Lesson 3

This document contains Lesson 3: MyPlate, of the 2013 *Nutrition to Grow On: A Garden-Enhanced Nutrition Education Curriculum for Upper Elementary School Children (Second Edition)* prepared under the direction of the Nutrition Services Division, California Department of Education. The entire publication is available at http://www.cde.ca.gov/ls/nu/he/nrttogrow.asp.

Lesson 3

MyPlate

OBJECTIVES

- To identify the food groups that make up MyPlate
- To learn the major nutrients in each food group
- To understand the important concepts of MyPlate
- To classify single and combination foods into the appropriate food group(s) on MyPlate
- To prepare a garden bed, plant seeds, and transplant seedlings
- To make plant growth charts

APPLICABLE CONTENT STANDARDS

- English–language arts
- Mathematics
- Science

(See the matrix in Appendix B.)

Materials for In-class Lesson and Activities	Materials for Gardening Activity
Handouts: 3-1 MyPlate 3-2 Match the Food Groups "10 tips" MyPlate poster—Order through the USDA. Schools may obtain full-color MyPlate resources free of charge. To request classroom materials and posters, download the order form at USDA's Team Nutrition Web site (https://pueblo.gpo.gov/FNS/FNSPubs.php). Food pictures—five pictures per food group Masking tape	Purchased or finished compost (needed if garden beds were not prepared in Lesson 2). Check with a master gardener in your county or a local nursery to determine the proper type and amount of compost for your garden. Gardening tools (the number of each will depend on the size of the group): Shovel Digging fork Rake Trowel Seeds (See "Planting Seeds" on page 50.) Starter plants (See "Planting Seeds" on page 50.) Butcher paper Ruler Markers

Preparation for In-class Lesson and Activities	Preparation for Gardening Activity
Day before the lesson: Photocopy handouts 3-1, 3-2, and the "10 tips." Gather the materials. Prepare five stacks of food group pictures (each stack will have one picture from each of the five food groups; seed packets may be substituted for picture cards). Remove the black edges around the food group stickers (otherwise they will be scattered all over the desks).	**Day before the lesson:** Ask parents to volunteer for this activity. **Week before the lesson:** Decide where the garden bed will be located. Make sure the bed receives at least six to eight hours of sunlight. Check the soil moisture. Water thoroughly if the ground is dry. Day before the lesson: Gather the materials. Lightly water the surface of the garden bed one to two days before digging. Check the weather report.
Just before the lesson: Tape the large MyPlate poster onto the wall. Draw a blank MyPlate on poster paper and tape it onto the wall. Have the students take out the nutrition folders.	

Nutrition Lesson Activities
(60 min.)

1. Review of Lesson 2

- Who remembers what nutrients are?
  Substances that our bodies need to help us grow and stay healthy
- Who can name the six different classes of nutrients that we talked about?
  Carbohydrates, protein, fat, minerals, vitamins, and water
- Which nutrients provide our bodies with energy?
  Carbohydrates, protein, and fat
- Where do we get nutrients?
  We get them from a variety of foods that come from plants and animals.

2. Introduction to MyPlate

(Refer to the MyPlate poster.)

- We now know that we must eat a variety of different foods to get all the nutrients that our bodies need to grow and stay healthy. How do we know *which* foods and *how much* of them we need to eat?

- Fortunately, we have a tool called MyPlate to help us figure out the types and quantities of food to eat. Has anyone ever seen this image before (point to MyPlate)? Where?
- MyPlate background
  - The United States Department of Agriculture (USDA) developed MyPlate to help you make healthful food choices.
  - MyPlate classifies foods into food groups according to the nutrients they contain:
    Vegetables
    Fruits
    Grains
    Dairy
    Protein Foods
  - All food groups are important. We need to eat from all of them every day to stay healthy.
- Discuss the important concepts to learn from MyPlate: Enjoy Your Food But Eat Less, Choose Foods to Eat More Often, Make Half Your Plate Fruits and Vegetables, and Make Half Your Grains Whole Grains.

  Enjoy Your Food, But Eat Less. Take time to fully enjoy your food as you eat it. Eating too fast or when your attention is focused on something else may lead to eating too much. Avoid oversized portions. Use a smaller plate, bowl, and glass. When you eat out, choose a smaller-size option.

  Choose Foods to Eat More Often. Eat more vegetables, fruits, whole grains, and fat-free or low-fat (1 %) milk and dairy products. These foods have the nutrients necessary for health.

  Drink water instead of sugary drinks.

  Make Half Your Plate Fruits and Vegetables. Choose red, orange, and dark-green vegetables such as tomatoes, sweet potatoes, and broccoli, along with other vegetables for your meals. Add fruit to meals or choose it for snacks.

  Make Half Your Grains Whole Grains. To eat more whole grains, use whole-wheat bread instead of white bread or brown rice instead of white rice.

3. Food Group Classification and MyPlate Location Activity

- Setup:

  Divide the class into five groups.

  Distribute the blank MyPlate handout (3-1) to each student. Distribute a stack of food pictures, with one picture per food group, to each group of students.
- Examine each food group one at a time by following the procedures noted below:

  Using the MyPlate handout (3-1) and the poster, discuss with the class which foods belong in each group and why.

- Classification and location procedures:

1. Read the name of the food group and the description of the foods in that group. (Start with vegetables, using the information that follows item 5 in this section.)
2. Tell the students which major nutrients the vegetable group provides. (That is, why is the vegetable group important?) Write key words on the board or an overhead transparency. This step will aid the students in completing the Match the Food Groups handout (3-2). Direct the students to write the key words in the vegetable group section of handout 3-1.
3. Ask the student groups to look at their food pictures and, as a group, to identify the food item that belongs in the vegetable group. (Each student group should have only one food picture from each food group.) After each group has found the food item for the vegetable group, ask one student to hold the card up and tell the class which food item is shown. (Point out those foods that are planted in the garden or could be grown there.)
4. Direct some of the students to tape the food pictures in the correct location on the blank MyPlate taped on the wall. The other students may brainstorm about other foods in the vegetable group and draw them on handout 3-1.
5. Repeat the procedure with the other food groups: fruits, grains, dairy, and protein foods.

Vegetables—Add More to Your Day.

- All the different parts of the plant, such as the root, stem, leaves, fruit, flowers, and seeds, can be considered vegetables if they are not sweet. (A tomato, for example, is botanically a fruit, but because it is not sweet, we classify it as a vegetable when we are talking in culinary terms.)
- Vegetables have vitamins, minerals, and fiber that our bodies need to keep us healthy, growing, and strong.
- Orange or dark green vegetables are rich in vitamin A.
- Each vegetable has different nutrients that are important for keeping us healthy. To get all of them, we need to eat a variety of vegetables.
- Examples of foods in this group are carrots, spinach, and broccoli. (Which plant parts are they?) What vegetables can you name?

Fruits—Focus on Fruits.

- Fruits are plant parts that contain seeds and are usually sweet.
- This group provides the vitamins, minerals, and fiber that our bodies need to keep us healthy, growing, and strong.
- Some fruit, such as oranges, kiwi, and mango, is rich in vitamin C.
- Fruit is a great choice for a healthful snack.
- Examples of foods in this group are apples, bananas, mangoes, orange juice, and raisins. What other fruits can you name?

Grains—Make Half Your Grains Whole.

- This group includes all foods made from any type of grain product (e.g., wheat, rice, oats, rye, cornmeal).
- Examples of foods in this group are bread, cereal, rice, pasta, tortillas, and crackers.
- Grains are a good source of complex carbohydrates. Some complex carbohydrates provide us with energy while others, known as fiber, help to keep the digestive tract running smoothly.
- Whole grains are higher in fiber and some nutrients than are other grains. Popcorn is an example of a whole grain.
- Look for whole wheat or other whole grains on the ingredient labels.

Dairy—Got Your Dairy Today?

- Milk and milk products are sources of calcium, which our bodies need to keep our teeth and bones strong.
- Try to choose milk products that are lower in fat, such as low-fat or fat-free milk, yogurt, or cheese.
- Examples of foods in this group are milk, yogurt, and cheese.
- If you are lactose-intolerant, try lactose-free milk or fortified soy milk.

Protein Foods—With Protein Foods, Variety Is Key.

- Both plant and animal products are in the Protein Foods group.
- This group provides our body with protein that muscles and bones need to grow and stay healthy.
- Choose lean meat such as turkey or chicken.
- Examples of foods in this group are meat, fish, poultry, eggs, beans, nuts, and seeds.
- Try to make seafood a part of your plate twice a week.

What is missing?

Oils are not a food group, but they should be eaten every day in moderation. Foods with healthful oils provide nutrients that help to keep the heart healthy. Examples of foods with healthful oils are nuts, olives, avocados, and canola oil.

Fats and sweets such as candy, soda, butter, margarine, dressings, and gravy are not included. These foods should be eaten in moderation to make more room for foods that are high in important nutrients.

Physical Activity

Kids need 60 or more minutes of physical activity per day for a healthy heart and body. Does the class think that most kids get this amount? Why? Why not? How could the students increase their physical activity?

4. Closing Comments

- Review all the foods in each food group.
- Discuss combination foods that fit into more than one category. How many food groups would pizza or sandwiches fit into? (Consider the individual ingredients of the food.)

5. Review Activity

- Have students complete the Match the Food Groups handout (3-2). The objective is to reinforce what each food group provides for our body and some of the characteristics of the foods in that group. Students use food group stickers for handout 3-2 or have them draw their favorite foods in the boxes to the right of the food group names.

Gardening Activity
(30 min.)

Before planting the seeds, consider working with the class to decide the layout of the garden.

Divide the class into two groups to make them more manageable. Assign a parent volunteer(s) to assist one group. Have half of the class plant seeds in the garden while the other half works in the classroom on the plant growth charts. While working with the seeds, the students can try to classify them into the appropriate food group on MyPlate.

Planting Seeds

- If the soil was not prepared in Lesson 2, do it now. Digging forks or shovels can be used to turn over the soil. This process breaks up the soil and allows more space for root growth.
- Add the compost to the soil. Mix and level the surface with a rake. Do not pack the soil tightly.
- Plant the seeds according to the directions on the packet.

  Make sure to plant seeds that are likely to grow under the conditions of your area and during the time of year when they are planted. Remember to consider the time until harvest. You may want to purchase some transplants to put directly into your garden. Check with a local master gardener or nursery to learn more details about gardening in your area.
- This may also be a good time to plant some of the seedlings you started in the mini-greenhouses. If the plants are still too small for transplanting, plan to do so a couple of weeks later. Generally, you should allow four to six weeks between planting seeds and transplanting. One good way to check is to gently remove a transplant from the tray. If the roots are in a clump, your plant is ready to go into the garden.
- Consider the type of snacks you may wish to make from the fruits and vegetables in your garden. See lesson 9 for snack recipes and ingredients. You may also want to plant a theme garden (e.g., a salad garden, a pizza garden, or a MyPlate garden).

- Make sure plants receive adequate water and sunlight. Too little water or too much sun may cause the seedlings to dehydrate. With too much water or not enough sun, the seedlings may grow slowly or die.
- Have the students walk around the garden plots, not through them, to avoid trampling young plants.

Plant Growth Charts

- A garden must be checked regularly, especially to ensure adequate watering. Make a point to have the class routinely check the garden. This activity can be as simple as walking by the garden on the way back to the class from recess or as intensive as designating a half hour to be spent in the garden every day. Determine what works best with your class.
- Design a chart, or several charts, for the class to keep track of the seedlings or transplants. Have the students create a graph showing the height of different plants at a specified time interval (e.g., each week). Ask the students to make predictions about which plant will grow faster, taller, and so on. You may also make additional charts to track such information as the amount of rainfall each week. Be creative!
- After several weeks have the students make comparisons between the actual plant and their predictions.

Additional Activities

- Have students design and prepare a small snack that includes one food from each of the five food groups.
- Before the lesson, have the students, write down their favorite meal. After the students have learned about MyPlate, have them compare their meal to the MyPlate recommendations. Encourage students to substitute other favorite foods so that the meal more closely fits with the goals of MyPlate.
- Have the students examine the school lunch menu every morning and determine where items would fit into MyPlate.
- Cut out pictures of foods from magazines and paste them onto a blank MyPlate. Display the finished product in the classroom.

Background Information

(Recommended quantities of foods will be discussed in detail in Lesson 4.)

Vegetables. This group provides a lot of vitamins, minerals, fiber, and other substances important for good health. It is very important to include a variety of vegetables in your diet. The recommended daily amount is 2 1/2 cups, with at least some being a green vegetable and some being an orange vegetable, both of which are high in vitamin A. Some vegetables may be served with a lot of fat (e.g., french fries). Try to eat fresh vegetables without additional fat.

Fruits. This group also provides many nutrients, including vitamins and minerals. Citrus fruits (e.g., oranges, lemons) provide high levels of vitamin C that help us to stay healthy. Children should consume 1 1/2 cups of fruit each day. Most servings should be from whole fruit, not juice. If juice is consumed, it should be 100 percent fruit juice. Be aware that some "fruit" products, especially juices, are not much more than sugar with a fruit flavor; therefore, you need to check the labels (see Lesson 5 for more information).

Grains. We need to consume the most amount of food from this group—6 ounces per day. This group includes foods like bread, pasta, rice, popcorn, and oatmeal. The grains group provides a variety of nutrients, including vitamins and minerals (especially in whole and enriched grain products), some protein, and many carbohydrates. Depending on the method of preparation, the grains group may add a little or a lot of fat to our diets. Whole-grain products are also a good source of fiber. Fiber is a complex carbohydrate that is important in cleaning out the digestive tract.

Two common types of grains are whole and refined. Whole grains generally still contain all their naturally present nutrients; whereas, refined grains generally lose many important nutrients during processing. The nutrients lost include iron, several B vitamins (niacin, riboflavin, thiamin), and fiber. By law refined grains must be enriched with several of the nutrients that were lost, and they must be fortified with the vitamin folic acid. (To *enrich* means to restore something that was lost during the processing of a product. To *fortify* means to add something to a product.) However, these refined products still lack the fiber that was initially present. Therefore, whole grains are a part of a healthful diet.

Protein foods. This group provides protein and other vitamins and minerals. The primary mineral is iron, which helps to transport oxygen in our blood. The recommended amount to consume is 5 ounces per day. Leaner meats, such as turkey, chicken, and fish, should be eaten more often than fattier red meats. Plant products high in protein include beans, peas, nuts, and seeds. Those types of plant foods should be eaten a couple of times per week. Eggs are also in this food group.

Dairy. This group provides nutrients in all six classes (carbohydrates, protein, fat, vitamins, minerals, and water). Most important, this group contributes calcium, which is necessary to keep teeth and bones strong and healthy. Pasteurized milk is fortified with vitamin D, which helps the body to absorb the calcium. Growing children need to consume three cups per day because they are undergoing peak bone formation.

Oils. Although not represented on MyPlate, oils are an important source of essential fatty acids and vitamin E in the diet. They differ from other less healthful fats because they are liquid, rather than solid, at room temperature. Sources of healthy fats include avocados, olives, canola oil, and nuts, but because of their high calorie content, these foods should be eaten in moderation.

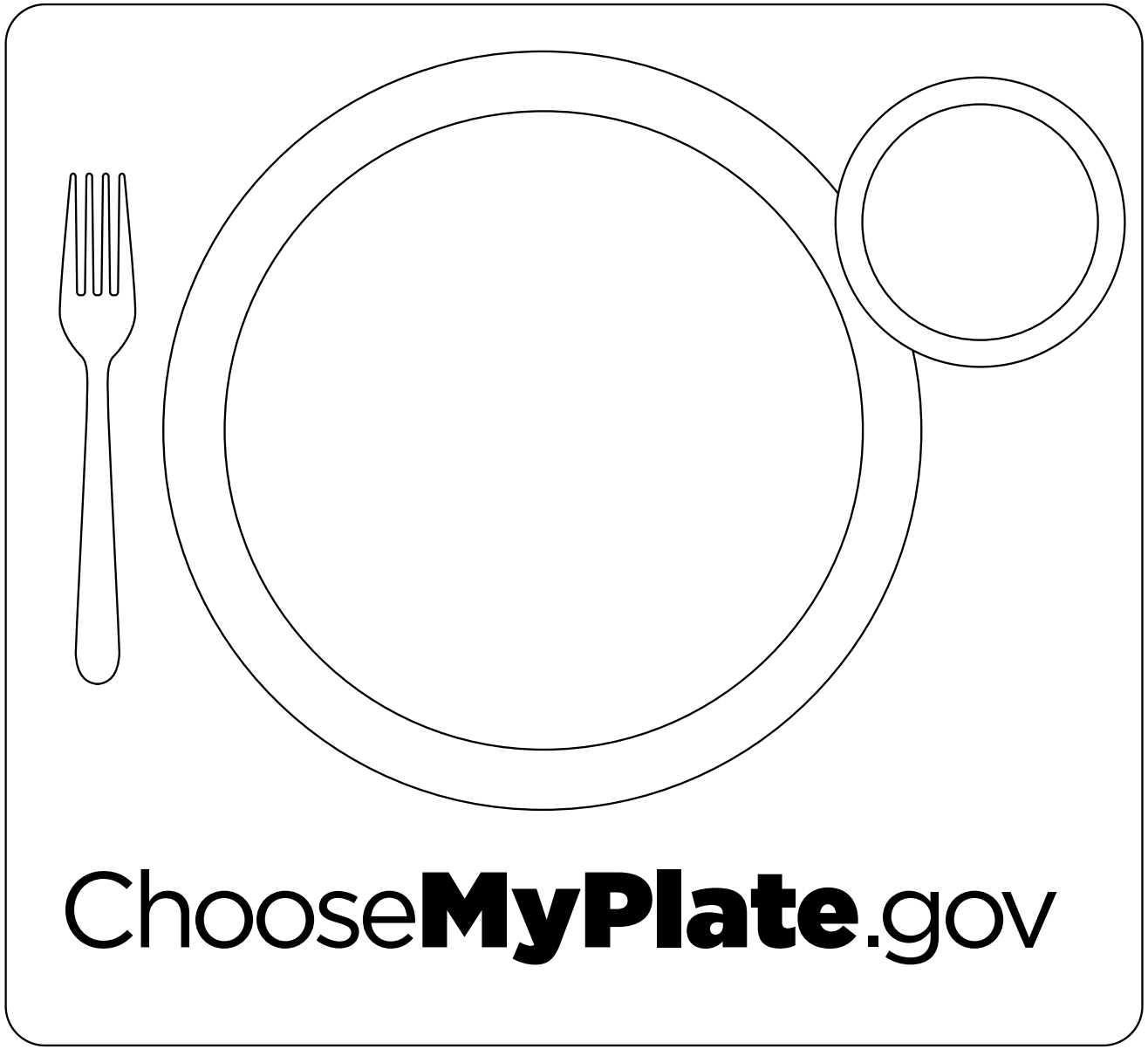
Vegetarians. People who have chosen for personal, religious, or health reasons (or all of these) to eliminate some or all animal products from their diets are considered vegetarians. There are several types of vegetarians. A vegan has eliminated all animal products, including milk, eggs, and anything made with animal fat. Ovo-vegetarians will eat eggs. Lacto-vegetarians will eat dairy products. Lacto-ovo-vegetarians will eat both eggs and milk products.

Note: For more information, visit http://www.choosemyplate.gov.

NAME: **DATE:**

Handout 3-1

MyPlate



USDA Center for Nutrition Policy and Promotion

NAME: **DATE:**

Handout 3-2

Match the Food Groups

Directions: Draw a line to match each food group with the box that tells us what the group gives our bodies.

Food Group	Picture of Foods from Each Food Group
Vegetables	
Fruits	
Grains	
Dairy	
Protein foods	

What the Food Group Gives to Our Bodies
Foods from this group can include all the plant parts. They provide many nutrients and fiber. Orange or dark-green ones are rich in vitamin A.
Foods from this group provide our bodies with fiber and energy from complex carbohydrates. We need carbohydrates to do all the things we do every day.
Foods from this group provide our bodies with the protein that our muscles need to grow and stay strong.
Foods from this group contain seeds. They provide many nutrients and fiber. Many are rich in vitamin C.
Foods from this group provide our bodies with the calcium that our teeth and bones need to grow and stay strong.

Handout 3-2

Match the Food Groups—Answer Key

Directions: Draw a line to match each food group with the box that tells us what the group gives our bodies.

Food Group	Picture of Foods from Each Food Group	What the Food Group Gives to Our Bodies
Vegetables		Foods from this group can include all the plant parts. They provide many nutrients and fiber. Orange or dark-green ones are rich in vitamin A.
Fruits		Foods from this group provide our bodies with fiber and energy from complex carbohydrates. We need carbohydrates to do all the things we do every day.
Grains		Foods from this group provide our bodies with the protein that our muscles need to grow and stay strong.
Dairy		Foods from this group contain seeds. They provide many nutrients and fiber. Many are rich in vitamin C.
Protein foods		Foods from this group provide our bodies with the calcium that our teeth and bones need to grow and stay strong.

10 tips
Nutrition Education Series

choose MyPlate

10 tips to a great plate

Making food choices for a healthy lifestyle can be as simple as using these 10 Tips.
Use the ideas in this list to *balance your calories*, to choose foods to *eat more often*, and to cut back on foods to *eat less often*.

1 balance calories

Find out how many calories YOU need for a day as a first step in managing your weight. Go to www.ChooseMyPlate.gov to find your calorie level. Being physically active also helps you balance calories.

2 enjoy your food, but eat less

Take the time to fully enjoy your food as you eat it. Eating too fast or when your attention is elsewhere may lead to eating too many calories. Pay attention to hunger and fullness cues before, during, and after meals. Use them to recognize when to eat and when you've had enough.

3 avoid oversized portions

Use a smaller plate, bowl, and glass. Portion out foods before you eat. When eating out, choose a smaller size option, share a dish, or take home part of your meal.

4 foods to eat more often

Eat more vegetables, fruits, whole grains, and fat-free or 1% milk and dairy products. These foods have the nutrients you need for health—including potassium, calcium, vitamin D, and fiber. Make them the basis for meals and snacks.

5 make half your plate fruits and vegetables

Choose red, orange, and dark-green vegetables like tomatoes, sweet potatoes, and broccoli, along with other vegetables for your meals. Add fruit to meals as part of main or side dishes or as dessert.

6 switch to fat-free or low-fat (1%) milk

They have the same amount of calcium and other essential nutrients as whole milk, but fewer calories and less saturated fat.

7 make half your grains whole grains

To eat more whole grains, substitute a whole-grain product for a refined product—such as eating whole-wheat bread instead of white bread or brown rice instead of white rice.

8 foods to eat less often

Cut back on foods high in solid fats, added sugars, and salt. They include cakes, cookies, ice cream, candies, sweetened drinks, pizza, and fatty meats like ribs, sausages, bacon, and hot dogs. Use these foods as occasional treats, not everyday foods.

9 compare sodium in foods

Use the Nutrition Facts label to choose lower sodium versions of foods like soup, bread, and frozen meals. Select canned foods labeled "low sodium," "reduced sodium," or "no salt added."

10 drink water instead of sugary drinks

Cut calories by drinking water or unsweetened beverages. Soda, energy drinks, and sports drinks are a major source of added sugar, and calories, in American diets.

USDA United States Department of Agriculture
Center for Nutrition Policy and Promotion

Go to www.ChooseMyPlate.gov for more information.

DG TipSheet No. 1
June 2011
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10 consejos
Serie de educación en nutrición

elija MiPlato

10 consejos para crear un buen plato

Elegir alimentos para llevar un estilo de vida sano es muy sencillo si sigue estos 10 consejos. Use las ideas de esta lista para *balancear las calorías*, elegir los alimentos que le conviene *comer con mayor frecuencia* y reducir la cantidad de alimentos que le conviene *comer con menos frecuencia*.

1 balancee las calorías

El primer paso para controlar su peso es ver cuántas calorías USTED necesita al día. Vaya a www.ChooseMyPlate.gov para determinar la cantidad de calorías. Hacer actividades físicas también le ayuda a balancear las calorías.

2 disfrute de sus comidas, pero en cantidades más pequeñas

Tómese el tiempo necesario para disfrutar de sus comidas. El comer demasiado rápido o mientras se concentra en otras cosas puede resultar en que coma demasiadas calorías. Preste atención a las señales del hambre y de saciedad antes, durante y después de las comidas. Úselas para reconocer cuándo debe comer y cuándo ha comido suficiente.

3 evite las porciones extra grandes

Use platos, platos hondos y vasos más pequeños. Separe las porciones de alimentos antes de comer. Al salir a comer, elija las opciones de menor tamaño, comparta el platillo o llévese parte de la comida a casa.

4 alimentos que le conviene comer con más frecuencia

Coma más vegetales, frutas, granos integrales, y leche y productos lácteos sin grasa o con 1% de grasa. Esos alimentos contienen los nutrientes que necesita para la buena salud; entre ellos potasio, calcio, vitamina D y fibra. Haga de ellos la base de sus comidas y bocadillos.

5 haga que la mitad de su plato consista en frutas y vegetales

Al preparar sus comidas, elija vegetales rojos, anaranjados y verduras como tomates, camotes (batatas) y brócoli, así como otros vegetales. Agregue frutas a las comidas como parte de los platos principales o de acompañamiento, o bien como postres.

6 cambie a leche descremada o baja en grasa (1%)

Contienen la misma cantidad de calcio y otros nutrientes esenciales que la leche entera, pero sin tantas calorías y grasa saturada.

7 consuma la mitad en granos integrales

Para consumir más granos integrales, reemplace un producto de grano refinado por un producto de grano integral, como comer pan de trigo integral en lugar de pan blanco o arroz integral en lugar de arroz blanco.

8 alimentos que le conviene comer con menos frecuencia

Reduzca su consumo de alimentos con grasas sólidas, azúcar y sal adicionales. Estos incluyen pasteles (bizcochos), galletitas, helado, dulces, bebidas endulzadas, pizza y carnes grasas como costillas, chorizo, tocineta y salchichas. Use estos alimentos como antojitos ocasionales, no alimentos para todos los días.

9 compare el contenido de sodio de los alimentos

Use las etiquetas de Información Nutricional (“Nutrition Facts”) para elegir sopas, panes y comidas congeladas con menos sodio. Elija alimentos enlatados marcados “bajo en sodio,” “sodio reducido,” o “sin sal adicional” (“low in sodium,” “reduced sodium,” o “without added salt”).

10 beba agua en lugar de bebidas endulzadas con azúcar

Reduzca las calorías al beber agua o bebidas sin azúcar. En las dietas de los estadounidenses, las gaseosas, bebidas de energía y bebidas deportivas representan grandes cantidades adicionales de azúcar y calorías.

USDA Centro para Políticas y Promoción de la Nutrición

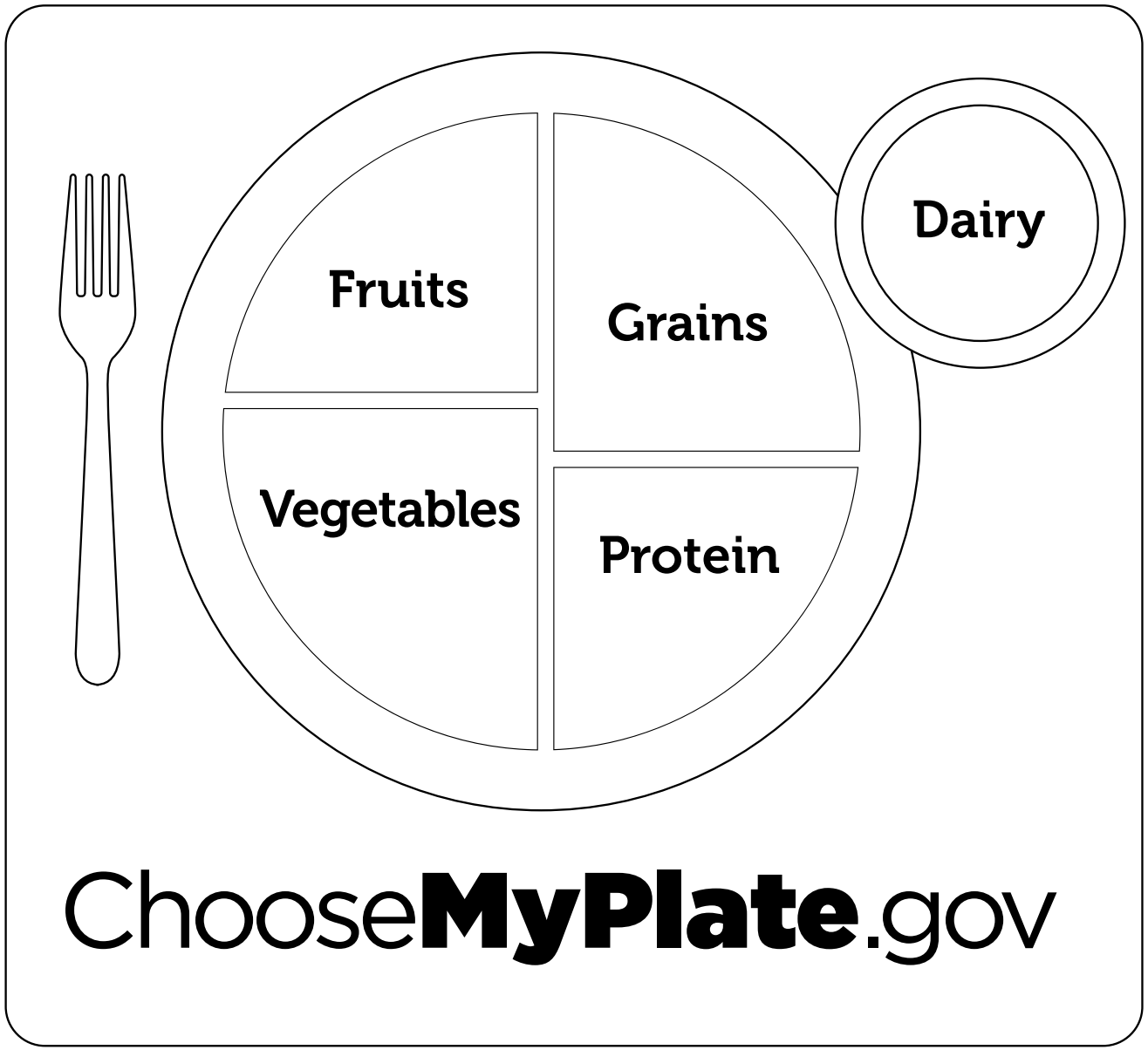
Visite www.ChooseMyPlate.gov para obtener más información.

DG TipSheet No. 1
Septiembre 2011
EL USDA es un proveedor y empleador que ofrece igualdad de oportunidades para todos.

NAME: DATE:

Handout 3-3

MyPlate



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