

Portion to Portion*

Segment 3

Purpose

- To compare estimates of portion size to the recommended portion size
- To determine the importance of portion size to a healthy diet

Background

You can find food labels on nearly every type of food you buy. The nutrition facts on the food label are regulated by the Food and Drug Administration (FDA) to ensure accuracy. Some basic nutrition facts listed on a food label are serving size, calories, fat, cholesterol, sodium, carbohydrates, and protein. Serving size, or a portion, is very important to a healthy diet. Portion size gives the amount of food recommended to be eaten in a single sitting. Portion size can vary for different kinds of foods: solids versus liquids and raw versus cooked. Portion size helps people understand how much they are eating. For example, if a serving size listed on a nutritional label is 10 chips and you eat 20 chips, you just ate two portions of chips. To find the calories, fat, cholesterol, and other nutritional values for the chips, multiply each value listed on the label by two (the number of portions you ate). One package often contains multiple portions. You can use some common, quick-hand measures to help you estimate portions. For example, a closed fist is about the same size as a piece of fruit or a cup of raw vegetables. Understanding how to measure portion size is a key factor in maintaining a healthy diet.

Teacher Preparation

1. Place the food items and drink into the appropriate containers.
2. Remove the nutrition label from the food items and drink packaging.
3. Glue each nutrition label to 1/2 a piece of paper.
4. Fold the paper in half to hide the nutrition label from view.
5. Create four stations for students to rotate through by placing a container of each food item and drink at a different table.
6. Place a measuring cup (any size) at each station.
7. Place the folded paper with the nutrition label on the table so that it cannot be viewed.
8. Label the stations for easy identification by students.

Procedure

1. Using a marker, label three of the paper plates and one cup "estimate."
2. Label the remaining three paper plates and one cup "actual."
3. On the **Serving Size Worksheet**, write the names of the food items under Food Name on each table.
4. Go to the first station and estimate how many cups (or fractions of a cup) make up one portion size of that food item or drink.
5. Record your estimate on the **Portion Size Worksheet**.
6. Measure the estimated amount of the food item or drink and place it on the plate or in the cup labeled "estimate."

Teacher Materials
frozen peas (2 packages)
dry breakfast cereal
popped popcorn
3 large containers (for the dry foods above)
2-liter bottle of regular soft drink
8 measuring cups (any size)
4 pieces of paper or cardstock

Materials
Per Group
6 paper plates
2 large, plastic cups
marker
Labels and Estimates Handout
pen or pencil
science journal
Portion Size Worksheet (p. 71)
Serving Size Worksheet (p. 71)

7. Observe your estimated measurements and record.
8. Open the folded paper and read the "Nutrition Facts" label for the food item or drink.
9. Record the actual recommended serving size for each on the Serving Size worksheet.
10. Measure the actual recommended serving size and place it on the plate or in the cup.
11. Observe and compare your estimated portion size to the actual recommended serving size.
12. Record your observations in your science journal.
13. Rotate to the next station and repeat until you have visited all four stations.

Discussion

1. How did your estimated portion size compare to the actual portion suggested on the nutrition label?
2. Why do you think it is important to look at the serving size (portion size) on a label?

Extensions

1. Test your friends and family on their knowledge of portions. Prepare a similar activity for them by gathering various food items from your home and removing the nutrition labels. Have them estimate and compare their estimates to the recommended portion size.
2. Quick-hand measures are an easy way to help judge portion size. Look at some suggested hand measures below. How would you use them to help you determine portion size? Can you think of any other appropriate quick hand measures? Experiment to develop some quick hand measures of your own to help with portion size.

Use the Quick Hand Measures to estimate the size of one serving of different foods.

Quick Hand Measures



A closed fist
=
Piece of fruit or
cup of raw
vegetables



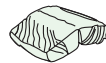
Two fingers
=
Ounce of
cheese



A cupped hand
=
Cup of
dry cereal



An open hand
=
Single serving
of meat



Tip of thumb
=
Teaspoon of
butter



* This hands-on activity was adapted from activities in *From Outer Space to Inner Space/Food and Fitness: Activities Guide for Teachers* created by Baylor College of Medicine for the National Space Biomedical Research Institute under NASA Cooperative Agreement NCC 9-58. The activities are used with permission of Baylor. All rights reserved. For additional activities visit http://www.nsbri.org/Education/Elem_Act.html

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Portion Size Worksheet

Food Name	1 Portion Estimate of Food – use cups as a measure

Serving Size Worksheet

Food Name	"Nutrition Facts" Food Label (recommended serving size) – use cups as a measure