPlate.

RECOMMENDED BOOK

Picky Peggy by Jennifer Dussling

FLORIDA STANDARDS

HEALTH EDUCATION

HE.3.B.3.3: The student will list healthy options to health-related issues or problems.

HE.3.B.3.5: The student will find a healthy option when making a decision for yourself.

HE.3.P.1.1: The student will practice responsible personal health behaviors.

HE.3.B.4.1: The student will select a personal health goal and track progress toward achievement.

HE.3.P.2.1: The student will suggest others make positive health choices.

LANGUAGE ARTS

LACC.3.RF.4.4: The student will read with sufficient accuracy and fluency to support comprehension.

LACC.3.W.1.2: The student will write informative/explanatory texts to examine a topic and convey ideas and information clearly.



Learning Activity: Keys to a Healthy Plate

NOTE TO EDUCATOR

For this activity, students will create posters to reinforce one of five MyPlate key messages.

MATERIALS

- 11" x 14" poster boards (or 8 1/2" x 11" paper for time saving activity), one for each student;
Colored pencils, crayons, or markers (students may have these at their desks; check with the teacher in advance)
- 1- 8.5" x 11" MyPlate poster
- MyPlate Key Messages, provided
- Key Message Tip Sheets, provided
- 7 inch white paper plates (or smallest available; enough to allow one per student)
- Dairy spots, provided
- Glue Sticks, (students may have these at their desks; check with the teacher in advance; if not, provide at least 10 for the students to share)

PRIOR TO ACTIVITY


Print MyPlate image (available at www.ChooseMyPlate.gov) and hang it in the front of the room if there isn't a poster available already. Print enough copies of the MyPlate Key Messages sheet so there is one message for each student and cut them out. Print enough Key Messages Tip Sheets so that there are the same number of tip sheets as there are MyPlate Key Messages. Print enough dairy spots for each student and cut them out.

ACTIVITY INTRODUCTION

Who can tell me the five sections of MyPlate? Point to MyPlate poster as you review each group. Grains, Fruits, Vegetables, Dairy, and Protein Foods. *That's right! It's important to eat foods from each of these groups every day. There are key messages related to each of these food groups that remind us about things we should do to help us make healthy food choices. Let's see if you know these messages. I will say the first part of each key message, and I want everyone in the class to finish the rest of the sentence. Make at least half your Grains _____ (answer: whole). Good! Make half your plate fruits and _____ (answer: vegetables). Correct! Switch to fat-free or low-fat (1%) _____ (answer: milk). And finally, go lean with _____ (answer: protein). Excellent!*

Today we are going to talk about two more key messages that we want to think about when we are eating. But the messages aren't for just one food group, they are for our whole plate. The first message is, "Enjoy Your Food, but Eat Less." The second message is "Avoid Oversized Portions." These messages go together, so we will talk about them as one message. Who knows what we mean by "oversized portions"? Call on children to get their answers. *That's right. An amount of food that is more than we need like eating a jumbo burger, eating a huge bagel or eating a whole pizza by yourself. In addition to eating foods we enjoy and that are good for us, we need to eat less and avoid eating larger portions than we need. Eating more food than our bodies need is not a healthy behavior, plus it can make us feel uncomfortable.*

Let's think about how we can follow the key message of "enjoy your food, but eat less and avoid oversized portions". When we think about how to follow this message, or any of the MyPlate messages, it becomes a goal for us. Who knows what a goal is? Call on students for answers. Answer: a goal is something we want to be able to do. In order for us to make our goals happen, we need to come up with ways to be able to make them happen. So, let's say that that my goal is to enjoy my food, but eat less and avoid oversized portions. If I just leave it at that, I probably won't make any changes. But if I brainstorm ways to do this, then I will have ideas for how to make it happen. One thing that I could do to avoid overeating would be to serve myself less or order a smaller portion when I eat at restaurants. What are some things that you could do to achieve the goal of eating less and avoiding oversized portions? Encourage participation from students. Give additional suggestions if they seem stuck. Acceptable answers include: stop eating when you are full; don't eat foods that don't belong on MyPlate often; choose healthy snacks; eat slowly; eat foods you enjoy; use a smaller plate



or bowl; eat fewer meals at restaurants; don't feel like you have to eat everything on your plate; serve yourself a small amount first and get more food if you are still hungry; add more of the foods that are good for you, and less of the foods you don't need; avoid eating in front of the television or when you are bored. If you have lots of time you could follow this approach for each of the key messages.

We are going to do an activity to help us remember to enjoy our food, but to eat less and avoid oversized portions, as well as how to achieve the other important messages of MyPlate. To start this activity, I will give each of you a slip of paper with one of the following key messages of MyPlate: Make At Least Half Your Grains Whole, Switch to Fat-Free or Low-Fat Milk, Make Half Your Plate Fruits and Vegetables, and Go Lean with Protein, Enjoy Your Food, But Eat Less, and Avoid Oversized Portions. I also will give you tip sheet to help you think about some of the ways we can achieve the MyPlate key message goals. As soon as you get your key message and the tip sheet, read it to yourself. Distribute one MyPlate Key Message and the corresponding Key Messages Tip Sheet to each student.

ACTIVITY DIRECTIONS

We are going to make a poster (or handout) about your key message. Your poster will include your key message goal, why it is important and how you can meet your goal. We will also add something fun at the bottom of your poster if we have time.

- 1. First, look at the key message I gave you. You will see that there is a blank spot before the noun in your key message. While I am passing out the materials for our poster, I want you to think of an adjective you can use to fill in the blank that describes the food group in your key message. For example, if your key message is to switch to low-fat or fat-free dairy, you should think of a word to describe dairy. When you get your poster, you will write your key message with the adjective you selected at the top. So, for example, if it was my poster, I might write something like, "Switch to low-fat or fat-free mouthwatering dairy". If your message is "Enjoy Your Food, But Eat Less and Avoid Oversized Portions," you should think of an adjective to describe "food". Distribute one sheet of poster board to each student. Distribute crayons, markers and/or colored pencils if the students don't already have them at their desks.*
- 2. Next, think of the key message as your goal – something you want to be able to do. Write a short sentence about why it is important to meet this goal on your poster board. If you aren't sure why the goal is important, look at the top of the tip sheet I gave you for some hints. For example, eating more fruits and vegetables gives me important vitamins, minerals and fiber. Make sure to leave room on the bottom half of your poster for something else we are going to add to your poster. Walk around the room and assist students who are having difficulty.*
- 3. Next, think about ways that third grade students like you can meet your goal. You can include tips for meeting this goal at breakfast, lunch, and/or dinner or for meeting this goal at home, school, or after school. Try to think of your own tips, but if you get stuck, you can use ideas from the tip sheet. Remember to leave room on the bottom half of your poster for something we are going to add to your poster.*



Walk around the room and assist students who are having difficulty. As the students are doing this part, distribute one paper plate and one dairy spot to each student.

4. *Now, divide the paper plate that I gave you into sections and color it so it looks like MyPlate. If you need help, look at the MyPlate poster up front. Write the name of the food group that matches your key message goal on the correct section of the plate. For example, if your key message goal is to fill half your plate with fruits and vegetables, you should write the words "Fruits" and "Vegetables" on the sections of the plate where fruits and vegetables belong. If your key message goal is about Dairy group foods, you should write the word "Dairy" on the dairy spot. There is one key message goal for which you will write the names of every food group. Which key message goal is that? Call on students. Correct answer: enjoy your food, but eat less and avoid oversized portions. When you are ready to attach the plate and dairy spot to your poster, raise your hand so I can give you a glue stick. Try to have several glue sticks to speed up the process of attaching the plate and dairy spot to each poster.*

Optional Activity:

5. *Now, draw a picture or pictures to represent your key message goal. You can draw foods from your food group, meal ideas, measuring tools, or your friends and family being active and healthy together, or anything that goes along with the idea of your poster's key message goal. This last part can be omitted if time is an issue. After the students have spent about 20 minutes working on their poster, encourage students to share their poster with the class. Hang the posters in the classroom to reinforce the lesson.*



Make Half Your Plate Fruits and Vegetables



It is important for kids to focus on increasing their intake of fruits and vegetables. These foods are full of fiber, vitamins, and minerals to keep us healthy. Think about the ideas below and decide which tips will help you make half your plate fruits and vegetables. Add these ideas, and your own, to your poster!

1. With your parent or caregiver, make a fruit smoothie with your favorite fruits. They can be fresh, canned, or frozen. Add in some fat-free or low-fat milk or yogurt to help you meet another key message of MyPlate!
2. Make “kebabs” with your family. Add cut-up fresh fruit like apples, pineapple, and watermelon to a skewer. Or, make a vegetable kebab with cucumbers, tomatoes, and squash.
3. Make a banana popsicle by peeling a banana and sticking a popsicle stick through the top end. Put it in the freezer until frozen, and enjoy on a hot day.
4. Help your parent or caregiver choose new fruits and vegetables to try when you go to the grocery store. Let them know your favorites, too!
5. List your ideas here:

Adapted from 10 Tips Nutrition Education Series, available at <http://www.choosemyplate.gov/healthy-eating-tips/ten-tips.html>.

The USDA and the University of Florida IFAS Extension are equal opportunity providers and employers. The Supplemental Nutrition Assistance Program (SNAP) provides nutrition assistance to people with low income. It can help you buy nutritious foods for a better diet. To find out more, contact 1-866-762-2237. TTY/TTD/FRS dial 711. This material was funded by USDA's Supplemental Nutrition Assistance Program – SNAP.



Go Lean with Protein



We know we need protein to keep our muscles strong, and we learned that a key message of MyPlate is to go lean with protein. Meat isn't the only type of protein food. Kids have so many choices! Think about the ideas below and decide which tips will help you go lean with protein. Add these ideas, and your own, to your poster!

1. Eat different kinds of protein foods for variety. This includes fish (baked, grilled, broiled), beans, chicken (without the skin), lean red meat, peanut butter, and more.
2. Try to eat plant protein foods like beans, veggie burgers, nuts, and seeds more often. They are lean proteins and are easy to prepare with the help of your family.
3. When your family is cooking protein foods, remember that baked, grilled, roasted, and broiled protein foods are leaner than fried foods. Foods that are leaner have all the nutrients to keep your muscles strong, but aren't made with the extra fat that our bodies don't need.
4. Make your sandwiches with healthy protein choices. Turkey, tuna, and peanut butter are good, lean ideas.
5. List your ideas here:

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Choose Fat-Free or Low-Fat (1%) Milk



Dairy foods have calcium, which is important for strong bones. But some types of dairy foods, like fat-free and low-fat (1%) milk, are best for our bodies. How can you focus on getting the best type of dairy foods? Think about the ideas below and decide which tips will help you choose fat-free and low-fat (1%) dairy foods for your meals and snacks. Add these ideas, and your own, to your poster!

1. Do you eat cereal or oatmeal for breakfast? Start your day right and add some fat-free or low-fat (1%) milk to your bowl.
2. Play detective with your parent or caregiver at the store. Look for words like “reduced-fat” or “fat-free” when you are choosing cheese, yogurt, and milk.
3. Drink fat-free or low-fat (1%) milk at mealtime instead of sugary drinks. Choose fat-free or low-fat (1%) milk in the lunch line at school and even at fast food restaurants.
4. When it’s time for a snack, try a fat-free or low-fat (1%) cheese stick with a fruit to keep you full until your next meal.
5. List your ideas here:

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Make Half Your Grains Whole

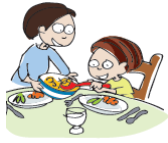


Many of us get enough grains in the foods we eat every day, but making half our grains whole can take a little more thinking and planning ahead. Whole grains have more fiber, which keeps us full until our next meal. Think about the ideas below and decide which tips will help you make half your grains whole. Add these ideas, and your own, to your poster!

1. At the store, help your parent or caregiver find “100% whole grain” bread, rice, pasta, and cereal. Look closely! Just because a food is brown does not mean it is whole grain.
2. Find your favorite whole grain snacks. Popcorn, a small baggie of O-shaped cereal, and 100% whole grain crackers are good ideas for whole grain snacks.
3. Tell your parent or caregiver that you enjoy whole grain foods and teach them why whole grains are important. You can even show your family and friends how there is more fiber on the nutrition facts panel in whole grain food choices!
4. Eat school lunch! Schools make sure that there are whole grains in the meals they serve.
5. Your ideas here:

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Enjoy Your Food, But Eat Less *and* Avoid Oversized Portions



A new key message of MyPlate that we learned about today is to enjoy your food, but eat less. When we eat too much, we don't feel good, but it can be hard to stop when you are eating food that tastes great! When we eat the right amount of food for our bodies, we don't feel hungry, and we are ready to learn and be active. Think about the ideas below and decide which tips will help you enjoy your food but eat less and avoid oversized portions. Add these ideas, and your own, to your poster!

1. Take time to eat your meals so that you can think about how full you are and realize when you are ready to stop eating. It is ok if you are full before your plate is empty.
2. Eat more fruits and vegetables, lean protein foods, and fat-free or low-fat (1%) dairy. Eat less cookies, candy, and chips. These foods don't give our bodies nutrients that we need.
3. When you are at a fast food restaurant, choose from the kid's menu. Adult size meals have too much food for a kid. Tell your family that you like to eat meals at home, too.
4. Kids don't need as much food as adults. Use a smaller, kid sized plate so that your plate is full even though you aren't being served as much food. If you are still hungry, you can always add more to your plate!
5. List your ideas here:

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MyPlate Key Messages

There are five different key messages listed below. Print enough copies of this page to allow for each student to have their own copy of one of the key messages. Cut the key messages into strips and distribute to the students.

Choose Fat-Free or Low-Fat (1%) _____ Dairy

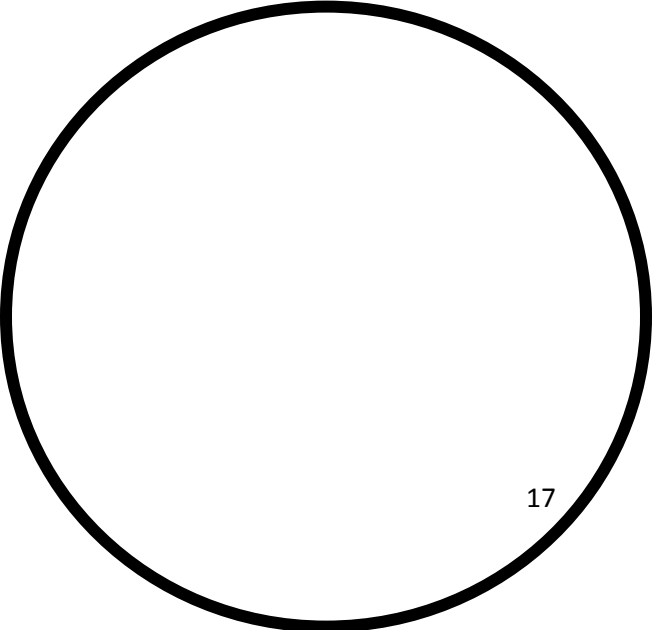
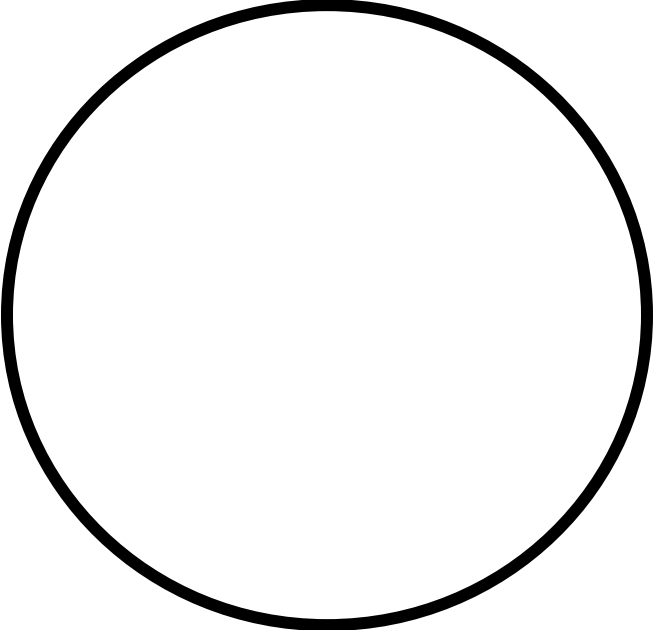
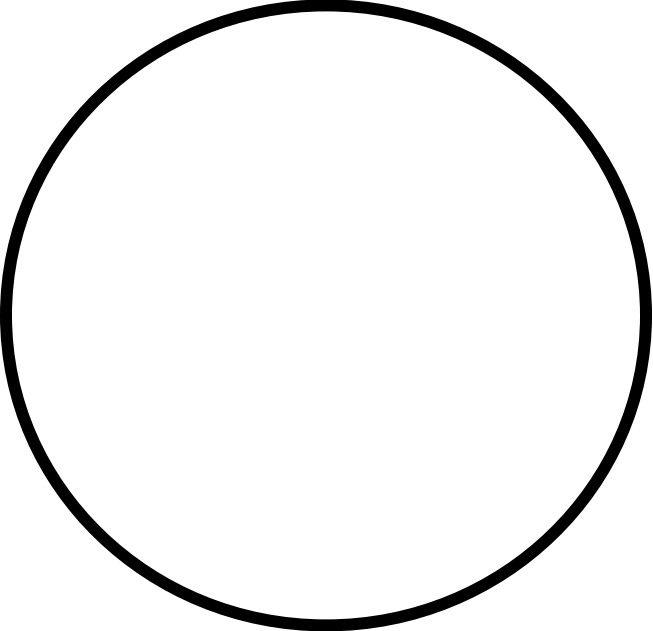
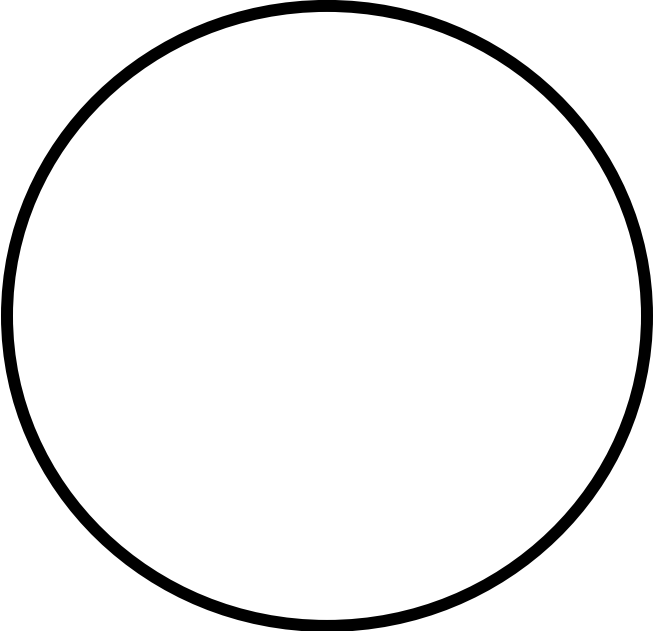
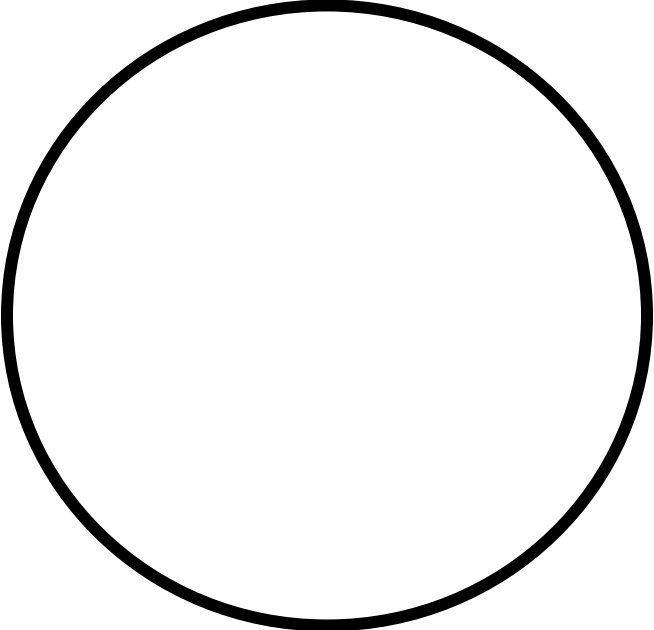
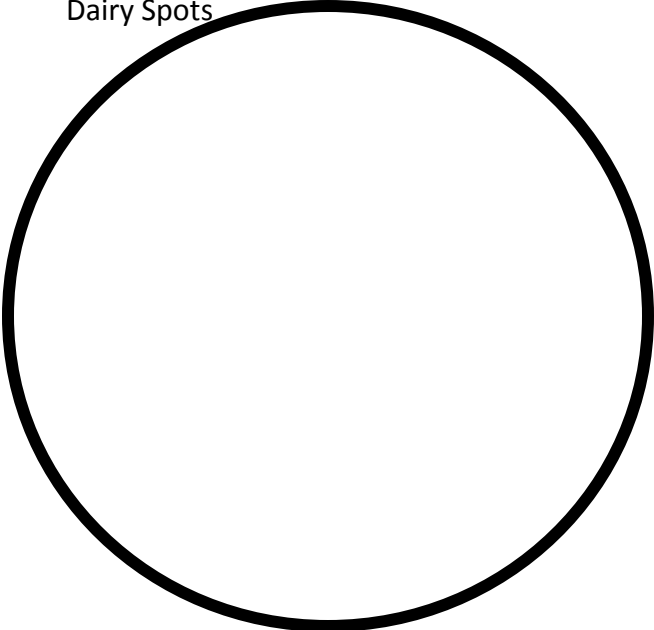
Go Lean with _____ Protein

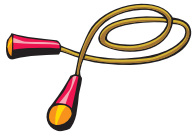
**Enjoy Your _____ Food, but Eat Less and Avoid
Oversized Portions**

Make At Least Half Your _____ Grains Whole

Make Half Your Plate _____ Fruits and Vegetables

Dairy Spots





Physical Activity: Key Message Quest

PRIOR TO ACTIVITY

Make enough copies of the Key Message Quest Form for each student.

ACTIVITY INTRODUCTION

For our physical activity, we are going to do more goal setting! Did you know that MyPlate also has physical activity goals? The message for physical activity is to “Be Physically Active, Your Way.” Just because your friend likes to play soccer doesn’t mean you have to! Taking a walk with your family, playing basketball, dancing, and hula hooping are just some ways to add physical activity to your day. Does anyone want to share their favorite way to be active? Allow students to answer as time permits.

We are going to do a few exercises and either count how many times we do them in a minute or how many seconds you can hold it depending on the activity. After the first round, you will write your numbers on the paper I give to you. Next, you will set a goal for yourself that is better than what you were able to do on the first try. When you come up with your goal, write it on the paper and tell the person next to you the goal that you set. Everyone will do the exercise again, and then you will write the number of times you did the exercise on the second try. Hopefully, you will be able to do it more times on your second try than the first time you did it. Clear an area of the room for doing the exercises. Ask students to come to the area with a pencil. Distribute one worksheet to each student. Tell the students to put their pencil and worksheet on the floor near to where they are standing. The first exercise is the Whole Grain Grinder. To do this exercise you will need to sit on the floor, then cross your feet and raise them slightly off the ground. To do the grinder part, you need to twist your body to the right and then to the left. Remember to count the number of times you do it in one minute. I will let you know when to start and when to stop. Demonstrate the exercise if possible.

The next exercise is the Fat-Free Milk Shake. Get on the floor in a push-up position, then kick your left leg forward. Return your left leg to its original position and then kick forward with your right. Repeat. Remember to count the number of times you do it in one minute. I will let you know when to start and when to stop. This activity is also called mountain climbers. There are “How to” videos available on the Internet if you need assistance.

The next exercise is the Fruit and Veggie Half Dip. Stand straight, then lower yourself by bending at the knees as if you were going to sit in a chair. Hold this position for as long as you can with your arms stretched out in front of you before returning to standing position. I will count the seconds out loud until the last person is finished. For this exercise, the goal should be longer than what it was on the first try because the object is to hold the position for as long as possible.

The next exercise is the Lean Mean Protein Plank. Lie on the floor and raise your body by supporting yourself with only your elbows and toes. Hold for as long as you can. I will count the seconds out loud until the last person is finished. For this exercise, the goal should be longer than what it was on the first try because the object is to hold the position for as long as possible. This activity is also called a plank. There are “How to” videos available on the Internet if you need assistance.

MATERIALS

- Key Message Quest Form, provided
- Timer or stopwatch



During this activity:

1. Remind students to count how many times each exercise is performed or for how long the exercise is held.
2. Suggest that students make their goals reasonable. This may be about 3-4 more repetitions for the grinder and the shake and 3-4 more seconds for the dip and the plank compared to the first time.
3. Encourage students and congratulate them for meeting their goals or trying to meet their goals.

★ Key Message Quest ★

Exercise	Round 1	Goal	Round 2
Whole Grain Grinder	_____ grinds	_____ grinds	_____ grinds
Fat-Free Milk Shake	_____ shakes	_____ shakes	_____ shakes
Fruit and Veggie Half Dips	_____ seconds	_____ seconds	_____ seconds
Lean Mean Protein Plank	_____ seconds	_____ seconds	_____ seconds

★ Key Message Quest ★

Exercise	Round 1	Goal	Round 2
Whole Grain Grinder	_____ grinds	_____ grinds	_____ grinds
Fat-Free Milk Shake	_____ shakes	_____ shakes	_____ shakes
Fruit and Veggie Half Dips	_____ seconds	_____ seconds	_____ seconds
Lean Mean Protein Plank	_____ seconds	_____ seconds	_____ seconds

The USDA and the University of Florida IFAS Extension are equal opportunity providers and employers. The Supplemental Nutrition Assistance Program (SNAP) provides nutrition assistance to people with low income. It can help you buy nutritious foods for a better diet. To find out more, contact 1-866-762-2237. TTY/TTD/FRS dial 711. This material was funded by USDA's Supplemental Nutrition Assistance Program – SNAP.



COMMONLY ASKED QUESTIONS

Q: Are there any recommendations for the amounts of food we should eat?

A: Yes. The Dietary Guidelines for Americans, 2010, recommend that you make half your plate fruits and vegetables.

Q: What are the “key messages” of MyPlate?

A: To help Americans improve their diet quality, MyPlate focuses on several central ideas, or, “key messages”. These key messages can assist consumers in making sound food choices. Following these key messages when planning meals, shopping, or ordering food, is an important step in helping to ensure healthy eating. The key messages are based on the research findings used to develop the 2010 Dietary Guidelines for Americans policy document. The key messages are listed below:


1. Enjoy Your Food, but Eat Less
2. Avoid Oversized Portions
3. Make at Least Half Your Grains Whole
4. Fill Half Your Plate with Fruits and Vegetables
5. Go Lean with Protein
6. Choose Fat-Free or Low-Fat (1%) Milk (switched to “dairy” for the purposes of this lesson)

Q: Must these materials be printed in color?

A: No. Feel free to print all materials in black and white.

Q: If materials are limited, or I have a large number of students, how can I make this lesson work?

A: For the learning activity, you can have 2–3 students work to create a poster together. For the physical activity, you can arrange students into teams and have them either choose representatives to complete different actions, or have the students compile their number of completions and add them together so that every student does not need their own Key Message Quest handout.



Dear Parent or Caregiver,

Today your child learned about the key messages of MyPlate and learned about effective strategies to meet these messages. MyPlate is a tool from the USDA that can be used to remind Americans which foods are needed and how much is needed from each food group. The key messages of MyPlate are to: enjoy your food but eat less, avoid oversized portions, make at least half your grains whole, fill half your plate with fruits and vegetables, go lean with protein, and switch to fat-free or low-fat (1%) milk. Your child created a poster explaining one of these messages in more detail. Ask your child to describe their poster to you.

As parents or caregivers, you can further promote the material presented in today's lesson. Here are just a few ideas to help your family achieve the messages of MyPlate:

- Add new fruits and vegetables to family meals. Encourage your child to help you select produce at the store
- Prepare protein foods in ways that do not add extra fat. Try removing excess fat, baking instead of frying, and selecting plant proteins such as beans.
- Offer fat-free or low-fat (1%) milk or water as beverage choices at meal time.
- Find healthy family recipes online at <http://www.choosemyplate.gov/healthy-eating-tips/sample-menus-recipes.html>.

Today's lesson was based on information from the 2010 US Dietary Guidelines for Americans. Additional information and resources for you and your child is available at www.ChooseMyPlate.gov. Reinforcing the information that your child learned about MyPlate at home is a great way to help him/her remember to make food choices that promote good health. We hope you and your family find this information helpful, and we are glad that your child participated in today's lesson!

Sincerely,