

My Meal Choices

Subjects Taught: Health, Physical Education, Science, Language Arts, Mathematics

Grade Levels: 3rd-5th Grade

Brief Description: Student will collect personal meal consumption data, align those foods to the food guide food groups, and cross reference that information with the *MyPlate* to compare personal eating habits and to recommended guidelines. Students also will use that information to create their own food web.

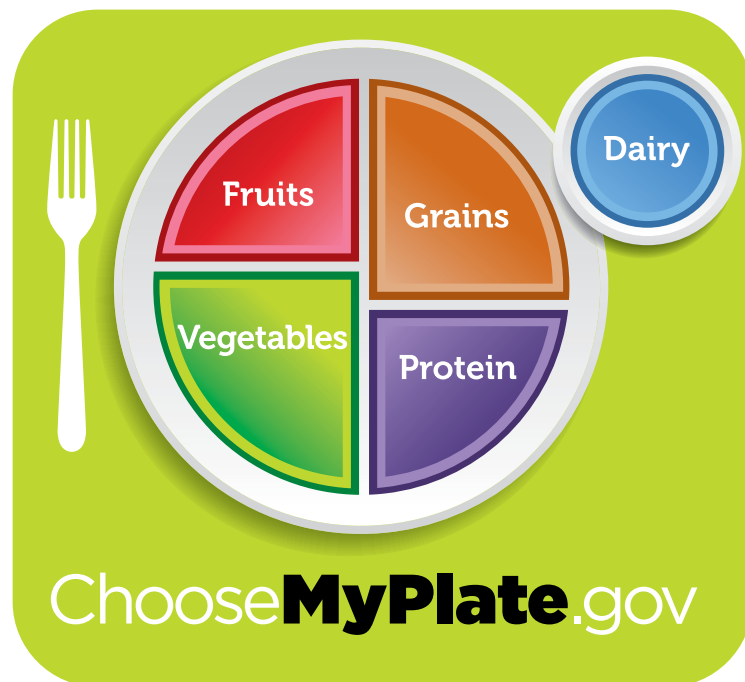
Objectives: Students will:

1. Document each meal and snack over a one week period on *Diary of My Meal Choices* student handout.
2. Designate food information collected into *MyPlate*.
3. Compare own meal data with the recommended data to analyze their healthy eating status.
4. Reflect on personal eating habits and determine changes to be made in diet.
5. Create their own personal food web that demonstrates how the food they eat is a result of the interactions between the geosphere, atmosphere, hydrosphere and biosphere.

Life Skills: analyzing, communicating, following directions, obtaining information, using technology

Materials Needed:

- “*Diary of My Meal Choices*” student handout — one or more per student as needed
- *MyPlate* worksheet on page 128.
- Science notebook for collaboration and reflection



- *Food Group and My Plate* checklist — one per student
- Computers with Internet access for each student

Time:

Four to five 30-minute sessions plus time for daily meal documentation on hard copy or online

Preparation:

1. Review websites listed under resources.
2. Provide a listing of food groups and portions as per USDA recommendations.
3. Copy *MyPlate* worksheet on page 128 and copy *Diary of My Meal Choices* student handout on page 130 or plan on having students journal online on a daily basis.

Florida Standards Met At-A-Glance

National Next Generation Science	4-LS1-a, 5-LS2-a, 5-PS3-a, 5-LS2-d
English /Language Arts	4.RI.2.4, 4.RI.4.10, 5.RI.4.10, 3.W.1.2, 3.W.3.7, 3.W.3.8, 4.W.1.2, 4.W.3.7, 4.W.3.8, 5.W.1.2, 5.W.3.7, 5.W.3.8
Health	HE.3.C.1.1, HE.4.B.4.1, HE.4.B.3.5, HE.4.C.1.1, HE.5.B.3.5, HE.5.C.1.1
Physical Education	PE.3.L.2.5, PE.4.L.2.12, PE.4.L.2.13, PE.5.L.2.12
Science	SC.3.L.14.1, SC.3.L.17.2, SC.3.N.3.2, SC.4.L.17.2, SC.4.L.17.3

4. Make copies of the *Food Groups & MyPlate* checklist on page 131 for evaluation — one per student.

Vocabulary: dietary guidelines, nutrients

Background Information:

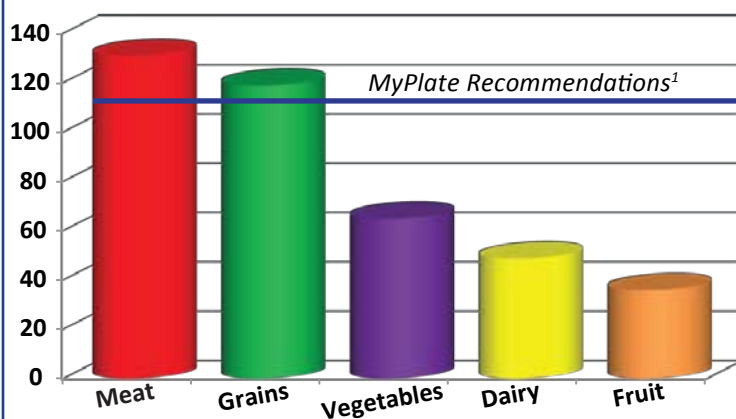
Since the early days of the 20th Century, the U.S. Department of Agriculture (USDA) has made recommendations to the public about healthy diets. These guidelines are known as Dietary Guidelines and are available at www.cnpp.usda.gov/DietaryGuidelines.htm. Those recommendations have always included eating a balanced diet including all of the food groups. Today, the application of those recommendations is known as *MyPlate* and not only includes what those food groups are but also identifies proportional servings on the plate. Current recommendations are that half of the plate used in a meal should be covered with fruits and vegetables. The USDA currently recommends two to four half-cup servings of fruits and three to five half-cup servings of vegetables. Yet, despite these recommendations, we are falling far short of meeting the recommendations of eating fruits and vegetables. The lesson “*Nutrient Database*” in this book identifies specific nutritional deficiencies for girls and boys ages 12- 29. Most of these deficiencies occur because of a very low consumption of vegetables in the diet. According to the USDA, current consumption of fruits and vegetables for both adults and children is about half of the recommended levels with potato consumption making up almost a third of the vegetables consumed both at and away from home. More information is available at www.choosemyplate.gov.



Introduction:

1. Instruct the students to jot down what each had for breakfast this morning in his/her science notebook, which will take about two minutes.
2. Then have them turn and talk with their neighbor and compare their food choices.
 - a. Are there any cultural differences?
 - b. Historically, when humans worked hard physically, it was important that a high calorie breakfast prepared workers for the day. How is this different today? Have our breakfast choices changed?
 - c. Did some students not eat breakfast? How does that affect how he or she feels? What are options to change that?
 - d. Share that across the globe, even regionally within the United States, and between individuals that vary in activity level, there are great differences in choices for breakfast foods. Some cultures might choose to consume fish at breakfast, or rice, or sausage, others might have pancakes with real maple syrup in the northeastern United States or sorghum syrup in the south. Other southerners might choose to have grits. Those hiking up a mountain might have a ready-to-eat meal by adding water to a package of dehydrated food. Bikers might supplement their meal with protein bars. Others working in a heavy labor occupation might select a high energy and high protein breakfast. But someone on the run might stop at a fast food restaurant for something on the go or grab a bowl of cold cereal.
3. Ask: “How healthy do you think your choices were? Does your choice match your activity level? What might be a better choice?”

American diets are out of balance with dietary recommendations



Note: Food availability data serve as proxies for food consumption.

¹2014 Data based on a 2,000-calorie diet.

Source: USDA, ERS.

4. Explain that research indicates breakfast has a huge impact on success in school. It improves learning, reduces discipline problems, improves student behavior, improves school attendance, aids in weight control, decreases visits to the school nurse and improves attention spans in class. In addition, it sets students up for the development of lifelong healthy eating habits and results in better overall health due to better nutrition.
5. Explain that this week the class is going to keep a diary of food choices for breakfast, lunch, dinner and snacks. At the end of the week, students will chart meal choices and look at the dietary guidelines for their age group.

Activity One:

1. After introduction, provide students with *Diary of my Meal Choices* worksheet and indicate that additional



copies will be available as they need them, just request a copy. Or direct students to the *MyPlate* website at www.choosemyplate.gov and click on the Super Tracker button, log in and create a profile.

2. Review worksheet or the website with students and answer any questions they may have.
3. Throughout the week, give students time to complete their worksheets or online tracker on a daily basis. Check worksheets in the morning or have students check each other to ensure that all students are logging in their data.
4. At the end of the week, pass out the *MyPlate* worksheet on page 128. Have students select one day that they felt they ate the healthiest during the week and use that day as the example.
5. Review use of the worksheet.
6. Students place their food choices under each section appropriately.
7. Have students collaboratively review their worksheets.
8. Have students reflect on their food choices and possible changes they can make to ensure a healthy diet in the future.

Activity Two:

1. Using *MyPlate* information at www.choosemyplate.gov, have students create three plates representing three meals. Ask them to include vegetables grown in the school garden on their plates.
2. Have students share or display their plates depicting healthy food choices.
3. Use the serving sizes and servings explained in *MyPlate*. Detail for each food group is provided by food group under the *MyPlate* button by viewing the food group gallery.
4. Discuss the difference between what is commonly viewed as a portion size (can vary widely) and a serving size (standardized and on the *MyPlate* website).
5. On the *MyPlate* website, have students access the “Super Tracker” section and click on the “Portion Distortion” button. Ask them to take the portion distortion quiz.

Activity Three:

1. Using the information already collected, have students create a food web that includes all of the foods they have eaten over the week and include vegetables grown in the school garden if they are not part of the food identified.
2. Discuss with students how this food web demonstrates how the geosphere, atmosphere, biosphere and hydrosphere are all components of the system that produces the food they need.
 - a. Identify that plants take atmospheric carbon dioxide in and give oxygen off.

- b. Identify that animals take atmospheric oxygen in and give carbon dioxide off.
 - c. Identify the uptake and release of water by plants and animals.
 - d. Identify interactions of other organisms important to the food system (bees, decomposers, nitrogen fixing bacteria, etc.).
 - e. Identify the role of soil and minerals found in the earth.
3. Reflection will be assessed by the *Food Groups & MyPlate* checklist.
 4. Assess the three planning plates that each student creates, making healthy food choices for the future and including produce from the garden.
 5. Ask students to create a balanced menu as a summative assessment. Use the following rubric to evaluate the success of each of their meals as balanced and representative of *MyPlate*.
 6. Have students write an opinion piece detailing what the title of this lesson means to them and how it ties to the school garden. Detail actions for the future, with parental involvement, to have the healthiest diet.

Evaluation Options:

1. Assess students each day for completing the daily section of their food diary (1 check per day).
2. Assess the *MyPlate* form against Food Diary for accuracy.

Create a Balanced Meal Rubric

Category	4 Points	3 Points	2 Points	1 Points
Food Groups	Menu contains at least one example from each food group: Grains, Vegetables, Fruits, Dairy, Protein.	Menu is missing one food group.	Menu is missing two food groups.	Menu is missing three or more food groups.
Serving Sizes	All serving sizes are noted and appropriate.	Not all serving sizes are noted or may not be appropriate.	Serving sizes may not be noted or may not be appropriate.	Serving sizes are not noted or not appropriate.
Labels and Descriptions	All menu items are clearly labeled. Penmanship is neat and the presentation is organized.	Almost all menu items are clearly labeled. Penmanship is somewhat neat and presentation is organized.	Several menu items are clearly labeled. Penmanship could be improved and presentation could be more organized.	No items are labeled. Penmanship and presentation is poor.
Knowledge Gained	Student can accurately answer questions as to why their menu represents a balanced meal.	Student can accurately answer some questions as to why their menu represents a balanced meal.	Student can accurately answer more than half of the questions as to why their menu represents a balanced meal.	Student cannot answer questions as to why their menu represents a balanced meal.
Required Elements	Student followed all directions and the menu reflects those directions. Students also met time constraints.	Student followed most directions and the menu reflects those directions. Students also met time constraints.	Student followed many directions and the menu reflects the lack of those directions not followed. Student did not meet time constraints.	Student did not follow directions and the menu reflects that lack. Student did not meet time constraints.

7. Have the school cafeteria manager speak to students about how they develop the school lunch menu and what they consider to ensure students get a healthy, balanced meal.
8. Have the class work with the cafeteria manager to plan a balanced meal and promote it to other students. (Today's lunch menu was planned by Mrs. Alvarez's fourth grade class and they will be helping serve in the cafeteria.)

Extensions or Variations:

1. For kindergarten through second grade students, teachers may have students create a drawing of their breakfast or lunch meal, categorizing foods on a *MyPlate* worksheet and listen to a read aloud. See suggested book titles under resources.
2. Use the following websites as enrichment:
 - “Fruit and Veggie Champions” independent games website for ages 6 – 8 www.foodchamps.org/
 - “Readworks” website: www.Readworks.org (must register — registration free) Healthy Plates passage includes explicit information.
 - Play the games at www.eatright.org/nnm/games/#
3. Celebrate National Nutrition Month.
4. Have students research the National School Lunch Program requirements. Do they think their school cafeteria follows those guidelines? If not, what can they do to improve them?
5. Have students complete their food diaries when other work is completed, or they are writing for other students throughout the day.

Resources:

Basic breakfast learning information
www.frac.org/wp-content/uploads/2009/09/breakfastforlearning.pdf

www.frac.org/wp-content/uploads/2011/08/breakfastforhealth.pdf

www.webmd.com/food-recipes/most-important-meal

Brown, Laurie Krasny & Marc Brown. “*Dinosaurs Alive and Well: A Guide to Good Health.*” Little, Brown Books. 1992. ISBN-13: 9780316110099

Hawley, Ella. “*Exploring Food and Nutrition.*” Rosen Publishing. 2012. ISBN-13: 9781448861767

Llewellyn, Claire. “*Why Should I Eat Well?*” Barrons Ed. 2005. ISBN-13: 9780764132179

Overview on breakfast

www.kidshealth.org/parent/nutrition_center/healthy_eating/breakfast.html#

Sears, William, Martha Sears, and Christie Warts “*Kelly. Eat Healthy, Feel Great.*” Little, Brown Books. 2002. ISBN-13: 9780316787086

Credits:

CPalms website

www.cpalms.org/Standards/FLStandardSearch.aspx

Dietary Guidelines. United States Department of Agriculture (USDA). www.cnpp.usda.gov/DietaryGuidelines.htm

MyPlate, United States Department of Agriculture (USDA). www.choosemyplate.gov

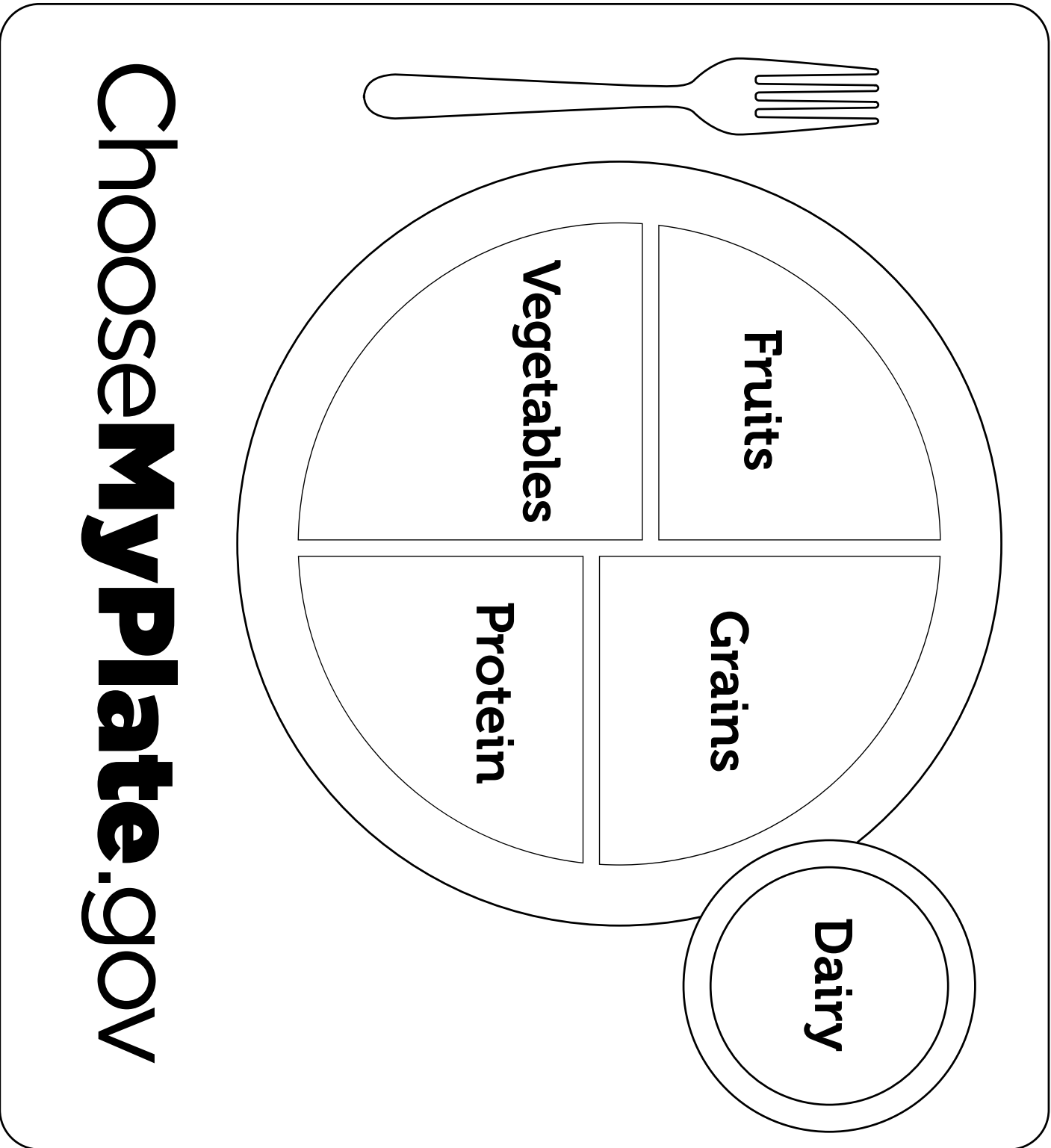
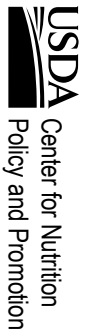
MyPlate graphic

www.choosemyplate.gov/food-groups/downloads/MyPlate/ColoringSheet.pdf

Online assessment game:

www.fns.usda.gov/multimedia/Games/Blastoff/BlastOff_Game.html

Readworks www.readworks.org



ChooseMyPlate.gov

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Sample Pre-Post Assessment

Give students a *MyPlate* template and have them answer these questions or perform these functions:

1. Place the foods you ate for either breakfast or lunch correctly onto the diagram.

2. What is a serving size for each of these foods?

3. Why is it important for half of the plate to be fruits and vegetables?

Diary of My Meal Choices

Name: _____

Weekly Dates: _____

Food choices	Average Serving	Goal	Your list of foods	Total for each group
Grains	1/2 cup			_____ ounces
Vegetables — Whole, Canned or Fresh	2 1/2 cups			_____ cups
Fruits — Whole, Canned or Fresh	1 1/2 cups			_____ cups
Dairy	3 cups			_____ cups
Protein	6 ounces			_____ ounces

Food Groups & MyPlate Checklist

Name: _____ Date: _____

Check off each area completed correctly.

Student completed each section of pyramid worksheet correctly.

- Grains
- Vegetables
- Fruit
- Dairy
- Protein

Student completed each section of *MyPlate* worksheet correctly.

- Grains
- Vegetables
- Fruit
- Dairy
- Protein

Total _____/10