



UNIT 4: NUTRITION

The Pyramid Counts

Grade level: Upper elementary

NATIONAL STANDARDS

NM-MEA.3-5.1

NL-ENG.K-12.7

NM-NUM.3-5.1

NM-GEO.3-5.1

NS.5-8.6

Student Learning Objectives

By the end of this lesson, students will be able to:

1. Explain how the USDA Food Guide Pyramid is a guide to healthy eating.
2. List the five major food groups and place familiar foods in the appropriate categories.
3. Choose the appropriate number of servings from each food group.
4. Discuss what a mixed food is and how it counts on the pyramid.

Time: 1 hour, 30 minutes

Tools, Equipment, and Supplies: Writing surface, copies of Activity Sheets 14:1 and 14:2, cards for \$10,000 Pyramid

Key Term(s): The USDA Food Guide Pyramid

Background Information

The food guide pyramid was developed by the United States Department of Agriculture and the Department of Health and Human Services to help people understand how to choose a healthful diet. The pyramid calls for eating a variety of foods daily that provide the needed nutrients and an appropriate number of calories.

The food guide pyramid categorizes foods into five groups. Each of these food groups provides some, but not all, of the nutrients people need. Foods in one group can't replace those in another. No one food group is more important than another—for good health, people need foods from each.

The pyramid helps people put the Dietary Guidelines for Americans into action. Following is the current advice (as of 2005) from most nutritionists. It serves as the basis for federal nutrition policy:

- Eat a variety of foods to get the energy, protein, vitamins, minerals and fiber you need for good health.
- Maintain a healthy weight to reduce your chances of having high blood pressure, heart disease, a stroke, certain cancers and diabetes.
- Choose a diet low in fat, saturated fat and cholesterol to reduce your risk



NOTES

of heart attack and certain types of cancer. Because fat contains over twice the calories of an equal amount of carbohydrates or protein, a diet low in fat can help you maintain a healthy weight.

- Choose a diet with plenty of vegetables, fruits and grain products, which provide needed vitamins, minerals, fiber and complex carbohydrates and can help you lower your intake of fat.
- Use sugars only in moderation. A diet with lots of sugars has too many calories and too few nutrients for most people and can contribute to tooth decay and obesity.
- Use salt and sodium in moderation to help reduce your risk of high blood pressure.

The orange stripe in the food guide pyramid represents grains, the green stripe represents vegetables, the red stripe represents fruits, the blue stripe represents milk and dairy products, and the purple stripe represents meat, beans, fish, and nuts, The smallest stripe of the pyramid is yellow; it represents fats, oils and sweets or foods such as salad dressings, oils, cream, butter, margarine, sugars, soft drinks, candies and sweet desserts. These foods provide calories but very little nutritional value to our daily diets. We should eat foods from this category only occasionally.

The food pyramid also shows a person running up the steps of the pyramid to represent how important it is to incorporate exercise into one's life. The steps also demonstrate that people can change their diets one step at a time to become healthier.

Interest Approach

FOOD—a topic that is near and dear to each of our hearts and stomachs! Here is a very important question for you. When I point to you, everyone at one time yell out your favorite food. Here is the question. What is your favorite food? Don't say anything yet. Think about it. Ready...

Point to the class.

Wow, I think I heard some of my favorites in the all the confusion. Let's think about our favorite foods a little more by drawing a picture!

Use a Hieroglyphics e-Moment® by having students draw their favorite food.

Let's begin. When I say GO, draw that favorite food you just shouted. Each of us will need to use a clean sheet of paper and the markers that have been provided. Let's draw our favorite food. Ready – GO!

Bring up the concept of healthy eating by asking students to draw arrows to the specific parts of their favorite food that is good for them.

Wow, our drawings are looking great. As a matter of fact, I am getting very



NOTES

hungry. Now, before you can call your masterpiece finished, let's identify the specific parts of our foods that are good for us. For example, if your favorite food was spaghetti, perhaps you think the pasta and the tomato sauce are good for you. We would draw a line to each and label each line pasta and tomatoes. So, look at your food and draw a line to each thing that is good for you and label each line. Be prepared to explain why those particular parts of your favorite food are good for you.

As students finish the assignment, clarify with each student the reasons certain foods are healthy.

OBJECTIVE 1: Explain that the USDA Food Guide Pyramid is a guide to healthy living.

Great! We are having fun now! Now that we are thinking so hard about our favorite food, let's look at a tool the United States Department of Agriculture (USDA) has published that should help us make decisions for healthy eating. The food guide pyramid is a guide to healthy eating.

Hand out the Activity Sheet 14:1, "The Pyramid Counts."

Have any of you ever seen the food pyramid before? The food pyramid helps us choose a mixture of foods that are good for us.

Use the Show What You Know e-Moment® and have students share what they think they know about the food guide pyramid. Simply soliciting responses from the entire class is probably best since some may not know anything about the food guide pyramid.

So let's all share what we just learned about the Food Pyramid! Who will be first?

Take as many responses as you like.

OBJECTIVE 2: List the five major food groups and place familiar foods in their appropriate categories.

Follow along with me on the activity sheet as we list each part of the food pyramid.

Review each of the food groups. Start with the orange stripe of the pyramid.

The orange stripe of the pyramid represents grains such as breads, cereals, rice and pasta. We should eat about 4 to 6 ounces from this group each and every day. Raise your hand if you have eaten any foods from this food group today.



NOTES

Raise your hand if your favorite food was in this group.

Ask students to look at the green and red stripes of the pyramid.

The green stripe represents vegetables and the red stripe represents fruits. Most people need to eat more of these foods for the vitamins, minerals and fiber they supply. We should all try to eat 1-1½ cups a day from both of these food groups. Raise your hand if you have eaten any foods from the vegetable food group today. Raise your hand if your favorite food is in this group. Raise your hand if you have eaten any foods from the fruit food group today. Raise your hand if your favorite food is in this group.

Ask students to look at the yellow stripe of the pyramid.

The small yellow stripe of the pyramid has no pictures in it. If it did, there would be pictures of things that are made mostly of fats, oils and sugars. These include soft drinks, candy, butter, margarine, salad dressings, oils and sweet desserts. These foods provide calories but very little nutritional value to our diets. We should all eat fewer servings of these foods. Raise your hand if you have eaten any foods from this food group today. Raise your hand if your favorite food is in this group.

Ask students to look at the blue stripe of the pyramid.

*This blue stripe includes dairy foods such as milk, yogurt and cheese. An important mineral, **calcium**, is found in these foods. Calcium makes strong bones and teeth. We should drink 1 to 3 cups of milk or eat 1 to 3 cups of other calcium-rich foods every day. Raise your hand if you have eaten any foods from this food group today. Raise your hand if your favorite food is in this group.*

Ask students to look at the purple stripe of the pyramid

*Our last stripe in the food guide pyramid is purple and represents meats, beans, fish, and nuts. An important nutrient, **protein**, comes from this group. It helps you grow and build strong muscles. We should eat 3 to 5 ounces from this group on a daily basis. Raise your hand if you have eaten any foods from this food group today. Raise your hand if your favorite food is in this group.*

Ask students to look at the steps and runner on the left side of the pyramid.

Exercise is also very important to keep us healthy. The little guy on the side of the pyramid is running up steps to remind us that we need to exercise every day. How many of you have exercised today? Remember we can exercise in many different ways such as playing during recess, riding our bikes, playing sports, or even taking our pets for walks. Exercise does not always have to be



NOTES

a formal activity as long as we are active.

OBJECTIVE 3: Choose the appropriate number of servings from each food group.

According to the United States Department of Agriculture (USDA) there aren't "good" and "bad" foods. Any food can fit into a healthy diet. Is anyone happy to hear that? You see, it's fine to eat some foods higher in sugar and fat, but not too much and not too often. Each of the food groups provides some, but not all, of the nutrients we need to be healthy. Foods in one group can't replace those in another. No one food group is more important than another.

Hand out copies of the Activity Sheet 14:2, "How Much Is Right for Me?"

Let's look at the "How Much Is Right for Me?" activity sheet. It is important for all of us to understand that the food guide pyramid shows a range of serving sizes. The number of servings we should eat depends on our age, size and activity level.

Let's take a look at what the appropriate servings are for each food group.

Use a Choral Response e-Moment® to review the appropriate servings for each food group.

According to the sheet, how much should we eat from the grain group each day?

Answer: We need 4-6 ounces per day.

According to the sheet, how much should we eat from the fruit group each day?

Answer: We need 1-1.5 cups per day.

According to the sheet, how much should we eat from the vegetable group each day?

Answer: We need 1-1.5 cups per day.

According to the sheet, how much should we eat from the dairy group each day?

Answer: We need 1-3 cups per day.



NOTES

According to the sheet, how much should we eat from the meat, beans, fish and nuts group each day?

Answer: We need 3-5 ounces per day.

According to the sheet, how much should we eat from the fats, oils and sugar group each day?

Answer: Use these foods sparingly.

How much exercise should have each day?

Answer: We need to exercise every day for at least 30-60 minutes.

OBJECTIVE 4: Discuss what a mixed food is and how it counts on the pyramid.

Great job, folks! We are really getting the hang of this healthy eating stuff. I bet we will be able to make it work for us. Let's discuss foods that might be hard to place on the food pyramid—mixed foods.

What should we do about *mixed foods* like pizza? We have to count them in several groups at one time. For example, a slice of pizza would include the following servings:

- Crust - a serving from the bread group
- Tomato sauce - a serving from the vegetable group
- Cheese - a serving from the dairy group

If we eat pizza with less cheese and use vegetable toppings instead of meat, the pizza will have less fat and calories.

It is also important to note that foods can be prepared in different ways. For example, a baked potato has 120 calories and only a trace of fat. But 14 French fries, which have about the same amount of potato, have 225 calories and 11 grams of fat.



NOTES

SUMMARY/REVIEW

Use the \$10,000 Pyramid e-Moment® to review content.

Excellent job! We should all go and become the healthiest eaters on the planet. Remember, it's all about good choices and moderation. Share what you learned today with someone you love so that they can feel good and live long lives.

REFLECTIVE REVIEW QUESTIONS:

- Think about what eat on a daily basis. How does your diet compare to what the Food Pyramid suggests?
- Why would the United States Department of Agriculture have anything to do with our daily diet?
- Which piece of the Food Pyramid is most interesting to you and why?

APPLICATIONS

APPLICATION 1: Create a large food guide pyramid on a bulletin board. Have students cut out pictures from magazines and place them in the appropriate food groups.

APPLICATION 2: Encourage students to strive to eat more fruits and vegetables every day. Have them keep track of the fruits and vegetables they eat.

APPLICATION 3: Good nutrition and fitness go together. Ask students about their favorite fitness activities. Have students keep records or draw pictures of the fitness activities they have done in a week.

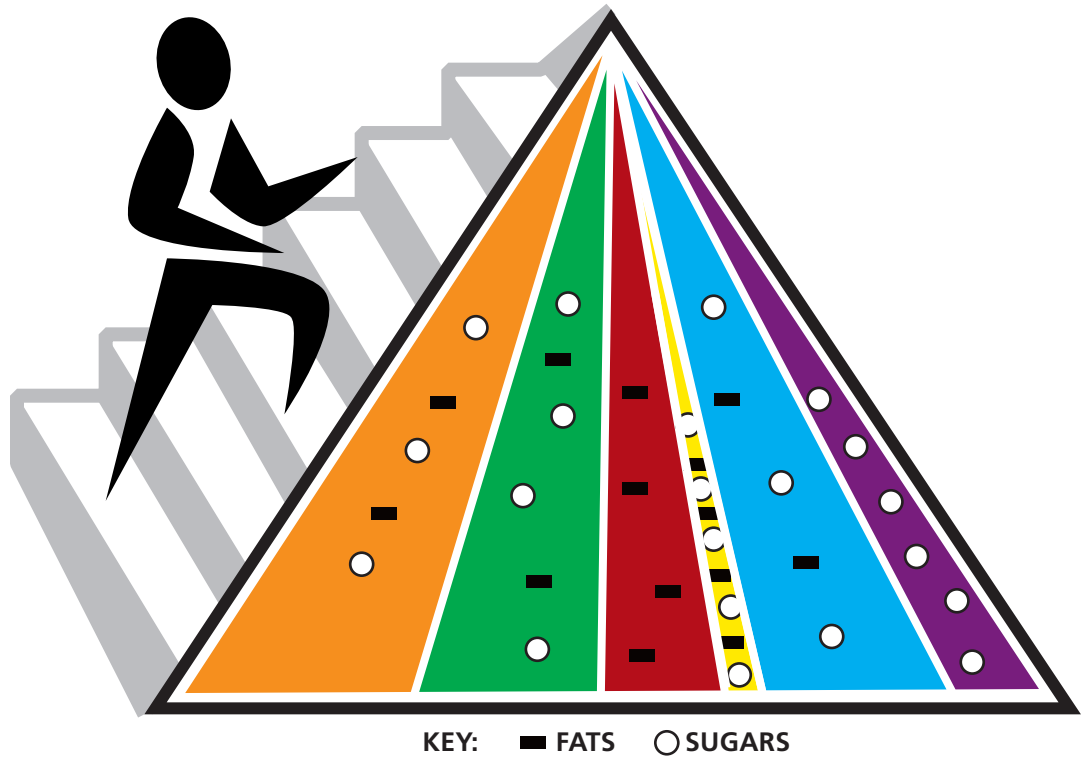
APPLICATION 4: For an art project, have students complete a "Pyramid Power" picture. Ask them to write or draw something demonstrating how the power of the pyramid can make them healthier.



ACTIVITY SHEET 14.1

The Pyramid Counts

NOTES



If we look at the food pyramid, we see that it is very colorful. Each of these colors represents one of the five major food groups. These groups help up maintain a healthy eating lifestyle.

Each of the colored stripes represents a food group. The orange stripe in the food guide pyramid represents grains, the green stripe represents vegetables, the red stripe represents fruits, the blue stripe represents milk and dairy products, and the purple stripe represents meat, beans, fish, and nuts, The smallest stripe of the pyramid is yellow; it represents fats, oils and sweets or foods such as salad dressings, oils, cream, butter, margarine, sugars, soft drinks, candies and sweet desserts. These foods provide calories but very little nutritional value to our daily diets. We should eat foods from this category only occasionally.

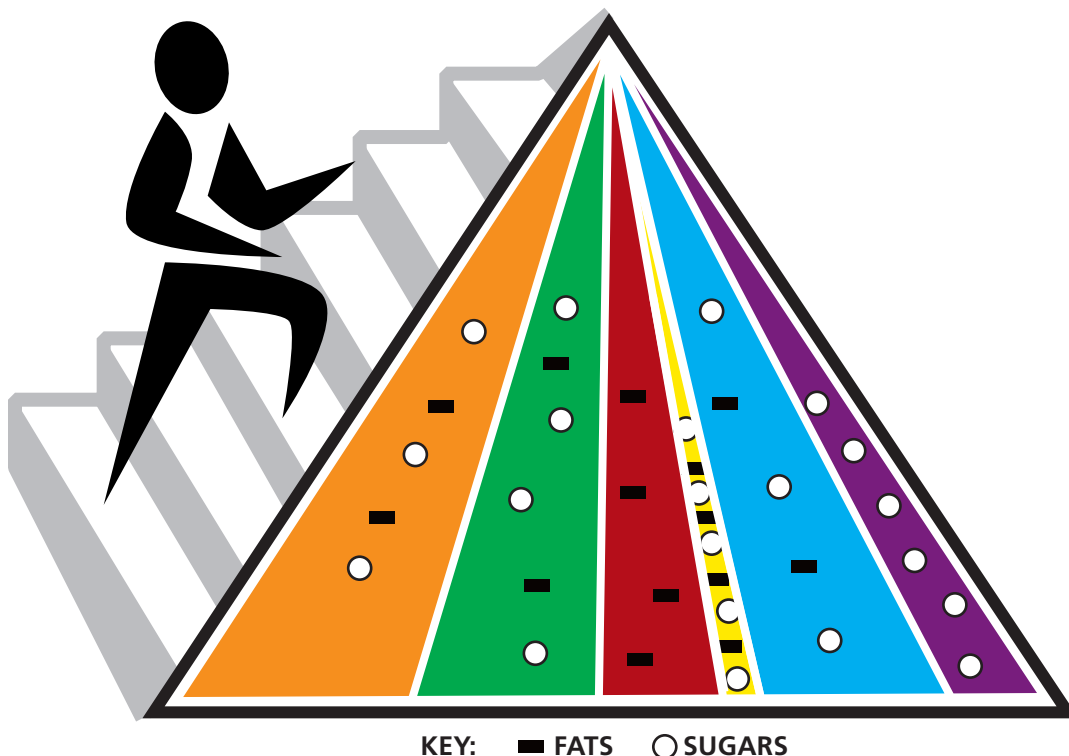
The food pyramid also shows a person running up the steps of the pyramid to represent how important it is to incorporate exercise into one's life. The steps also demonstrate that people can change their diets one step at a time to become healthier.



ACTIVITY SHEET 14.2

How Much Is Right for Me?

NOTES



Fats, Oils & Sweets - Yellow

USE SPARINGLY (all ages)

Vegetable Group - Green

1.5 cups per day (age 4 -8 years old)
2 cups per day (girls age 9-13 years old)
2.5 cups per day (boys age 9-13 years old)

Fruit Group - Red

1-1.5 cups per day (age 4 -8 years old)
1.5 cups per day (girls age 9-13 years old)
1.5 cups per day (boys age 9-13 years old)

Grains - Orange

4-5 oz. per day (age 4 -8 years old)
5 oz. per day (girls age 9-13 years old)
6 oz. per day (boys age 9-13 years old)

Dairy - Blue

1-2 cups per day (age 4 -8 years old)
3 cups per day (girls age 9-13 years old)
3 cups per day (boys age 9-13 years old)

Meat, Beans, Fish, & Nuts - Purple

3-4 oz. per day (age 4 -8 years old)
5 oz. per day (girls age 9-13 years old)
5 oz. per day (boys age 9-13 years old)

Exercise

30-60 minutes a day of vigorous play