Lesson Overview

The educator will lead a basic discussion about nutrients and how the food we eat contains nutrients such as vitamins, minerals, protein, carbohydrates, fat and fiber. Students will be introduced to four important nutrients of concern (potassium, dietary fiber, calcium, vitamin D) and identify the key food sources and food groups containing these nutrients.

Students will then be introduced to the MyPlate Food Guide and the five food groups. The class will participate in an activity where students are assigned to work together as part of food group "teams" to illustrate how all five food groups are needed for a balanced diet. Using a blank MyPlate graphic and food pictures, students will be encouraged to plan simple meals and snacks that fit the MyPlate guidelines.

The optional Fuel-up Food Prep* activity features a Pineapple-Yogurt Dip with fresh apple slices and graham crackers.

Lesson Objectives

The student will:
1. Be introduced to the idea that food provides nutrients, list the four nutrients of concern, and identify the food groups that contain the best sources of these nutrients.
2. Briefly describe the MyPlate Food Guide, list the groups that make up the "five food group team," and participate in a cooperative classroom activity.
3. Use the MyPlate activity sheet and food pictures or drawings to plan balanced meals and snacks.
4. (optional) Enjoy a simple, fun, nutrient-rich snack of apple slices and graham crackers served with pineapple-yogurt dip.

Academic Integration

Health, Critical Thinking, Science, Language Arts

Leader Background

The USDA Dietary Guidelines form the scientific basis for the MyPlate food guide and programs such as the school breakfast and lunch program. According to the 2015 Dietary Guidelines for Americans policy report,

Continued on Page 2

*For Fuel-Up Food Prep activities, apply for grants such as the Fuel Up to Play 60 grants available from the National Dairy Council (details at school.fueluptoplay60.com/funds). You can also ask your local booster club, parent organization or businesses for donations.
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Academic Integration

Health, Critical Thinking, Science, Language Arts

Leader Background

The USDA Dietary Guidelines form the scientific basis for the MyPlate food guide and programs such as the school breakfast and lunch program. According to the 2010 Dietary Guidelines for Americans policy report, “Americans eat too many calories and too much solid fat, added sugars, refined grains, and sodium. Americans also consume too little potassium; dietary fiber; calcium; vitamin D; unsaturated fatty acids from oils, nuts, and seafood; and other important nutrients. These nutrients are mostly found in vegetables, fruits, whole grains, and low-fat milk and milk products.”

The report highlights the nutrients of concern which are potassium, dietary fiber, calcium, and vitamin D. The following food groups are the best sources of these nutrients:

- **Potassium:** Dairy, Fruits, Vegetables
- **Dietary Fiber:** Fruits, Vegetables, Whole Grains
- **Calcium:** Dairy
- **Vitamin D:** Dairy

It is notable that dairy foods, including milk, yogurt and cheese are a significant source of three of the four nutrients of concern. Children ages 2-8 require 2.5 servings a day while children ages 9-18 require 3 servings daily. A serving is 8 ounces of yogurt or low-fat or fat-free milk (white or flavored) and 1.5 ounces of cheese.

This lesson introduces students to the concept that food provides nutrients and that certain foods are especially nutrient-rich. By highlighting the nutrients of concern, the goal is to guide students to identify and choose more servings of dairy, fruits, vegetables and whole grains.

The MyPlate food guide provides a graphic presentation of a healthful, balanced diet. It was designed as an easy tool to remind Americans to eat all five food groups in the proper proportions. In this lesson, students will be introduced to MyPlate through both group and individual activities.

As time and resources permit, consider conducting the Fuel-up Food Prep activity. Students are more willing to try nutrient-rich choices when they are exposed to easy, healthy classroom snacks.

Before teaching the lesson, review the following resources:

1. [choosemyplate.gov](http://choosemyplate.gov)
2. If you are interested in more in-depth information on the 2015 Dietary Guidelines for Americans, you can access the policy document at [www.cnpp.usda.gov/Publications/DietaryGuidelines/2015/PolicyDoc/PolicyDoc.pdf](http://www.cnpp.usda.gov/Publications/DietaryGuidelines/2015/PolicyDoc/PolicyDoc.pdf)
3. [fueluptoplay60.com](http://fueluptoplay60.com)
The MyPlate Food Guide: Fuel Up to Play 60 with the Five Food Group Team

Materials Needed
To Teach Lesson:
1. Board or flip chart
2. Display Projector or large classroom computer monitor
3. MyPlate graphic (download from choosemyplate.gov)
5. Food group cards (below)
6. MyPlate Planner activity sheet
7. grocery ads, gardening catalogs, and magazines with food pictures

For Fuel up Food Prep:
The following recipe makes approximately 4 cups, which is approximately 30 servings (2 tablespoons each).
1. 1 - 20 oz. can crushed pineapple in juice, well drained (reserve the juice)
2. 2 cups nonfat vanilla yogurt
3. 1 cup whipped cream cheese
4. Apple slices and graham crackers for dipping (approximately 1/4 apple and 2 small cracker squares per student)
5. 2 mixing bowls, colander, large spoon for mixing, small paper cups, serving bowls and tongs for apple slices and crackers, small plates

Teaching the Lesson
1. Begin by asking students if they know the definition of a nutrient. Write down their ideas on the board or a flip chart. Explain that nutrients are the parts or ingredients of food that your body needs to live, grow and stay healthy. The six types of nutrients are carbohydrates (which include fiber), proteins, fats, vitamins, minerals and water.
2. Explain that most children and adults in America are not getting enough of four important nutrients. They are potassium, fiber, calcium and vitamin D. Write these four nutrients on the board. Next, ask students if anyone knows the foods that are the best sources of these nutrients. The correct answers are:
   - **Potassium**: Dairy, Fruits, Vegetables
   - **Fiber**: Fruits, Vegetables, Whole Grains
   - **Calcium**: Dairy
   - **Vitamin D**: Dairy
3. Ask students to identify which food group is an important source of three of the four important nutrients. The correct answer is dairy foods, including milk, yogurt and cheese. Explain that children ages 2-8 require 2.5 servings of dairy each day while children ages 9-18 require 3 servings daily. A serving is 8 ounces of milk or yogurt and 1.5 ounces of cheese.
4. Next, project the graphic of the MyPlate food guide, available at choosemyplate.gov. Explain how the MyPlate food guide is made up of a "team" of five food groups that work together to give kids all of the nutrients needed to grow, stay healthy, and have energy for 60 minutes or more of activity. Briefly discuss each group, pointing out that many of the foods we eat are a combination of two or more groups. Ask students to list examples. (e.g. pizza, tacos, sandwiches, cereal with fruit and milk, etc)

Continued on Page 4
Page 4: The MyPlate Food Guide: Fuel Up to Play 60 with the Five Food Group Team

5. For the group activity, display the National Dairy Council food models on a table or desk. Next, cut out the food group card slips (below) and pass out one slip to each student. Ask students to glance at their paper slip and then turn it over. Play the game as follows:
   1) Explain that the goal of the game is to form “five food group teams” and then find food models that illustrate each food group.
   2) When the teacher gives the go-ahead, students will pick up their food group slips, mingle, and assemble a team of five which has all five food groups represented. Once a team is formed, they need to go to the food model table and each student needs to find a food that belongs to the food group listed on their slip of paper.
   3) Once the team has formed and each member has chosen the correct food models, the team should assemble at the front of the class and hold up their food models.
   4) As time permits, repeat the game a few times. Each time, the teams will be different and the food group examples will vary.

Note: The game works best when students are in multiples of 5. Any "extra" students can be monitors who make sure every team has the right food groups, picks up correct food models, etc.

6. As homework or during free classroom time, assign students to complete the Plan a MyPlate Plate worksheet on page 6 using drawings or food pictures from grocery ads, gardening catalogs or magazines.

Fuel Up Food Prep

Pineapple Yogurt dip
1. In advance, ask for student or parent volunteers and assign tasks for set-up, coordination and clean up.
2. Make sure all students wash their hands with warm water and soap for at least 20 seconds prior to this snack activity.
3. The leader/educator will first drain the pineapple, reserving the juice in a separate bowl. Next, the leader will measure 2 cups of nonfat vanilla Greek yogurt, 1 cup whipped cream cheese and the pineapple into a large mixing bowl. If desired, student volunteers can assist in mixing the dip. Continue to mix until the dip is well-blended and of a uniform consistency.
4. Adult volunteers or leaders will slice up apples (1 apple per four students) and place the slices in the bowl with the reserved pineapple juice. Explain to students that the vitamin C contained in the juice prevents the apples from browning.
5. Portion the dip into small paper cups and have students come take a cup of dip, 2 graham cracker squares and a few apple slices. Encourage students to identify the food groups and enjoy their snack!

Going Further
- Visit the Fuel Up to Play 60 interactive Playbook at school.fueluptoplay60.com/playbook for ideas on action strategies and ideas that can be implemented by students.
- Challenge students to come up with their own FUTP60 "plays" that reinforce this lesson. For example:
  - Create posters for the cafeteria that show pictures of the food groups or MyPlate food guide.
  - Use the National Dairy Council paperboard food models (free by request at www.southeastdairy.org), a MyPlate poster and 9” white paper plates as part of a hands-on classroom "Make your own MyPlate" learning center.
- Upper elementary students are encouraged to use the choosemyplate.gov website to generate a personal Daily Food Plan and set personal goals for eating according to the MyPlate guidelines.
- Display and discuss the Fuel Up With Milk – It Does a Body Good! poster and other resources from the Southeast Dairy Association, available by contacting your local Program Account Manager at www.southeastdairy.org/about-us/contact-us
The MyPlate Food Guide
Five Food Group Team! Activity Food Group Cards

Reproduce, cut apart, and use in Five Food Group Team Game

<table>
<thead>
<tr>
<th>Grain</th>
<th>Vegetable</th>
<th>Fruit</th>
<th>Dairy</th>
<th>Protein</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image" alt="Cereal" /></td>
<td><img src="image" alt="Broccoli" /></td>
<td><img src="image" alt="Apple" /></td>
<td><img src="image" alt="Milk" /></td>
<td><img src="image" alt="Fish" /></td>
</tr>
<tr>
<td><img src="image" alt="Cereal" /></td>
<td><img src="image" alt="Tomato" /></td>
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</tbody>
</table>
Directions: Use the blank plate below to plan a menu for breakfast, lunch, or dinner that has all of the food groups in the right amounts. You can draw pictures of foods or you can cut out food pictures from grocery flyers, gardening catalogs, or magazines.

You can use this sheet in many other ways:
1. Use it as a diet record. Draw pictures or write the names of everything you eat and drink each day. Are you filling up all the spaces?
2. Break your favorite combination food into all of its parts to see how many food groups it contains.
3. Going out to eat? Plan a meal in advance that will include all of the food groups in the correct amounts.

Find out more about MyPlate at the website, choosemyplate.gov.