



## MyPyramid Lesson Plan

### Objectives

- Know the five food groups and become familiar with the importance of each group
- Understand serving sizes and how to determine an equivalent serving size
- Become familiar with *MyPyramid* and its' symbol representation

### Materials Needed

- Visual of *MyPyramid*
- Access to the mypyramid website
- Worksheet
- Scale to weigh foods
- Measuring utensils—mainly measuring cups
- Food models (optional)

Length of lesson  
60 minutes

### Introduction

In April 2005 the USDA released a new food guide pyramid entitled MyPyramid. MyPyramid was created on the basis of the Dietary Guidelines for Americans as well as the Dietary Reference Intakes. It replaced the original food guide pyramid that was created in 1993. MyPyramid's slogan "Steps to a Healthier You" suggests a personalized approach to healthy eating and physical activity. MyPyramid is formatted to convey the message that one size doesn't fit all. It reminds consumers to incorporate healthy food choices, variety, moderation, and activity into their lives each day. Following the advice given can put students on their way to a healthier, longer-lasting life.

## Lesson Procedure

1. Know the five food groups and become familiar with the importance of each group. Understand serving sizes and how to determine an equivalent serving size.

A serving of fries is different from a helping of fries which is also different from an order of fries. So, when it comes to serving sizes how are you suppose to know. Many people are eating more servings than they think! MyPyramid has tried to make things easier by converting serving sizes into ounce and cup proportions, depending on the food group. Each of the six colors on MyPyramid represents one of the five food groups or the oil category. The width corresponds with the amount of each that should be consumed in the diet. Let's start from the left side of the pyramid and work our way to the right, considering the importance of each group and the amount we should eat!

- *Grains*—Orange, the first strip on the pyramid, symbolizes the grain group. The grain component of the diet is important for energy. 60% of energy comes from carbohydrates which are found in grains. Studies have shown that grain, especially whole grain, can help reduce your risk of many chronic diseases including coronary heart disease. Fiber, found in whole grains, is essential in preventing constipation. At least half of your grain choices should be whole grain. Grains provide complex carbohydrates to the diet, along with B vitamins, minerals, and fiber.
  - Give the students examples of foods that would fall into the grain category.
  - Ask the students which foods they like to eat that would fit in the grain group.
- *Serving Sizes for grains*—Grains are specified in ounce amounts. Most people will need approximately 6-8 ounces of grain. Translated into practical terms, here's what that means. One ounce is the same as:
  - 1 cup ready-to-eat cereal
  - 1 slice of bread
  - ½ cup of cooked rice, cooked pasta, or cooked cereal

\*\*Remember that half of your grains choices should be whole grain!

  - Give the students practical examples, and ask them how many ounces they ate. (i.e.: if you eat a sandwich how many ounces of grain have you eaten? Answer = 2
  - Stress the importance of obtaining fiber from the grain group. Address that even among foods claiming to be made with whole grain there can be discrepancies. For example, cereal. Some cereals that are made with whole grain still contain a large amount of sugar in them. A rule of thumb to check how much whole grain you are obtaining follows;
    - 3 grams of fiber = good amount
    - 5 grams of fiber = excellent amount
  - *Activity*... Weigh one ounce of grain—a slice of bread might be a good option. Notice that even though a slice of bread is considered a one ounce serving, often times it will weigh more than one ounce. Urge your

students to be cautious. Give the students a feel for how much food one ounce really is by weighing various grain products that they might be likely to eat.

- *Vegetables*—The green strip is symbolic of vegetables. This group provides essential vitamins such as Vitamin A—important for vision, cell function, and reproduction—and Vitamin C (ascorbic acid). Vegetables are low in fat and are a great source of fiber. Vegetables may decrease the risk of some chronic diseases, i.e.: type 2 diabetes, stroke, cardiovascular disease, certain cancers. Other important components of vegetables include...
  - potassium
  - dietary fiber
  - folate
  - vitamin A
  - vitamin E
  - vitamin C

*MyPyramid* has broken the vegetable group down even further by distinguishing between the colors and categories of vegetables. For example...

- dark green vegetables; about 2-3 cups per week
- orange vegetables; about 2 cups per week
- dry beans and peas; about 3 cups per week
- starchy vegetables; about 3 (6 for boys 14-18 years old) cups per week
- other vegetables; about 5-7 cups per week

- Review foods that are vegetables. Any vegetable or 100% vegetable juice counts, it doesn't matter whether they are raw, fresh, cooked, or mashed. Is a tomato considered a fruit or a vegetable?  
Answer = vegetable

- *Serving Sizes for vegetables*—*MyPyramid* has changed serving sizes of vegetables into cup equivalents. On average, students should try to eat at least 2 ½ cups of vegetables per day. Translated practically one cup equals:
  - 1 cup of raw or cooked vegetables or vegetable juice
  - 2 cups of raw leafy greens
  - Review some more cup equivalents from the chart provided.
  - Ask how many students think they eat 2 ½ cups of vegetables per day. Most should probably be challenged to eat more.
- *Fruits*—Fruits are symbolized next with a red strip. Important for potassium, dietary fiber, vitamin C, and folate. Low in fat and calories.
  - Review which foods are fruits.

- *Activity*...It might be fun to talk about fruits from different cultures and where most of them are grown.
- *Serving Sizes for fruits*—Fruits have also been equated to cup portions. This should help to alleviate some of the confusion. Students should aim to eat about 2 cups of fruits per day, but remember everyone is different so they need to find out for themselves. One cup of fruit is the same as:
  - 1 cup **100%** fruit juice—emphasize that it needs to be 100%
    - \*\*\*Note of caution. Although 100% fruit juices are considered part of the fruit category, it is recommended that children decrease fruit juice intake to be no more than ½ of their total fruit intake. In other words, students should not be getting all of their fruit servings from juice.
  - ½ cup of dried fruit
  - *Activity*...Use your measuring utensils to see how many cups there are in a medium apple? An orange? A banana?
- *Oils*—The small yellow strip is located towards the middle of the pyramid and is symbolic of oils. Oils are not one of the five food groups, but they are important to your diet and therefore have been added to the food guide pyramid. People want to focus on obtaining polyunsaturated (PUFAs) or monounsaturated (MUFAs) fats. You should stay away from most trans-fats. PUFAs are a major source of vitamin E and also contain essential fatty acids which are necessary for health. However, there is a caution because PUFAs are about 120 calories per tablespoon. Oils are liquid at room temperature and come from many different plant sources. Oils coming from plant sources are better than fats, such as butter and shortening, because they contain no cholesterol. This is good because cholesterol can lead to increased risk of heart disease.
  - What types of oils do the students usually cook with?
  - Are they plant or nut oils, or are they mostly solid fats?
  - Make sure the students realize that many foods have naturally contained oils that you eat when you consume them. Examples of such foods are nuts, olives, avocados, and some fish. Rather than adding extra oils to food, it may be beneficial to increase the amount of naturally occurring oils that the students consume.
- *Milk*—Represented by the blue strip. Milk contains many important nutrients including calcium, vitamin D, protein, and potassium. This food group is particularly important in childhood and adolescence when bones are being built. Consuming dairy products increase bone mass, and lead to higher nutritional quality diet.
  - This food group use to be referred to as the dairy group. What foods besides milk are considered dairy foods?  
Answer = yogurt, cheese, milk based products. Consult the attached list for additional information on what is incorporated in the milk group.

- *Serving Sizes for milk*—The amount of milk recommended has increased in *MyPyramid*. Three cups is the average amount that students should aim for. This group isn't specifically milk but includes all dairy. One cup for this group is equivalent to:
  - 1 cup milk or yogurt
  - 1 ½ ounces of natural cheese
  - 2 ounces of processed cheese
  - What is the difference between natural and processed cheese?  
Answer = Any cheese that has been altered to change its consistency or decrease production cost must be referred to as a processed cheese. When natural cheese is altered to processed cheese there is often less protein and calcium per ounce. Therefore to obtain the same nutrients a greater amount of processed cheese must be consumed.
  - Discuss ways to incorporate dairy into your diet.  
\*View the *Tips for making wise choices* under the milk section on [mypyramid.gov](http://mypyramid.gov)
  
- *Meats and Beans*—Purple is the last color strip on the pyramid and symbolizes meats and beans. This group is important in providing B vitamins, iron, zinc, vitamin E, magnesium, and protein. Choose low fat choices. (Refer to the lesson on meats and beans for a further description of why these elements are essential) Proteins, provided in the meats and beans category, are only one of three nutrients that provide calories to the body. The others are carbohydrates and fat. Athletes, this is a great group for you because meats and beans are the building blocks for muscles, bones, blood, and skin.
  - Discuss different types of beans that are available and that might be interesting to try eating.
  - Bring to the students' attention that dry beans and peas can also be considered part of the vegetable category. People who eat a lot of meat will probably consider beans a vegetable, whereas people that do not consume a lot of meats will incorporate beans into the meats and beans category. Since dry beans and peas are similar in their addition of nutrients to the body as meats they can be used to fulfill requirements in this group. Examples of dry beans and peas include...
    - kidney beans
    - pinto beans
    - lima beans
    - black-eyed peas
    - lentils
  
- *Serving Sizes for meat and beans*—Once again we are back to using ounces as measures of quantity. Ounces can be tricky so be careful when estimating serving sizes. One ounce of meat or beans is the same as:
  - 1 ounce of meat, poultry, or fish
  - ½ cup dried beans

- 1 egg
- 1 Tablespoon of peanut butter
- ½ ounce of nuts or seeds
- Remind the students that one helping isn't necessarily an ounce equivalent.
- Review some more measurements from the chart.
- *Activity...* Get out the scale and start weighing food!

\*\*There are many different foods in each category. A main goal of this section is to ensure that the students know what the five food groups are and they are able to categorize food items into their appropriate group. Spend some time reviewing various foods and portion sizes with the students so that they can obtain a strong grasp on serving size equivalents. Serving sizes are a very important part of creating a healthy diet. Spend ample time on it. More detailed lists of what counts as an ounce or serving are provided at the end of the lesson.

## 2. Become familiar with *MyPyramid* and its' symbol representation.

There are six components symbolized in *MyPyramid*.

Introduce the six components in *MyPyramid* and how each is symbolized--

*Activity:* Represented by the steps ascending the left of the pyramid and the person climbing them. Physical activity of some sort should be incorporated everyday.

- Ask the students in which types of physical activity they enjoy participating?
- Address the fact that there are many types of physical activity.
- Discuss that activities do not have to be done all at one time. (ie: in order to obtain 60 minutes of daily physical activity the student can either do it all at once or do three 20 minutes segments)
- *Activity...* Ask how many students are physically active. Then ask how many of their parents are physically active. Is there a correlation between the physical activity of the parents and their children?

*Moderation:* Represented by the narrowing of each food group. This concept is of particular importance when dealing with solid fats and added sugars. Foods in the food group without high amounts of solid fats or added sugars should be eaten more often than those with high amounts.

- Discuss foods that contain a lot of added sugars
- What foods have high amounts of solid fat?

*Personalization:* Represented by the slogan, the person on the steps, and the name *MyPyramid*

- Remind the students that each person is individual and unique. This concept carries over into everything, even diet.
- *MyPyramid* should be personalized by each consumer to fit their age, sex, and activity level.
- Show the students how they can personalize their own pyramid by going to [mypyramid.gov](http://mypyramid.gov).

*Proportionality:* Represented by the widths of the food groups. If the entire pyramid represents an entire day's food intake, the varying widths correspond with the proportion of the entire diet that each food group should consist of.

- Ask the students to look at the pyramid and tell you which food group makes up the largest proportion.
- Which one makes up the smallest proportion?

*Variety:* Represented by the six colored bands of the pyramid

- Stress the importance of consuming all the food groups each day.
- Reaffirm that eating a variety of foods will decrease boredom within their diet and it will likely incorporate most all of the essential vitamins and minerals needed for healthy living.

*Gradual Improvement:* Represented by the slogan "Steps to a Healthier You" and also the ascending stairs

- Make sure the students understand that creating a healthy body takes time. It will not occur in one day, but instead gradually over time.
- Discuss that when it comes to weight loss, it isn't healthy to lose more than **1-2 pounds a week**.

Worksheet for teachers

Categorize the following foods as

grains (G), vegetables (V), fruits (F), oils (O), Milk (M), meats and beans (MB)

popcorn \_\_\_\_\_ (G)  
 Mayonnaise \_\_\_\_\_ (O)  
 oatmeal \_\_\_\_\_ (G)  
 Pork \_\_\_\_\_ (MB)  
 Pumpkin \_\_\_\_\_ (V) orange  
 Pumpkin seed \_\_\_\_\_ (MB)  
 Black Beans (V or MB) dry beans and  
 peas  
 100% grape juice \_\_\_\_\_ (F)  
 Corn \_\_\_\_\_ (V) starchy  
 Eggplant \_\_\_\_\_ (V) other  
 Limes \_\_\_\_\_ (F)  
 Tomato \_\_\_\_\_ (V) other

Macaroni noodles \_\_\_\_\_ (G)  
 Avocado \_\_\_\_\_ (F)  
 Veggie Burger \_\_\_\_\_ (MB)  
 Squash \_\_\_\_\_ (V) orange  
 Almonds \_\_\_\_\_ (MB)  
 Green Beans \_\_\_\_\_ (V) other  
 Kiwi \_\_\_\_\_ (F)  
 Eggs \_\_\_\_\_ (MB)  
 Raisins \_\_\_\_\_ (F)  
 Tuna \_\_\_\_\_ (MB)  
 Butter \_\_\_\_\_ (O)  
 pita \_\_\_\_\_ (G)  
 Shortening \_\_\_\_\_ (O)

Aaron is a 17 year old high school Senior. He is rather active and participates in more than 60 minutes of physical activity a day. The following is a typical day's intake of food for Aaron. Analyze how many ounces and cups of the five food groups he consumed on this day.

Breakfast: 2 pieces whole wheat toast (2G)  
 2 Tablespoon butter  
 1 cup of Oatmeal (2G)  
 1 large banana (1F)  
 1 cup applesauce (1F)  
 1 cup milk (1M)

PM Snack: 2 ounces processed cheese (1M)  
 14 round crackers (2G)  
 1 small apple (1F)  
 1 cup chocolate milk (1M)

AM Snack: 8 ounce yogurt (1M)  
 1 muffin (2G)

Dinner: 1 cup Spaghetti with ½ cup  
 tomato sauce (2G, ½ V)  
 1 cup cooked broccoli (1V)  
 1 cup 100% Grape Juice (1F)  
 2 slices of French bread (2G)

Lunch: Hamburger (2G, 2-3 MB)  
 20 French Fries (1V)  
 1 ½ cups milk (1 ½ M)  
 12 baby carrot sticks (1V)

Late Snack: 1 ½ cups ice cream (1M)

Grains \_\_\_\_\_ 14 \_\_\_\_\_ ounces  
 Vegetables \_\_\_\_\_ 3 ½ \_\_\_\_\_ cups  
 Fruits \_\_\_\_\_ 4 \_\_\_\_\_ cups  
 Milk \_\_\_\_\_ 5 \_\_\_\_\_ cups  
 Meat and Beans \_\_\_\_\_ 2-3 \_\_\_\_\_ ounces

Is Aaron's diet in accordance to Mypyramid? What suggestions would you make to him to increase the healthfulness of his diet? Answers may vary. His ideal diet would include 10 ounces of grains, 4 cups of vegetables, 2.5 cups of fruits, 3 cups of milk, 7 ounces meat and beans. Any suggestions that would get his values closer to these would be acceptable.

Visit the mypyramid.gov website. On the top right hand side you will find a box that says My Pyramid Plan. Type in the required information and then click SUBMIT. Write in the values and one of the tips that the computer tells you.

Food Group	Ounces of Cups	Tip
Grains		
Vegetables		
Fruits		
Milk		
Meat and Beans		

Choose one of the food groups that you believe needs some altering in your diet. Write down three ways in which you are going to work this week to make your servings of that food group more consistent with the recommendations.

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Worksheet for students

For information allowing you to accomplish this worksheet, visit [mypyramid.gov](http://mypyramid.gov) and become familiar the resources available there.

Categorize the following foods as grains (G), vegetables (V), fruits (F), oils (O), Milk (M), meats and beans (MB)

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Eggplant \_\_\_\_\_  
Limes \_\_\_\_\_  
Tomato \_\_\_\_\_  
Macaroni noodles \_\_\_\_\_

Avocado \_\_\_\_\_  
Veggie Burger \_\_\_\_\_  
Squash \_\_\_\_\_  
Almonds \_\_\_\_\_  
Green Beans \_\_\_\_\_  
Kiwi \_\_\_\_\_  
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1 cup 100% Grape Juice  
2 slices of French bread

Lunch: Hamburger  
20 French Fries  
1 ½ cups milk  
12 baby carrot sticks

Late Snack: 1 ½ cups ice cream

Grains \_\_\_\_\_ ounces  
Vegetables \_\_\_\_\_ cups  
Fruits \_\_\_\_\_ cups

Milk \_\_\_\_\_ cups  
Meat and Beans \_\_\_\_\_ ounces

Is Aaron's diet in accordance to Mypyramid? What suggestions would you make to him to increase the healthfulness of his diet?

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