LESSON PLAN A

Fill Your Plates

Time Frame: Three 40-minute sessions

Learning Objectives:

- Identify different types and sources of information pertaining to health.
- Understand concepts that promote health and prevent disease.
- Make and reflect on goals related to personal health.
- Advocate for personal, family and community health.

Overview:

These activities all center around the MyPlate recommendations from the USDA. Use them to introduce or reinforce key concepts in an engaging, hands-on way. Each activity comes with creative snack ideas to serve during class time. These align with key teaching points in the curriculum but are optional.

Part A. Make-Your-Own Plate

Time Frame: 40 minutes

Materials for Activity:

- Compasses
- Rulers
- Pencils (plain and colored)
- Plain Paper
- Colored construction paper
- Paper plates and cups (optional)

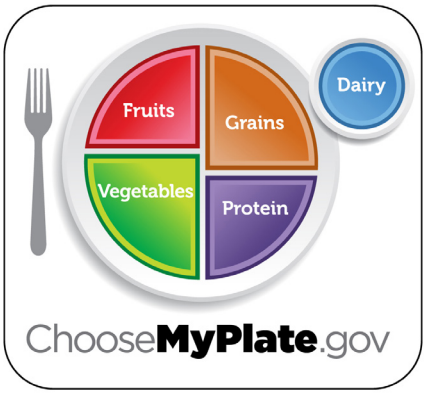
Project Options: Depending on time and resources, choose the option that works best for your class. Or let your students choose for themselves, based on age, ability and interest. Teacher can decide which based on supplies (such as compasses) and grade (grades 3–5 are studying geometry at different stages). Here are some options:

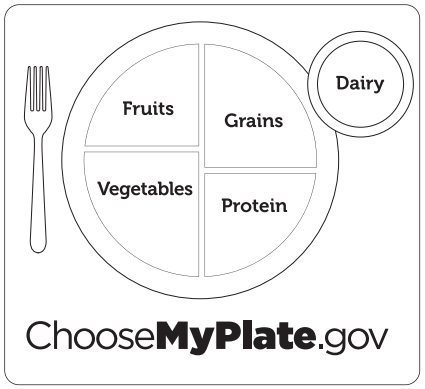
Paper Plate Method:
Use a ruler and pencil to measure and draw the MyPlate pattern on a white paper plate. You may choose to cut off the rim of the plate to have a flat circle. Use an upside-down paper cup to trace a small circle on white paper (to represent the dairy), then cut it out with scissors.

Compass Method:
Use a compass and pencil to draw a large circle on one piece of white paper, and a small circle on another (to represent the dairy). Now use a ruler to measure and draw the outlines for each food group section, paying attention to relative size since not all sections are equal.

Freehand/Make-Your-Own Compass Method:
See the methods shown in Lesson 1 of "Wellness: All Parts Count!" and use one to draw your own circles for this project.

Express Method:
Provide a photocopy of the MyPlate template for each student.





ChooseMyPlate.gov

Instructions:
1. Show the MyPlate graphic on an overhead projector for all to follow as a guide. Or print out a color copy to show as a display.

Present students with at least two options for making their plate. (See Project Options under Materials list above.)

After finishing their outlines, tell them to label each section with a marker or pen.

Under each label, they should write the daily amounts recommended for ages 9 and older:
- Fruit: 2 cups
- Vegetables: 2.5–3 cups
- Grains: 3–4 ounces
- Protein Foods: 5–6 ounces
- Dairy: 3 cups

Time permitting, they may color in each section, using the same colors to match the MyPlate sections. Or, skip to the next step, as it's more important.

Now students should color some of the items on their Meal Planning worksheet. Ask them to color in at least two items from each food group. Next, they should cut out each item, so they can use them for menu-planning activities on their plate.

Challenge students to plan some meals by placing food items in each category on their MyPlate page. Encourage them to experiment with different combinations and then choose what looks like a perfect meal to them. Suggest they choose things they like to eat — or would like to try to eat — from each group.

Optional: Take a picture of each student's chosen meal. Then, after learning more and doing more lessons, they can compare that meal with a later one.

Extension:
Make a placemat for your cup and plate shapes. Use colored construction paper or scraps of recycled paper taped together to make one big enough to fit your cutouts. You will use this for the next activities. Decorate your mat with doodles, positive messages or graphic elements if you have time to spare.

Talking Points:
Essential Question: Why is each food group a different size?
- Because we need different amounts of each kind for a balanced diet. These are the amounts recommended by doctors and scientists. This combination of different foods gives our bodies the nutrients and energy we need to grow and be healthy.

As students are coloring and cutting out their plates, talk about the five food groups:
- Fruit Group:* Along with being sweet and delicious, fruits contain vitamins, minerals and fiber that keep us healthy and help to prevent disease. Citrus fruits are especially high in vitamin C.
- Vegetable Group:* Vegetables are important sources of many nutrients, including potassium, fiber, folate (folic acid), vitamin A and vitamin C. Most vegetables are naturally low in fat and calories.

*Fruits and vegetables are a healthy way to get the nutrients and energy your body needs to feel and look good. Try to eat more of these two food groups every day by making half your plate fruits and vegetables!
- Protein Foods Group: Protein-rich foods keep us feeling full. They also build bones, muscles, blood and other body parts. This food group includes more than just meat, poultry and fish. Other foods like eggs, beans, peas, soy products, nuts and seeds all fall into this category as well.
- Dairy Group: Products in this group contain calcium, which is very important for children and teens who are still growing. The dairy group includes most foods made from milk, including yogurt and cheese. However, it does not include butter, cream cheese and cream. Calcium-fortified soy milk also counts as a dairy food.
- Grains Group: This includes any foods made from a cereal grain such as wheat, rice, barley or cornmeal. At least half of all your grain servings should come from whole-grain foods, as they provide more fiber and nutrients.

In the next lesson you'll research just how big a portion is for each of the five food groups.

Student Worksheet (Optional):
Word Search: Have Fun with Fruits and Vegetables

Family Connection:
Make homemade placemats for each member of your family. Have your siblings help out as well. This is a fun way to get families more committed to eating together at the dinner table. Ideas: 1) Cut one piece of colored construction paper into horizontal strips. Cut another piece of construction paper (a different color) into vertical strips. Weave the two of them together and secure them in place with glue or clear tape on the back. 2) Make a collage on a piece of construction paper, using cutout pictures of colorful fruits and vegetables. 3) Use your compass to make geometric designs on different colors of construction paper. 4) Write compliments and positive messages on construction paper and decorate with cheerful illustrations. Use these placemats at your family dinner table for a meal or two, or laminate them to make them last all year long.

Additional Resources:
MyPlate: 10 Practical Tips
www.choosemyplate.gov/ten-tips-choose-myplate

MyPlate Kids Place

Resources for Parents and Educators
www.choosemyplate.gov/kids-parents-ducators

Part B. Serve Yourself!

Time Frame: 40 minutes

Materials for Activity:

- Copies of MyPlate template (black-and-white) – 3 copies per student
- Copies of Student Reference Material – 1 copy per small group of students
- Blank paper, pencils and erasers
- Ask students to bring in any of the following from home:
  - baseball, hockey puck, ping pong ball, golf ball
  - deck of cards, CD cover, bar of soap
  - bottle cap from 16-oz water bottle
  - postage stamp, checkbook cover, 9-volt battery

Teacher Preparation:

Print the MyPlate template (see Worksheets & Downloads at the end of this lesson plan) and make enough photocopies to distribute 3 to each student in your class. Print out copies of the Student Reference Material as well, to be shared among students working in small groups. Bring any items you might have from home in the Materials list to help illustrate the portion sizes described in the Student Reference Material.

Talking Points:

Part 1. Crunch the Numbers

How much should we eat each day?
To review, these are the daily amounts recommended for ages 9 and older:

- Fruit: 2 cups
- Vegetables: 2.5–3 cups
- Grains: 3–4 ounces
- Protein Foods: 5–6 ounces
- Dairy: 3 cups

How much is a portion?

Counting cups and ounces gets confusing! That's why we depend on food scientists to find the exact measurements and recommendations.

Take some time to research the 5 different food groups and familiarize yourself with portion sizes for specific foods. (For example, a serving of lettuce will be larger in volume than a serving of peas.)

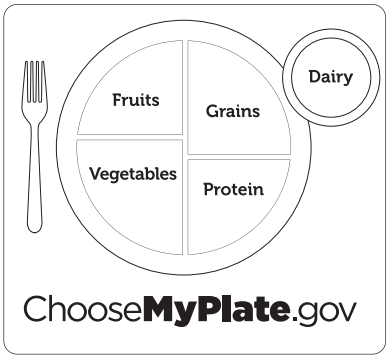
Refer to the Student Reference Materials (one copy per group) for a breakdown of the food groups and examples of serving sizes for each. Or, using computers with Internet access, visit ChooseMyPlate.gov and other reliable sites to view different ways to visualize a portion. (Example: A 3-ounce piece of chicken is the size of a deck of cards.)

Part 2. Pick your favorites

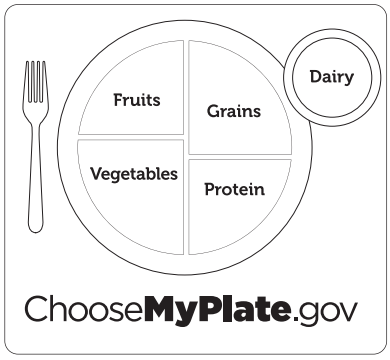
- Turn a piece of paper lengthwise and write the 5 food group names and oils across the top. Under each heading, list the items and amounts you'd like to eat/drink in a day.
- You may choose whatever you like on the lists, but you must follow the recommended guidelines.
- Use the Student Reference Material for guidance on measurements.
- Check your math!

Discuss: Was it hard to find enough things you like to fill each food group? Which was the easiest to fill? Would you want to eat this daily menu every day for a week or do you think you'd get bored of eating the same things every day?

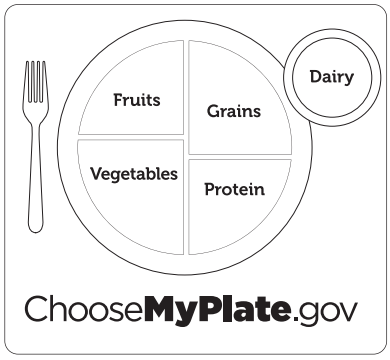
Part 3. Plan the Perfect Meal



Breakfast



Lunch



Dinner

Instructions:

1. Put on your Nutritionist hat and plan a perfectly balanced day of balanced meals. Spread them out over three full meals: Breakfast, Lunch and Dinner.
2. Use the Student Reference Materials or online research to calculate sizes and portions of each food type.
3. Use the MyPlate templates to write down the selected foods and portions in the correct places.
4. Double-check your math to make sure you've written down the right size portions and that all food and drink servings add up to the total recommended quantities. Show your math problem-solving work on a separate sheet of paper.

Discussion Points:

Describe their Breakfast, Lunch or Dinner menu plan.

Then ask for general feedback:
Raise your hand if this looks like a typical day's worth of meals. Does this look like what you ate yesterday? Raise your hand if you think it would be easy to eat a diet like this every day. Raise your hand if you think it would be hard.

Let's write a title at the top of your Daily Meal Plan: "A Perfect Day"

This means you've all created a perfectly balanced meal plan. But here's an important thing to remember: Nobody's perfect!

Some days we might be in more of a rush. Other days we might not have the right foods at home. Some days we might make a poor choice. So, what can we do to fix it? We can look at the big picture and make up for it over the week. Ask for some examples and provide some yourself.

Part 4. Key Points to Remember

Continue the conversation about food choices and meal planning by offering these 4 key points.

- **Look at the big picture.**
  It's the eating pattern that matters, not just the choices you make on one particular day. What's an eating pattern? The combination of all the foods and beverages a person eats and drinks over time.

- **Strive for Five.**
  Eat a mix of foods across all food groups. Choose foods and beverages from all 5 food groups — vegetables, fruits, grains, dairy, and protein foods — not just 1 or 2 of them.
- **Mix it up!**
  Eat a mix of foods within each food group. For example, each week try eating several types of vegetables, including dark green, red and orange, starchy ones, legumes, and others. Switch up the protein foods you eat, too — for example, consider fish, black beans, and peanut butter, not just lean meats and poultry.
- **Aim for balance and moderation.**
  Try to eat and drink the right amounts for you. How many calories you need to eat depends on your age, gender, height, weight, and how active you are. Use the MyPlate Plan at *www.choosemyplate.gov/GetMyPlan* to find a plan that is right for you.

Here's a quiz question:
You've finished your lunch and a friend offers to share a cookie with you. What do you do?
a) Say, "No, thanks."
b) Throw away your apple and eat the cookie instead.
c) Say, "Yes, please," then eat your apple AND share the cookie.

If you answered c, that's perfectly fine! Healthy eating is all about balance. As long as most of your meals include whole grains, vegetables, fruits, and low-fat dairy foods, plus some lean meats, fish, poultry, and beans, there is room for a few occasional treats.

Extra Credit: What's To Eat?
Online Dining Decision Game | CDC: BAM! Body and Mind
(This can be done as a class, led by the teacher with an overhead projector. Or, students may do it on their own or in small groups.)

Main takeaways from the Dining Decision Game:
- Healthy eating is like a larger puzzle, where there is a spot for everything. As long as most of your puzzle has whole grains, vegetables, fruits, and low-fat dairy foods, plus some lean meats, fish, poultry, and beans, there is room for a few less-healthy choices.
- Fruit and vegetables are a healthy way to get the vitamins, minerals, fiber, and energy your body needs to feel and look good.
- Whole grains deliver fiber, vitamins, and minerals.
- Protein is the building block for bones, muscles, cartilage, skin, and blood. Your body uses it to repair injuries and to make body chemicals like hormones and enzymes.

Optional Extensions:

Discussion: "Let's Make a Swap!"
Small changes can bring big benefits! Change should be gradual, not extreme! Small shifts in your daily eating habits can improve your health over the long run. Tips: Try swapping out white bread for whole-wheat bread and reach for a handful of nuts when you're craving something salty. For more tips, see:
Shift to Healthier Choices | U.S. Dietary Guidelines
health.gov/dietaryguidelines/2015/resources/DGA_Shift-to-Healthier-Choices.pdf

Make Small Changes | MyPlate www.choosemyplate.gov/make-small-changes

Classroom Snack (Optional):
Fresh, frozen, canned and dried are all fine! Any fruit or 100% fruit juice counts as part of the Fruit Group. Fruits may be fresh, canned, frozen, or dried, and may be whole, cut-up, or pureed. [Note: Students will be quizzed on this in Lesson 2.]

Drive home this point by trying samples of fruit in three or all four forms. For example:
- Orange segments or slices, canned mandarin oranges, dried apricots and cups of orange juice
- Dried banana chips, fresh banana chunks, canned pineapple chunks, orange juice blended with frozen bananas
- Smoothie made with frozen orange juice concentrate with water and frozen strawberries, peaches or mangoes

Part C. Head Chef Challenge

Part 1. Plan a Meal & Menu
Plan a creative meal (either breakfast, lunch or dinner) with foods from all 5 food groups. Include correct portions of nutrient-dense foods and beverages, and remember to limit fats and oils to the recommended amounts. How can you make it especially colorful or full of flavor?

Add details in your list of ingredients, such as:
- Pinto Beans (canned, low-sodium brand)
- Chicken (baked)
- Spinach (steamed)
- Peaches (fresh, frozen, or canned in juice)

Write a menu-style description of the meal and give your meal a creative name.

Part 2. Save Room for Dessert!
Plan the ultimate dessert, using minimal sugar and as many food groups as possible. Think of creative ways to make it look and taste appealing. Give it a fun name that would make people want to order it in a restaurant.

Present your plan to the class, describing all the ingredients. At the end of the presentations, have students vote on the dessert they'd most like to try.

Optional: Make that dessert during your next class so all classmates can have a serving.

Extensions:
Cooking Demos **| Kids Cooking Network**
Watch some of these online videos as a class to get inspired!

Picky Eater Challenge
Watch this video together as a class. Or skip it and go straight to the challenge below.
D.W. The Picky Eater | PBS Learning (6:05 mins)

Discussion: Afterward, start a discussion by asking students to raise their hands and name two foods they love and two they've never tried.

The challenge: Over the next two days, try two different foods you've never tried before. You may find these at home, in the school cafeteria or on a trip with your family to a local store or supermarket. It's okay if it's only one bite! Follow up and report your findings to the class. Share the following about the food item: Which Food Group does it belong in? What did it taste like? Would you eat it again?

Family Connection:
Kids in the Kitchen
Watch this *"Kids in the Kitchen" video* at school or at home with your family. Would you like to make one or both of the dishes? (chicken packet or fruit parfait). Does it inspire you to try cooking something else?

Healthy Eating Patterns – Sample Recipes
A variety of meals and snacks can fit within healthy eating patterns. Many meals have several food groups within one dish. Check out this *Healthy Eating Pattern guide* for examples like Taco Salad, Vegetable-Tofu Stir Fry and Tuna Salad Sandwich.

Standards Alignment | Students will:

National Health Education Standards
Standard 1. Comprehend concepts related to health promotion and disease prevention to enhance health.
Standard 3. Demonstrate the ability to access valid information, products, and services to enhance health
Standard 6. Demonstrate the ability to use goal-setting skills to enhance health.

SHAPE America, National Physical Education Standards
Standard 4. The physically literate individual exhibits responsible personal and social behavior that respects self and others.

English Language Arts Standards > Speaking & Listening

Comprehension and Collaboration:
CCSS.ELA-LITERACY.SL.4.1 - Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on *grade 4 topics and texts*, building on others' ideas and expressing their own clearly.
CCSS.ELA-LITERACY.SL.4.1.C - Pose and respond to specific questions to clarify or follow up on information, and make comments that contribute to the discussion and link to the remarks of others.

English Language Arts Standards > Reading: Informational Text
Integration of Knowledge and Ideas:
CCSS.ELA-LITERACY.RI.4.7 - Interpret information presented visually, orally, or quantitatively (e.g., in charts, graphs, diagrams, time lines, animations, or interactive elements on Web pages) and explain how the information contributes to an understanding of the text in which it appears.

Math > Measurement & Data
Solve problems involving measurement and conversion of measurements:
CCSS.MATH.CONTENT.4.MD.A.1 - Know relative sizes of measurement units within one system of units including km, m, cm; kg, g; lb, oz.; l, ml; hr, min, sec.
CCSS.MATH.CONTENT.4.MD.A.2 - Use the four operations to solve word problems involving distances, intervals of time, liquid volumes, masses of objects, and money, including problems involving simple fractions or decimals, and problems that require expressing measurements given in a larger unit in terms of a smaller unit. Represent measurement quantities using diagrams such as number line diagrams that feature a measurement scale.

Math > Operations & Algebraic Thinking
Use the four operations with whole numbers to solve problems:
CCSS.MATH.CONTENT.4.OA.A.2 - Multiply or divide to solve word problems involving multiplicative comparison, e.g., by using drawings and equations with a symbol for the unknown number to represent the problem, distinguishing multiplicative comparison from additive comparison.

Worksheets & Downloads:

Student Reference Materials:

Portion Sizes – Cups and Ounces Equivalents
Examples: 1 slice of bread = 1 ounce-equivalent grains,
¼ cup of raisins = ½ cup-equivalent fruit
A 3-ounce piece of chicken is the size of a deck of cards

Fruit Group
1 medium bunch of grapes (about 50 grapes) = 1½ cup-equivalent
¼ cup of raisins = ½ cup-equivalent fruit
1 small apple counts as 1 cup-equivalent
1 snack container of applesauce (4oz) = ½ cup-equivalent fruit
1 large banana = 1 cup-equivalent
8 large strawberries = 1 cup-equivalent
1 small orange counts as ½ cup-equivalent
½ cup of 100% orange juice (4 fluid ounces) counts as ½ cup-equivalent

Vegetable Group
6 baby carrots or 1 medium carrot = ½ cup-equivalent (Red and Orange subgroup)
1 large stalk of celery = ½ cup-equivalent (Other Vegetables subgroup)
1 small ear of corn (6" long) = ½ cup-equivalent (Starchy subgroup)
1 large baked sweet potato = 1 cup-equivalent (Red and Orange subgroup)
1 medium baked or boiled potato = 1 cup-equivalent (Starchy subgroup)
1 cup of baby spinach (raw) = ½ cup-equivalent (Dark-Green subgroup)
1 cup of romaine lettuce = ½ cup-equivalent (Dark-Green subgroup)
1 cup of iceberg lettuce = ½ cup-equivalent (Other Vegetables subgroup)
½ cup of pinto beans (cooked) = ½ cup-equivalent (Beans and Peas subgroup*)

Grains Group
1 slice of 100% whole wheat bread = 1 ounce-equivalent (Whole Grains subgroup)
1 flour tortilla (8" diameter) = 2 ounce-equivalents (Refined Grains subgroup*)
½ large bagel = 2 ounce-equivalents (Refined Grains subgroup*)
1 large muffin = 3 ounce-equivalents (Refined Grains subgroup*)
2 whole-grain waffles = 2 ounce-equivalents (Whole Grains subgroup)
1 cup of cooked macaroni, noodles or pasta = 2 ounce-equivalents (Refined Grains subgroup*)
1 sandwich roll (2½ ounces) = 2½ ounce-equivalents (Refined Grains subgroup*)
1 piece of cornbread (2½" by 2½") = 2 ounce-equivalents (Refined Grains subgroup*)
3 cups of popcorn = 1 ounce-equivalent (Whole Grains subgroup)
5 whole wheat crackers = 1 ounce-equivalent (Whole Grains subgroup)
7 saltine crackers = 1 ounce-equivalent (Refined Grains subgroup*)
½ cup of oatmeal (cooked) = 1 ounce-equivalent (Whole Grains subgroup)
1 cup of whole wheat cereal flakes = 1 ounce-equivalent (Whole Grains subgroup)
1 cup of corn flakes = 1 ounce-equivalent (Refined Grains subgroup*)
½ cup portion of cooked brown rice = 1 ounce-equivalent grains (Whole Grains subgroup)
1 cup of white rice (cooked) = 2 ounce-equivalents (Refined Grains subgroup*)

Dairy Group
1 cup of yogurt (made with milk or soymilk) = 1 cup-equivalent dairy
1 snack size container of yogurt (4 ounces) = ½ cup-equivalent dairy
1½ ounces portion of cheddar cheese = 1 cup-equivalent dairy
1 cup frozen yogurt = 1 cup milk
1 slice of processed cheese = □ cup milk

Protein Foods Group
1 large egg = 1 ounce-equivalent protein foods
2 tablespoon of peanut butter = 2 ounce-equivalents protein foods
1 ounce portion of walnuts = 2 ounce-equivalents protein foods
½ cup portion of black beans = 2 ounce-equivalents protein foods
4 ounce portion of pork = 4 ounce-equivalents protein foods

Food	Portion Size	About the Size of...
Grains Group		
Bread	1 ounce or 1 regular slice	CD cover
Dry cereal	1 ounce or 1 cup	Baseball
Cooked cereal, rice or pasta	1 ounce or ½ cup	½ baseball
Pancake or waffle	1 ounce or 1 small piece (6 inches)	CD
Bagel, hamburger bun	1 ounce or ½ piece	Hockey puck
Cornbread	1 piece	Bar of soap
Fruits Group		
Orange, apple, pear	1 small fruit (2½ inches in diameter)	Tennis ball
Raisins	¼ cup	Golf ball
Vegetables Group		
Baked potato	1 medium	Computer mouse
Vegetables, chopped or salad	1 cup	Baseball
Dairy Group		
Fat-free or low-fat milk or yogurt	1 cup	Baseball
Cheese	1½ ounces natural cheese or 2 ounces processed cheese	9-volt battery
Frozen yogurt	½ cup	½ baseball

Protein Foods Group		
Lean beef or poultry	3 ounces	Deck of cards
Grilled or baked fish	3 ounces	Checkbook
Peanut butter	2 tablespoons	Ping-pong ball
Oils		
Margarine	1 teaspoon	Standard postage stamp
Oil or salad dressing	1 teaspoon	Standard cap on a 16-ounce water bottle

Source: Academy of Nutrition and Dietetics
https://www.eatright.org/food/nutrition/dietary-guidelines-and-myplate/kids-and-portion-control