



**BRIDGES TO
WELLNESS™**



Grades 9–10

*Connecting
School Meals and
Classroom Learning*
Food Groups to Encourage

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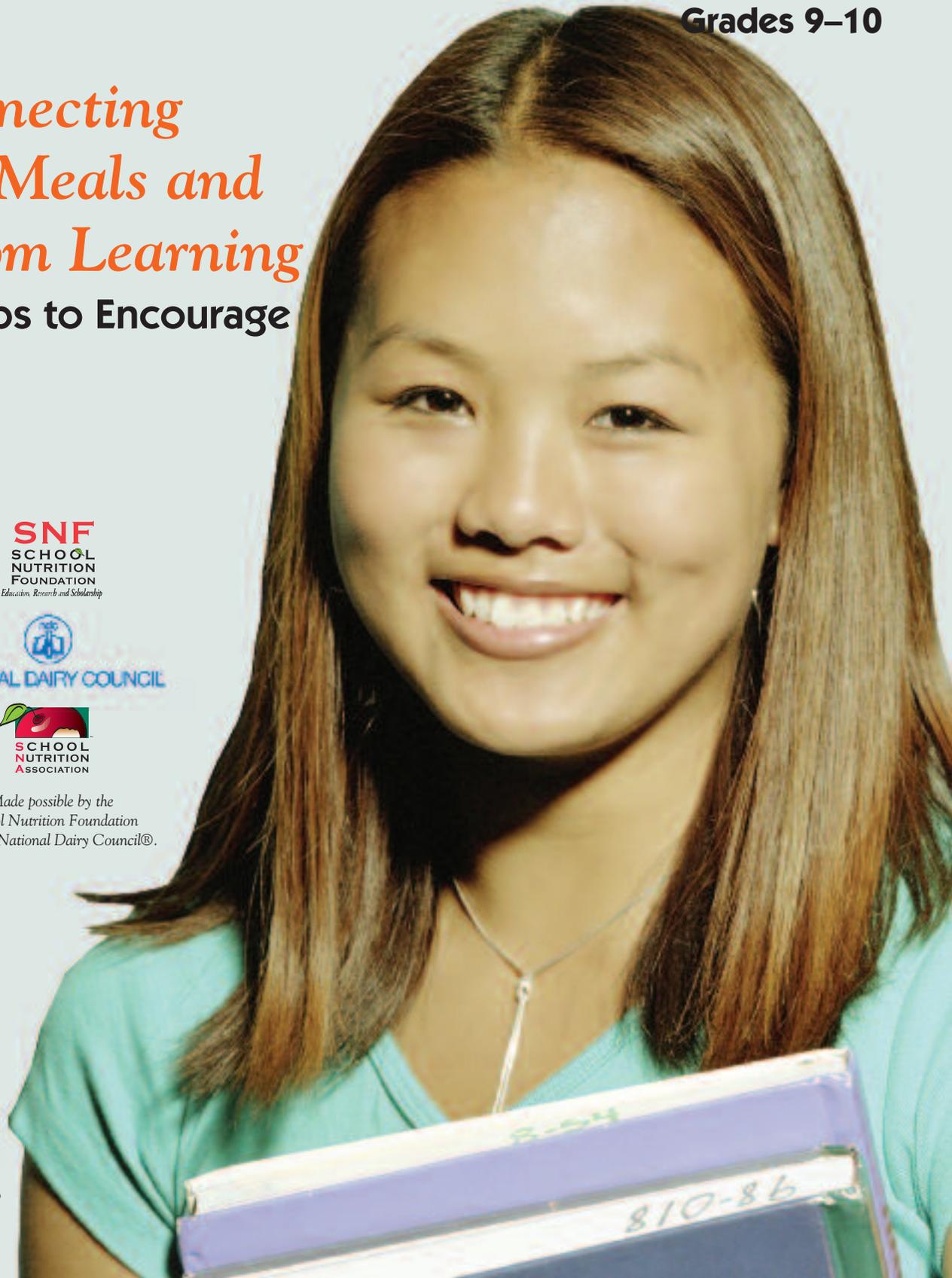


NATIONAL DAIRY COUNCIL



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Connecting School Meals and Classroom Learning

Food Groups to Encourage

The 2005 Dietary Guidelines identified “Food Groups to Encourage”—food groups that Americans need to eat more frequently: the Fruit Group, the Vegetable Group, the Grain Group (specifically whole grains) and the Milk Group (specifically low-fat and fat-free dairy products). Although it is important to eat foods from all the food groups, increased intakes of foods from these food groups are recommended since they are good sources of the “nutrients of concern” i.e., nutrients lacking in the American diet. The nutrients of concern for children include calcium, potassium, fiber, and magnesium. This three-part lesson teaches and reinforces these important nutrition recommendations in both the classroom and the cafeteria.

PART 1—CLASSROOM INSTRUCTION: GETTING ENOUGH OF THE GOOD STUFF After reviewing the MyPyramid food guide, students learn more about recommended daily amounts of food, suggested serving numbers, suggested serving sizes, and nutrient-rich foods in each of the four targeted food groups. Next they evaluate the one-day food diary of a 15-year-old girl and generate suggestions for improving her diet. Finally, they create a “One Day’s Eating Plan” for themselves that incorporates what they’ve learned in this lesson. **Activity Length, Part 1—45 minutes**

PART 2—APPLICATION ACTIVITY: MYPYRAMID.GOV SCAVENGER HUNT Working in small groups, with a partner or independently, students search the www.mypyramid.gov website to answer the questions on a handout designed to help them explore this website. **Activity Length, Part 2—60 minutes**

PART 3—CAFETERIA CONNECTIONS: “MORE OF THE FOUR” STUDENT SURVEY Students will develop a survey to determine the most popular foods from the “Food Groups to Encourage” and report results to the cafeteria staff and other students. **Activity Length, Part 3—90 minutes**

NUTRITION OBJECTIVES

Students will be able to:

- Identify the Milk, Vegetable, Fruit, and Grain Groups as food groups they need to eat more often.
- List 3 health benefits of a diet rich in low-fat or fat-free dairy foods, vegetables, fruits, and whole grains.
- Use the “Recommended Amounts of Food” (from mypyramid.gov) to evaluate a sample “One Day Food Log” and make recommendations for change.
- Use the “Recommended Amounts of Foods” to create a “One Day’s Eating Plan” for themselves.

MATERIALS

- **Transparency A—MyPyramid**
- Overhead projector or LCD projector
- Projection screen
- **Handout 1—More of Four** (one copy for each student)
- **Transparency B—More of Four**
- **Handout 2—Does Madison Need More of the Four?** (one copy for each student)

- **Handout 2** [Teacher Version with Answer Key]—**Does Madison Need More of the Four?**
- **Handout 3—One Day’s Eating Plan** (one copy for each student)
- **Handout 4—MyPyramid.gov Scavenger Hunt** (one copy for each student)
- **Handout 4** [Teacher Version with Answer Key]—**MyPyramid.gov Scavenger Hunt**

ADVANCE PREPARATION

- Review the entire lesson to become familiar with it.
- Decide if you will project the transparencies on an LCD projector or if you will use an overhead projector. If you will be using an overhead projector, make a transparency of **Transparency A—MyPyramid** and **Transparency B—More of Four**.
- Photocopy **Handouts 1, 2, 3, and 4** making one copy of each for each student.



Part 1—Classroom Instruction: Getting Enough of the Good Stuff

1. Begin this activity by asking a few questions to set the stage for the lesson:

- How many of you think nutrition is important?
- Why? *Accept all reasonable answers. If students do not mention it, point out that nutrition plays a role in health and growth.*
- Lots of groups are concerned about nutrition. One of those groups is the United States government. They study the health and nutrient intake of Americans and then make recommendations on what we need to eat to stay healthy.
- Today we'll be looking at some of these recommendations.

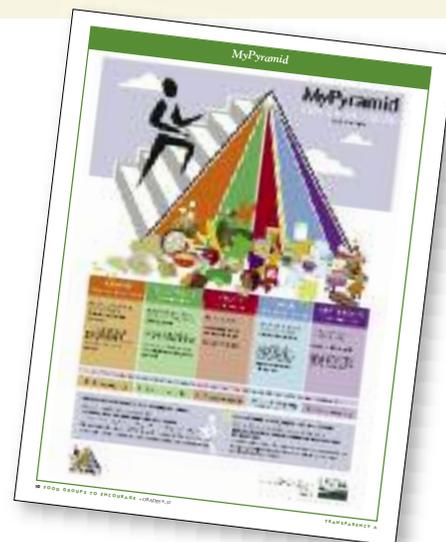
2. Project Transparency A—MyPyramid either on an overhead transparency or off your computer. Ask students:

- Who has seen this graphic before? Where?
Answers may include: On posters, in the school cafeteria, on the Internet, on cereal boxes, in grocery stores
- What does this graphic represent? *A healthy diet; a healthy balance between food and physical activity*
- There are six different sections on MyPyramid.
- What does the orange section stand for?
The Grain Group
- What does the green section stand for?
The Vegetable Group
- What does the red section stand for?
The Fruit Group
- What does the yellow section stand for? *Oils*
- What does the blue section stand for?
The Milk Group
- What does the purple section stand for?
The Meat & Beans Group
- Did you notice that some of the color stripes are wider than others? Why do you think the Pyramid was drawn this way? *The different sizes remind*

you to choose more foods from the food groups with the widest stripes.

- When the government looked at the diets of Americans, they discovered that most students your age are doing well in getting enough servings from the Meat & Beans Group. *However, most students need to eat more foods from four of the Five Food Groups: the Milk Group, the Vegetable Group, the Fruit Group, and the Grain Group.*

NOTE: While increased consumption of these foods is recommended, decreased consumption of less nutrient-dense foods is needed to control calorie intake.



3. Distribute Handout 1—More of Four. Project Transparency B—More of Four. Explain:

- In the first column of the chart are the names of the four food groups that we need to eat more often. What are they? *Milk Group, Vegetable Group, Fruit Group, Grain Group.*
- To eat a healthy diet, you may hear lots of advice: "Eat this" or "Don't eat that." It sometimes gets confusing.

- Before you make a decision about eating a food, you need to remember two guidelines.

On the chalkboard, write:

- “Guideline #1 for Healthy Eating: Eat the recommended amount of food from each food group.”

NOTE: Students can go to www.mypyramid.gov to get more information on the number of calories they need each day as well as the amount of food recommended from each food group per day. Calories are based on an individual’s age, gender and activity level.

| Food Group | Recommended Amount (per Day) | Number of Daily Servings | Suggested Serving Sizes | Nutrients Provided* | Nutrient-Rich Choices | Health Benefits† |
|------------------|------------------------------|--------------------------|---|--|--|--|
| Milk | 3 cups | 3 servings | • 1½-2 (1 cup) • Yogurt—8 oz • Cheese—1½ oz | • calcium • potassium • magnesium • protein • phosphorus • vitamin D | • Low-fat and fat-free milk • Most fat and fat-free yogurt • Reduced-fat cheese | |
| Vegetable | 2½ cups | 5 servings | • Raw or cooked vegetables (½ cup) • Raw, leafy vegetables (1 cup) • Vegetable juice (½ cup) | • fiber • potassium • magnesium • vitamins A • vitamin C | • Many of these food vegetables • Dark green vegetables • Orange vegetables • Beans | |
| Fruit | 2 cups | 4 servings | • Apple, banana, orange, pear, 1 medium • Grapefruit, ½ • Cantaloupe, ½ • Raisins, dried fruit, ½ cup • Chopped fruit, ½ cup • 100% fruit juice, ½ cup | • fiber • potassium • vitamins A • vitamin C | • Lemons • Dried fruit • Most fruit • Dried fruit | |
| Grain | 6 ounces | 6 servings | • Bread, 1 slice • Tortilla, roll, muffin, pancake, waffle, 1 • Bagel, hamburger, taco, ½ • Cold cereal, 1 cup • Hot cereal, 1 cup • cereal, ½ cup | • fiber • magnesium • carbohydrates | • Whole grain bread and cereal • Oatmeal • Brown rice • Whole wheat pasta | NOTE: Half of your White Grain should be whole grain. |

Continue:

- On the average, students your age need about 2000 Calories of food and beverages each day.
- The information on **Handout 1**, presumes you are eating 2000 Calories daily.
- Find the Milk Group. Look at Column 2 to find out what is the recommended amount of food needed each day from the Milk Group? **3 cups**
- Go to the next column. How many servings do you need each day from the Milk Group? **3**
- How much is in a serving?
 - **8 ounces (1 cup) of milk**
 - **8 ounces of yogurt**
 - **1½ ounces of cheese**

4. Continue by writing the following on the chalkboard:

- “Guideline #2 for Healthy Eating: Select the most nutritious choices from each food group.”

Continue reviewing **Handout 1**:

- The Milk Group provides many different nutrients to our bodies.
- What nutrients are listed here? **Calcium, potassium, magnesium, protein, phosphorus, vitamin D.**
- These six nutrients work as a team to help build strong, healthy bones.
- Experts tell us that when your diet has enough Milk Group foods you will get enough nutrients to **build strong healthy bones and help reduce your risk of losing your bone mass** and developing osteoporosis.
- Which of these nutrients are printed in boldface? **Calcium, potassium and magnesium**
- Health professionals refer to the nutrients in boldface as “nutrients of concern” for teenagers.

- “Nutrients of concern” are nutrients that most students your age are not getting enough of.
- Which foods in the Milk Group are the best sources of the nutrients your body needs? **Low-fat or fat-free milk, low-fat or fat-free yogurt, reduced-fat cheese, string cheese**

In the column labeled “Health Benefits,” have students fill in the cell in the Milk Group row, writing the health benefit of this group in their own words.

5. Review the other three food groups on Handout 1—Vegetable Group, Fruit Group and Grain Group. For each food group:

- Emphasize Guideline #1 as you cover:
 - Column 2: The total amount of food recommended each day from each food group
 - Column 3: The number of suggested daily servings (based on the total amount of food)
 - Column 4: Suggested serving sizes
- Emphasize Guideline #2 as you cover:
 - Column 5: Nutrients
 - Emphasize the nutrients in boldface, as these are the nutrients that adolescents are not consuming in adequate amounts.
 - Column 6: “Nutrient-Rich Choices” which lists the best sources of the “nutrients of concern.”
- Share the health benefit(s) of each food group with students and have them write these in the column titled “Health Benefit(s).” These benefits include:
 - **Vegetable Group**—Can help reduce the risk of having a stroke, developing diabetes, developing certain types of cancer, and developing heart disease.

- **Fruit Group**—Can help reduce the risk of having a stroke, developing diabetes, developing certain types of cancer, and developing heart disease.
- **Grain Group**—Whole grains can help reduce the risk of developing heart disease.

6. Distribute Handout 2—Does Madison Need More of the Four? Explain to students that this food diary includes all the foods a 15-year-old girl ate in one day.

On each line students should:

- Check the food group that the food is in, e.g., banana is in the Fruit Group.

NOTE: Some foods listed are not in any of the four food groups studied in this lesson. (e.g., hamburger) Students should not place a check in any column opposite these foods.

- Identify if Madison ate more than one serving of a food using the serving size information in column 4 of **Handout 1**.
- If Madison ate more than one serving of any food item, make enough checks to count her servings, e.g., 2 slices of whole grain toast = 2 servings from the Grain Group.

When students are done evaluating the food diary, they should complete the chart on the bottom of the page, using their findings from Madison's food diary and information from Handout 1.

7. When students have completed the chart, review the two guidelines for healthy eating and students' findings:

- In looking at Madison's food diary, we need to keep in mind our two guidelines for healthy eating.
- What's the first guideline? *Eat the recommended amount of food from each food group.*
- That's what you were checking when you counted the number of servings she ate from each food group.
- What's guideline #2? *Select the most nutritious choices from each food group.*
- As we talk about Madison's food diary, I'm going to ask you to look at the foods she chose to see

Does Madison Need More of the Four?
Teacher Version

WHO IS MADISON?
Madison Taylor is a 15th grade student at Thomas Jefferson High School. She takes Physical Education every day, walks about 10 minutes each way to and from school, and plays volleyball a couple times a week. Madison has figured out that she needs about 2000 Calories a day to stay healthy.

INSTRUCTIONS:
1. Review Madison's "One-Day Food Diary."
2. For each serving she ate from one of the four food groups studied in this lesson, make a check in the appropriate column of the food diary.
3. For any whole grain food she ate, write the check.
4. If a particular food is not in the Milk, Vegetable, Fruit, or Grain Groups, do not place a check in any column.

| Meal | Food | Serving Size | Milk | Vegetable | Fruit | Grain |
|-----------|----------------------------|---------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|
| Breakfast | Banana | 1 medium | | | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| | Milk, chocolate, low fat | 8 ounces | <input checked="" type="checkbox"/> | | | |
| | Toast, whole grain | 2 slices | | | | <input checked="" type="checkbox"/> |
| Lunch | Apple | 2 tablespoons | | | <input checked="" type="checkbox"/> | |
| | Hamburger | 3 ounces | | | | |
| | Hamburger bun | 8 ounces | | <input checked="" type="checkbox"/> | | |
| Snack | Yogurt, plain, lowfat | 10 ounces | <input checked="" type="checkbox"/> | | | |
| | Carrot | 10 strips | | <input checked="" type="checkbox"/> | | |
| | Cup | 1/2 cup | | | <input checked="" type="checkbox"/> | |
| Supper | Salmon | 3 ounces | | <input checked="" type="checkbox"/> | | |
| | Chicken, skinless, skin on | 4 ounces | | <input checked="" type="checkbox"/> | | |
| | Chicken leg | 1/2 cup | | | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| Dessert | Mashed potatoes | 1/2 cup | | | | <input checked="" type="checkbox"/> |
| | Biscuit | 1 cup | | | | <input checked="" type="checkbox"/> |
| | Ice cream, vanilla | 1/2 cup | | | | <input checked="" type="checkbox"/> |

SUMMARY CHART:

| How many servings did Madison eat from the Milk Group? | How many servings are recommended each day from the Milk Group? | How many servings did Madison eat from the Fruit Group? | How many servings are recommended each day from the Fruit Group? |
|--|---|---|--|
| 1 | 3 | 3 | 2 |
| 1 | 3 | 3 | 2 |
| 1 | 3 | 3 | 2 |
| 1 | 3 | 3 | 2 |

if they were on the "nutrient-rich" list on **Handout 1**.

- How many servings did Madison eat from the Milk Group? **2**
- How many servings are recommended from the Milk Group? **3**
- How many additional Milk Group servings does she need? **1**
- Were her Milk Group choices from the nutrient-rich list? **Yes**

NOTE: If students do not agree on how many servings Madison ate from a particular food group, review the foods in that food group. The answer key on page 15 can be helpful.

Continue:

- How many servings did Madison eat from the Vegetable Group? **3**
- How many does she need to eat? **5**
- How many additional Vegetable Group servings does she need? **2**
- Were her Vegetable Group choices from the nutrient-rich list? *French-fries are not.*
- How many servings did Madison eat from the Fruit Group? **3**
- How many does she need to eat? **4**
- How many additional Fruit Group servings does she need? **1**
- Were her Fruit Group choices from the nutrient-rich list? **Yes**
- How many servings did Madison eat from the Grain Group? **6**
- How many does she need to eat? **6**
- How many additional Grain Group servings does she need? **None**
- Did Madison choose any whole grains from the nutrient-rich list? *She had two servings of whole-grain toast.*
- How many Grain Group servings should be whole grains? **3**
- How many additional whole grains does she need? **1**

8. As a class, have the students generate several options for Madison to add the missing servings and/or to replace poor food choices with nutrient-rich choices. For example:

- **Milk Group:**
 - Drink a glass of low-fat milk with supper.
 - Add a slice of low-fat cheese to her hamburger at lunch.
- **Vegetable Group**
 - Have raw vegetables as part of a snack.
 - Have 1 cup of broccoli instead of $\frac{1}{2}$ cup for supper.
 - Put several slices of tomato on her hamburger at lunch.
 - Choose carrots instead of french fries for lunch.
- **Fruit Group**
 - Eat an apple or pear instead of a brownie at lunch.
 - Select grapes or mango instead of cookies for a snack.
- **Grain Group**
 - Ask the person preparing supper to make rice out of $\frac{1}{2}$ white rice and $\frac{1}{2}$ wild rice (which is a whole grain).
 - Ask for her hamburger on a whole grain bun or whole grain bread.
 - Eat only a $\frac{1}{2}$ cup of rice at supper and add 1 cup of plain popcorn as an evening snack.

NOTE: Plain popcorn is a whole grain food and a good source of fiber. White rice, on the other hand, is a refined grain that is lower in fiber.

9. Review Handout 2 one more time, discussing “Extra Foods.”

- Besides eating foods from the Milk, Vegetable, Fruit, and Grain Groups, Madison also ate some “Extra Foods.”
- “Extra Foods” are low in nutrients but can be high in calories.
- What “Extra Foods” did Madison eat? *Jelly, brownie, cola, cookies*
- It’s okay to eat a few “Extras” within your daily calorie limitations. But in order to get the nutrients you need and have room for the daily recommended amount of servings from the Milk, Vegetable and Fruit Groups, Madison may have to eat fewer “Extra Foods.”

10. Distribute Handout 3—One Day’s Eating Plan. Review the directions with students. Be sure to review the serving size information on Handout 1. For example,

- $1\frac{1}{2}$ ounces of cheese = 1 cup of milk
- 1 medium apple, orange or banana = $\frac{1}{2}$ cup of fruit
- 1 slice of bread = 1 ounce of grain

Allow students several minutes to complete the chart.

When students are done, take a quick survey by asking:

- How many found it easy to get enough food from the Milk Group?
- How many found it challenging?
- What were some of the Milk Group foods you included on your Eating Plans? *Accept all reasonable answers.*
- If you didn’t get three cups of Milk Group foods, add one of the foods just suggested.
- How many were able to get $2\frac{1}{2}$ cups (5 servings) of vegetables on your Eating Plan?
- How many only got $1\frac{1}{2}$ cups (3 servings) or $2\frac{1}{2}$ cups (4 servings) How many got 1 cup (2 servings) or less?
- What were some of the vegetables that you included?
- How many got 2 cups (4 servings) from the Fruit Group?
- How many did not?
- What were some of the Fruit Group foods that you included on your Eating Plans?
- How many were able to include 6 ounces (6 servings) of Grain Group foods?
- How many also got at least 3 ounces (3 servings) of whole grains?
- What whole grain foods did you choose?

Ask students to “test” their Eating Plans during the coming week by trying to follow their plan for a whole day. Ask students to observe any challenges in

NOTE: If possible, schedule class time during the following week for students to “check in” on how well they’ve done in implementing the Eating Plan.

following their plans.



Part 2—Application Activity: MyPyramid.gov Scavenger Hunt

Working in small groups, with a partner or independently, students search the www.mypyramid.gov website to answer the questions on a handout designed to help them explore this website.

SUGGESTED PROCEDURE

1. After deciding whether students will work individually or with others on this handout, distribute a copy of **Handout 4—MyPyramid.gov Scavenger Hunt** to each student.
2. If possible, introduce the class to the www.mypyramid.gov website, showing them the two sections in which they will be looking for answers to the scavenger hunt questions. Set a date for completing the handout.

3. When students have completed the handout, review the answers (see: **Handout 4 with Teacher Answer Key**). Discuss any questions students have.

NOTE: Students who are interested can use the **Pyramid Tracker** component of this website to evaluate how well they are eating (“Assess Your Food Intake”) and to evaluate their physical activity (“Assess Your Physical Activity”).





Part 3—Cafeteria Connection: “More of the Four” Student Survey



Classroom instruction connects to the school cafeteria when students survey their peers about their favorite foods from the “Food Groups to Encourage.” Students tabulate the survey results and present them to the cafeteria manager and students in an interesting fashion using a variety of graphs.

ADVANCE PREPARATION

- Meet with the cafeteria manager to review the lesson. Let her/him know that the students wish to survey fellow students in the cafeteria about their favorite foods from the Milk, Grain, Fruit, and Vegetable Groups. Work with the cafeteria manager to identify a list of appropriate foods that are already offered on the cafeteria menu within each food group.
- Secure a day and time to conduct the survey in the cafeteria. Obtain any needed permission from the school principal or teachers/lunch monitors on duty that day.
- If possible, have a student “announce” that the survey will be taking place over the public address system or post the announcement on the school website.

SUGGESTED PROCEDURE

- Explain the assignment to students and start by having them list all the foods currently served in the school cafeteria from each of the four “Food Groups to Encourage.”

- Then using the Internet and other resources, students identify additional foods they like from each food group.
- From the list of foods developed with the cafeteria manager, have students develop a brief survey, approximately 4-6 questions, to determine food preferences from the “Food Groups to Encourage.” A sample survey question may be:

Rank the following “whole grain” foods, with #1 being your least favorite whole grain food to #8 being your most favorite whole grain food that you would like to see on the school menu:

- ___ Whole grain bread
- ___ Whole grain buns
- ___ Brown rice
- ___ Whole grain pasta
- ___ Oatmeal
- ___ Whole grain cereal, such as Cheerios
- ___ Plain, cooked popcorn
- ___ Whole grain snack bars



- Make enough copies of the survey so that each student in the school can complete a survey during his or her lunch period. Have a few extra pencils available for students to use to complete the survey.
- Have students identify the tasks that need to be completed to conduct the survey including: distributing the survey in the cafeteria, being available to answer questions, collecting surveys, and tabulating results. Be sure students are assigned to cover all responsibilities.
- Have students calculate the most popular food items. In the sample question, students would add up the number of points for each food item. From the totals, students could calculate percentages to create a pie graph, or use the total numbers to create a bar graph that illustrates most popular food items.
- Have students report the results. Some suggested methods include:
 - Meet with the cafeteria manager and staff. Present the graphs and support the reasons for including more foods from the “Food Groups to Encourage” by citing the nutrients found in each food group.
 - Create a public service announcement letting fellow students know which foods are most popular from the “Food Groups to Encourage.” Have students support the need for consuming more from these food groups in their announcement.
 - Develop a brief article with graphs about the favorite food items to be published in the school newsletter or on the school website. Again, have students use the medium to cite the nutrients found in each food group.

ALTERNATE PROCEDURE

- The alternate procedure is recommended if the timing of the lesson coincides with the foodservice department’s purchasing cycle. At certain times of the school year, mainly in the spring, the foodservice department evaluates new products for the upcoming school year. Ask the cafeteria manager if the foodservice department is currently seeking input from students on new products for next year’s menu. If so, modify the suggested procedure to include the new food products under consideration for next year.
- Please note that this alternate procedure may need to be coordinated with the Central Office foodservice staff where purchasing decisions are usually made.

Other Resources

For more information on wellness and nutrition education check out <http://www.nutritionexplorations.org> and <http://www.schoolnutrition.org>.

United States Department of Health and Human Services and United States Department of Agriculture:

- *Dietary Guidelines for Americans, Chapter 5*: Explanation and discussion of "Food Groups to Encourage".
<http://www.health.gov/DietaryGuidelines/dga2005/document/pdf/Chapter5.pdf>

United States Department of Agriculture:

- *Steps to a Healthier You: MyPyramid*: Interactive website providing step-by-step instruction on determining the amount of each food group recommended for every age group and activity level. Provides information about the role of each food group in maintaining health.
<http://www.mypyramid.gov/>
- *MyPyramid: Getting Started*: Website for professionals on how to interpret MyPyramid concepts for consumers.
http://www.mypyramid.gov/downloads/MyPyramid_Getting_Started.pdf
- *Anatomy of MyPyramid*: Website explaining how to use the Pyramid graphics to teach MyPyramid concepts.
http://www.mypyramid.gov/downloads/MyPyramid_Anatomy.pdf

International Food Information Council:

- *Dietary Guidance for Americans*: Article providing background information on The Dietary Guidelines for Americans, November 2006.
<http://ific.org/nutrition/guidance/index.cfm>
- *New Dietary Guidelines and MyPyramid: Implementing Steps for a Healthier You!* Food Insight brochure providing information on the evolution of the Dietary Guidelines, May/June 2005.
<http://ific.org/foodinsight/2005/mj/mypyramidfi305.cfm>
- *Whole Grains Fact Sheet*: Comprehensive information about whole grains, including their role in the diet, good whole grain sources, and food supply changes.
<http://www.ific.org/publications/factsheets/wholegrainsfs.cfm>

Whole Grains Council:

- *Reaping the Benefits of Whole Grains*: A consumer guide to whole grains including definition of whole grains, benefits, recommended amounts for the diet, definition of a serving, identification of whole grains, and tips for inclusion in the diet.
<http://www.wholegrainscouncil.org/ConsumerGuide.html>

Harvard School of Public Health:

- *Fruits and Vegetables*: Article on the role of fruits and vegetables in the diet.
<http://www.hsph.harvard.edu/nutritionsource/fruits.html>
- *Carbohydrates*: Going with the Whole Grain: Article providing detailed information on types of carbohydrates and metabolism of carbohydrates. Includes a discussion of the glycemic index.
<http://www.hsph.harvard.edu/nutritionsource/carbohydrates.html>
- *Fiber Start Roughing It*: Article on the importance of including fiber in the diet. Provides descriptions of fiber types and role of fiber in maintaining good health.
<http://www.hsph.harvard.edu/nutritionsource/fiber.html>

Fruits & Veggies More Matters

- Find resources, recipes, and educational materials from the Produce for Better Health Foundation.
<http://www.fruitsandvegetablesmorematters.org/>

National Dairy Council:

- *Food Models*: Life-size cardboard photographs of 200 commonly-eaten foods in portion sizes. The backs of the cards contain nutrient information presented in label format. Available for purchase at <http://www.nutritionexplorations.org/catalog/junior.asp>
- *Healthier Eating*: Getting Where You Need to Be: Handout focused on "Food Groups to Encourage."
<http://www.nationaldairycouncil.org/NR/rdonlyres/5B812FCA-CE92-4B59-A1A8-A55BBAA1416A/0/FinalPrintedVersion.pdf>
- *3-A-Day™ of Dairy*: This site includes fun ideas for teaching dairy nutrition and recipe tips.
<http://www.3aday.org>

MyPyramid

STEPS TO A HEALTHIER YOU

MyPyramid.gov



| GRAINS | VEGETABLES | FRUITS | MILK | MEAT & BEANS |
|---|---|--|--|---|
| Make half your grains whole | Vary your veggies | Make half fruits | Get your calcium-rich foods | Go lean with protein |
| <p>Eat at least 3 oz. of whole-grain cereals, breads, crackers, rice, or pasta every day</p> <p>1 oz. is about 1 slice of bread, about 1 cup of breakfast cereal, or 1/2 cup of cooked rice, cereal, or pasta</p> | <p>Eat more dark-green veggies like broccoli, spinach, and other dark leafy greens</p> <p>Eat more orange vegetables like carrots and sweet potatoes</p> <p>Eat more dry beans and peas like pinto beans, kidney beans, and lentils</p> | <p>Eat a variety of fruit</p> <p>Choose fresh, frozen, canned, or dried fruit</p> <p>Go easy on fruit juices</p> | <p>Go low-fat or fat-free when you choose milk, yogurt, and other milk products</p> <p>If you don't or can't consume milk, choose lactose-free products or other calcium sources such as fortified foods and beverages</p> | <p>Choose low-fat or lean meats and poultry</p> <p>Bake it, broil it, or grill it</p> <p>Vary your protein routine — choose more fish, beans, peas, nuts, and seeds</p> |

For a 2,000-calorie diet, you need the amounts below from each food group. To find the amounts that are right for you, go to MyPyramid.gov.

| | | | | |
|---------------------|--------------------------|----------------------|--|-------------------------|
| Eat 6 oz. every day | Eat 2 1/2 cups every day | Eat 2 cups every day | Get 3 cups every day; <small>(or less aged 7 to 10, 4 to 7)</small> | Eat 5 1/2 oz. every day |
|---------------------|--------------------------|----------------------|--|-------------------------|

Find your balance between food and physical activity

- Be sure to stay within your daily calorie needs.
- Be physically active for at least 30 minutes most days of the week.
- About 60 minutes a day of physical activity may be needed to prevent weight gain.
- For maintaining weight loss, at least 90 to 120 minutes a day of physical activity may be required.
- Children and teenagers should be physically active for 60 minutes every day, or most days.



Know the limits on fats, sugars, and salt (sodium)

- Make most of your fat sources from fish, nuts, and vegetable oils.
- Limit solid fats like butter, margarine, shortening, and lard, as well as foods that contain these.
- Check the Nutrition Facts label to keep saturated fat, trans fat, and sodium low.
- Choose food and beverages low in added sugars. Added sugars contribute calories with few, if any, nutrients.



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More of Four

| Food Group | Recommended Amount Per Day ¹ | Number of Daily Servings | Suggested Serving Sizes | Nutrients Provided ² | Nutrient-Rich Choices | Health Benefit(s) |
|------------------|---|--------------------------|---|--|--|-------------------|
| Milk | 3 cups | 3 servings | <ul style="list-style-type: none"> • Milk—8 oz (1 cup) • Yogurt—8 oz • Cheese—1½ oz | <ul style="list-style-type: none"> • calcium • potassium • magnesium • protein • phosphorus • vitamin D | <ul style="list-style-type: none"> • low-fat and fat-free milk • low-fat and fat-free yogurt • reduced-fat cheese • string cheese | |
| Vegetable | 2½ cups | 5 servings | <ul style="list-style-type: none"> • Raw or cooked vegetables (½ cup) • Raw, leafy vegetables, (1 cup) • Vegetable juice (½ cup) | <ul style="list-style-type: none"> • fiber • potassium • magnesium • vitamin A • vitamin C | Variety of non-fried vegetables including <ul style="list-style-type: none"> • Dark green vegetables • Orange vegetables • Dried beans and peas | |
| Fruit | 2 cups | 4 servings | <ul style="list-style-type: none"> • Apple, banana, orange, pear, 1 medium • Grapefruit, ½ • Cantaloupe, ¼ • Raisins, dried fruit, ¼ cup • Chopped fruit, ½ cup • 100% fruit juice, ½ cup | <ul style="list-style-type: none"> • fiber • potassium • vitamin A • vitamin C | <ul style="list-style-type: none"> • fresh fruit • canned fruit • frozen fruit • dried fruit | |
| Grain | 6 ounces | 6 servings | <ul style="list-style-type: none"> • Bread, 1 slice • Tortilla, roll, muffin, pancake, waffle, 1 • Bagel, hamburger bun, ½ • Cold cereal, 1 oz • Rice, pasta, hot cereal, ½ cup | <ul style="list-style-type: none"> • fiber • magnesium • carbohydrate | <ul style="list-style-type: none"> • whole grain bread and cereal • oatmeal • brown rice • whole wheat pasta <p>NOTE: Half of your Whole Grain Group servings</p> | |

¹ Serving numbers are based on a 2000 Calorie per day diet.

² "Nutrients of concern" are printed in **boldface**. "Nutrients of concern" are those lacking in most teens' diets.



Does Madison Need More of the Four?

WHO IS MADISON?

Madison Taylor is a 10th grade student at Thomas Jefferson High School. She takes Physical Education every day, walks about 10 minutes each way to and from school, and plays volleyball a couple times a week. Madison has figured out that she needs about 2000 Calories a day to stay healthy.

INSTRUCTIONS:

1. Review Madison's "One-Day Food Diary."
2. For each serving she ate from one of the four food groups studied in this lesson, make a check in the appropriate column of the food diary.
3. For any whole grain food she ate, circle the check.
4. If a particular food is not in the Milk, Vegetable, Fruit, or Grain Group, do not place a check in any column.

| Meal | Food | Serving Size | Milk | Vegetable | Fruit | Grain |
|------------------|--------------------------|---------------|------|-----------|-------|-------|
| Breakfast | Banana | 1 medium | | | | |
| | Milk, chocolate, low-fat | 8 ounces | | | | |
| | Toast, whole grain | 2 slices | | | | |
| | Jelly | 2 Tablespoons | | | | |
| Lunch | Hamburger | 3 ounces | | | | |
| | Hamburger bun | 1 | | | | |
| | Yogurt, peach, low-fat | 8 ounces | | | | |
| | French fries | 10 strips | | | | |
| | Brownie | 1 | | | | |
| | Cola | 12 ounces | | | | |
| Snack | Raisins | 1/4 cup | | | | |
| | Almonds | 1/4 cup | | | | |
| | Cookies, chocolate chip | 2 | | | | |
| Supper | Chicken leg | 4 ounces | | | | |
| | Mashed potatoes | 1/2 cup | | | | |
| | Broccoli | 1/2 cup | | | | |
| | Rice, white | 1 cup | | | | |
| | Applesauce | 1/2 cup | | | | |

SUMMING IT UP...

| How many servings did Madison eat from: | How many servings are recommended each day from: | How many more servings does she need from this group? |
|---|--|---|
| The Milk Group? | The Milk Group? | |
| The Vegetable Group? | The Vegetable Group? | |
| The Fruit Group? | The Fruit Group? | |
| The Grain Group? | The Grain Group? | |
| Whole Grains? | Whole Grains? | |

Does Madison Need More of the Four?

Teacher Version

WHO IS MADISON?

Madison Taylor is a 10th grade student at Thomas Jefferson High School. She takes Physical Education every day, walks about 10 minutes each way to and from school, and plays volleyball a couple times a week. Madison has figured out that she needs about 2000 Calories a day to stay healthy.

INSTRUCTIONS:

1. Review Madison's "One-Day Food Diary."
2. For each serving she ate from one of the four food groups studied in this lesson, make a check in the appropriate column of the food diary.
3. For any whole grain food she ate, circle the check.
4. If a particular food is not in the Milk, Vegetable, Fruit, or Grain Group, do not place a check in any column.

| Meal | Food | Serving Size | Milk | Vegetable | Fruit | Grain |
|------------------|--------------------------|---------------|------|-----------|-------|-------|
| Breakfast | Banana | 1 medium | | | ✓ | |
| | Milk, chocolate, low-fat | 8 ounces | ✓ | | | |
| | Toast, whole grain | 2 slices | | | | ✓✓ |
| | Jelly | 2 Tablespoons | | | | |
| Lunch | Hamburger | 3 ounces | | | | |
| | Hamburger bun | 1 | | | | ✓✓ |
| | Yogurt, peach, low-fat | 8 ounces | ✓ | | | |
| | French fries | 10 strips | | ✓ | | |
| | Brownie | 1 | | | | |
| | Cola | 12 ounces | | | | |
| Snack | Raisins | 1/4 cup | | | ✓ | |
| | Almonds | 1/4 cup | | | | |
| | Cookies, chocolate chip | 2 | | | | |
| Supper | Chicken leg | 4 ounces | | | | |
| | Mashed potatoes | 1/2 cup | | ✓ | | |
| | Broccoli | 1/2 cup | | ✓ | | |
| | Rice, white | 1 cup | | | | ✓✓ |
| | Applesauce | 1/2 cup | | | ✓ | |

SUMMING IT UP...

| How many servings did Madison eat from: | | How many servings are recommended each day from: | | How many more servings does she need from this group? |
|---|---|--|---|---|
| The Milk Group? | 2 | The Milk Group? | 3 | 1 |
| The Vegetable Group? | 3 | The Vegetable Group? | 5 | 2 |
| The Fruit Group? | 3 | The Fruit Group? | 4 | 1 |
| The Grain Group? | 6 | The Grain Group? | 6 | 0 |
| Whole Grains? | 2 | Whole Grains? | 3 | 1 |

One Day's Eating Plan

DIRECTIONS:

1. Start by filling in Row B at the bottom of the page with the number of servings you need each day from the Milk, Vegetable, Fruit, and Grain Groups.
2. Then fill in the chart for each meal and snack with foods you like to eat. Include the serving size of each food. See if you can create an Eating Plan that gives you all the servings you need from the four food groups we've been studying. You can also include two or more servings from the Meat & Beans Group.
3. After writing your Eating Plan, fill in the "Food Group" columns on the right to identify in which group each food belongs.
4. Now fill in Row A below the chart.
5. Compare Row A with Row B. If you don't have enough servings from one or more food groups, go back and add the foods you need.

| Meal | Food | Serving Size | Milk | Vegetable | Fruit | Grain |
|------------------|------|--------------|------|-----------|-------|-------|
| Breakfast | | | | | | |
| | | | | | | |
| | | | | | | |
| Lunch | | | | | | |
| | | | | | | |
| | | | | | | |
| Snack | | | | | | |
| | | | | | | |
| | | | | | | |
| Supper | | | | | | |
| | | | | | | |
| | | | | | | |

| | | | | |
|--|-------------|------------|--------------|--------------|
| Row A | Milk | Veg | Fruit | Grain |
| How many servings did I get? | | | | |
| Row B | Milk | Veg | Fruit | Grain |
| How many servings do I need each day from each food group? | | | | |

MyPyramid.gov Scavenger Hunt

PART 1:

DIRECTIONS:

- Go to the Home Page of www.mypyramid.gov
- On the right side of the page, find "My Pyramid Plan."

QUESTIONS:

- Using "My Pyramid Plan," find how many calories a 15-year-old boy needs if his physical activity level is:
 - Less than 30 minutes a day? _____
 - 30-60 minutes a day? _____
 - More than 60 minutes a day? _____

DRAWING A CONCLUSION:

- How does physical activity affect someone's calorie needs? _____

PART 2:

DIRECTIONS:

- Go to the *Inside the Pyramid* section of www.mypyramid.gov to answer the following questions.

QUESTIONS:

1. What 2 colors of vegetables are emphasized in MyPyramid? _____
2. What are the dimensions of a serving of Swiss cheese? _____
3. Why is intake of Milk Group foods important for children and teens? _____
4. What types of cancers do fruits and vegetables help protect us from? _____
5. Why is whole or cut up fruit better for you than juice? _____

6. What are the 3 parts of the grain kernel found in whole grain foods? _____

7. When grains are milled, they become refined grains. In the milling process, fiber, iron and many B-vitamins are lost. Many refined grains are later enriched. That means nutrients are added back. However, which key nutrient is NOT added back to enriched grains? _____

8. "Discretionary Calories" include extra calories from food group foods and non-food-group foods such as chips, soft drinks, sweets, and salad dressings. How many Discretionary Calories can the following people choose each day?

| | Physically Active | Not Physically Active |
|-------------|-------------------|-----------------------|
| Boys 14-18 | _____ | _____ |
| Girls 14-18 | _____ | _____ |

Drawing A Conclusion:

What does this information suggest to you?

MORE QUESTIONS:

9. How fast is:
 - Moderate Walking? _____
 - Vigorous Walking? _____
10. Of the "Moderate Activities" listed on the calorie chart, which activity burns the most calories? _____
11. Fill in the blanks to answer the question: How much physical activity is needed?
At a minimum, do _____ intensity activity for _____ minutes _____ days, or preferably _____.

Teacher Version

PART 1:

DIRECTIONS:

- Go to the Home Page of www.mypyramid.gov
- On the right side of the page, find "My Pyramid Plan."

QUESTIONS:

- Using "My Pyramid Plan," find how many calories a 15-year-old boy needs if his physical activity level is:
 - Less than 30 minutes a day? **2200**
 - 30-60 minutes a day? **2600**
 - More than 60 minutes a day? **3000**

DRAWING A CONCLUSION:

- How does physical activity affect someone's calorie needs? *The more physical activity you do, the higher your calorie needs are.*

PART 2:

DIRECTIONS:

- Go to the *Inside the Pyramid* section of www.mypyramid.gov to answer the following questions.

QUESTIONS:

1. What 2 colors of vegetables are emphasized in MyPyramid? **dark green, orange**
2. What are the dimensions of a serving of Swiss cheese? **2 slices @ 3" x 3¹/₄" (3/4 ounce) a slice**
3. Why is intake of Milk Group foods important for children and teens? **Bone mass is built during childhood and adolescence.**
4. What types of cancers do fruits and vegetables help protect us from? **mouth, stomach, colon-rectum**
5. Why is whole or cut up fruit better for you than juice? **Whole fruit contains dietary fiber.**
6. What are the 3 parts of the grain kernel found in whole grain foods? **the bran, germ, endosperm**

7. When grains are milled, they become refined grains. In the milling process, fiber, iron and many B-vitamins are lost. Many refined grains are later enriched. That means nutrients are added back. However, which key nutrient is NOT added back to enriched grains? **fiber**

8. "Discretionary Calories" include extra calories from food group foods and non-food-group foods such as chips, soft drinks, sweets, and salad dressings. How many Discretionary Calories can the following people choose each day?

| | Physically Active | Not Physically Active |
|-------------|-------------------|-----------------------|
| Boys 14-18 | 360-650 Calories | 290 Calories |
| Girls 14-18 | 265-360 Calories | 195 Calories |

Drawing A Conclusion:

What does this information suggest to you?

The more active you are, the more discretionary calories you can eat. Boys can eat more discretionary calories than girls.

MORE QUESTIONS:

9. How fast is:

| | |
|-------------------|--|
| Moderate Walking? | 3¹/₂ miles per hour |
| Vigorous Walking? | 4¹/₂ miles per hour |
10. Of the "Moderate Activities" listed on the calorie chart, which activity burns the most calories? **Hiking**
11. Fill in the blanks to answer the question: How much physical activity is needed?
At a minimum, do **moderate** intensity activity for **30** minutes **most** days, or preferably **everyday**.