

3-5

Estimating Portion Size and Serving Size

Throughout Part 3 the team has learned about the different foods and food groups people eat in your community. In Task 3-4, the team explored various food guidelines from around the world. These guidelines provide recommendations for the amounts of each food group that should be eaten. In the guidelines the team may have seen the terms **portion size** and **serving size**. You may have also seen these terms on the Nutrition Facts labels on packaged foods you buy. This information can help people make decisions about the amount of that food to eat.


However, sometimes the serving size information is not provided on a label, or you need to measure a smaller amount from a large package and you do not have a measuring device. In these cases, it can be helpful to calibrate a mental or physical tool, such as your hand, to help you make these measurements and decisions.

Objective



In this task, the team will learn about the difference between portion size and serving size. The team will calibrate a tool, such as your hand, as a measuring device to determine the serving sizes of different foods. The team will then learn how to read a Nutrition Facts label to determine the serving size of that product. Finally, the team will use their measuring device to measure out serving sizes of some different products. In this task, the team will be focusing on the following questions from the question map:

- How are portion and serving size useful to manage nutrition?

1. Go to the Task 3-5 folder and get Estimating Portion Size and Serving Size activity sheets. 
2. Complete the activity according to the instructions in the task folder.
3. After completing the activity, discuss as a team how your measuring tool, Nutrition Facts labels, and understanding serving size and portion size could be useful when thinking about the problem question, **How do we ensure good nutrition for all?**

Hooray! You completed Task 3-5. Check it off the task list. *Go to Task 3-6!*





Task 3-5. Estimating Portion Size and Serving Size

Portions and Servings: What's the Difference?

A **portion** is the amount of food you choose to eat for a meal or snack. It can be big or small—you decide.

A **serving** is a measured amount of food or drink, such as one slice of bread or one cup (8 ounces) of milk.

Many foods that are packaged or sold as a single *portion* actually contain several *servings*. Packaged foods are required to a Nutrition Facts label that tells you the number of servings in the container. You'll find it on the back of a can or bag or the side of a box. Different kinds of products have different serving sizes. Serving sizes could be measured in many different units, such as cups, ounces, grams, pieces, slices, or numbers (such as three crackers).

Look at the Nutrition Facts label on a 20-ounce soda (usually consumed as one portion). It says the bottle has 2.5 servings in it. A 3-ounce bag of potato chips, which some would consider a single portion, contains three servings.

Depending on how much you choose to eat, your portion size may or may not match the serving size. Remember, portion size is how much food you choose to eat at one time—whether you are eating in a restaurant, from a packaged meal, or at home. A serving size is a measured amount of food with a known amount of nutritional value. Knowing the nutritional value in a serving size can help you decide how large or small of a portion is appropriate to each in a day. However, a serving size on a Nutrition Facts label may be more or less than the amount you should eat, depending on your age, weight, whether you are male or female, and how active you are.

In this activity, you will learn how to estimate the portion size of some foods and compare it to a suggested serving size. You will then calibrate a measuring tool, your hand, that you can use to make approximate portion and serving size measurements in your daily life.





Lebanon Food Guidelines—Serving Size Recommendations

Table 3.1	Recommended Intakes and Examples of Serving Sizes of Each of the Five Food Groups	
Recommended Intakes of the Five Food Groups (based on a 2,000 calorie diet)	Examples of One Serving of Each of the Food Groups	
<p>Cereals and grains (at least 6 servings per day, with at least ½ being whole-grain)</p>	<ul style="list-style-type: none"> • ¼ big loaf of Arabic whole-wheat pita bread • 1 slice of whole-wheat loaf (toast) bread • ½ cup cooked ‘Burghul’, whole wheat, brown rice, whole-wheat pasta or noodles • 1 cup ready-to-eat breakfast cereal (unsweetened) 	
<p>Fruit (2 servings per day)</p>	<ul style="list-style-type: none"> • 1 small apple • 1 large banana, orange, or peach • ½ cup dried fruit (dates, prunes, raisins, apricots) • 1 cup fresh fruit juice 	
<p>Vegetables (2 - 3 servings per day)</p>	<ul style="list-style-type: none"> • 1 cup raw vegetables • 2 cups raw green leafy vegetables • 1 cup cooked vegetables • 1 cup vegetable juice 	
<p>Low-fat milk and dairy products (3 servings per day)</p>	<ul style="list-style-type: none"> • 1 cup liquid milk or yogurt • 3 tablespoons powdered milk • 45 g white cheese • 1 cup milk-based pudding such as ‘Mhalbiyeh’, ‘Sahlab’ or ‘Riz Bi Halib’ • 8 tablespoons ‘Labneh’ 	
<p>Protein-rich foods (5 - 6.5 servings per day)</p>	<ul style="list-style-type: none"> • 30 g cooked lean red meat or white meat (poultry or fish) • 1 whole egg or 1.5 egg whites • ¼ cup legumes (beans, lentils, peas) • 15 g unsalted nuts or seeds 	



For this part of the activity, the team should use the Lebanon food guidelines as a reference.

1. Look at the number of total servings of each food group recommended to eat per day.
 - Cereals and grains
 - Fruit
 - Vegetables
 - Low-fat milk and dairy products
 - Protein-rich foods
2. Look over the examples of foods and amounts that equal one serving for each food group.
3. Calculate the total amount of each food you would need to eat to fulfill the daily requirements for that food group.

For example, if one slice of whole wheat loaf (toast) bread equals one serving, how many slices of bread would you need to eat in a day to meet your total daily recommended cereals and grains intake?

1 slice of whole wheat bread = 1 serving

Recommended daily intake for cereals and grains = 6 servings

$1 \text{ slice} \times 6 = 6 \text{ slices of bread}$

- How many apples would you need to eat to meet your daily recommended fruit needs?
- How many cups of yogurt would you need to eat to meet your daily recommended dairy needs?
- How many cups of green leafy vegetables would you need to eat to meet your daily recommended vegetable needs?
- How many cups of legumes would you need to eat to meet your daily recommended protein needs?





Estimating and Calibrating a Serving and Portion Measuring Tool

In this part of the activity the team members will estimate a portion of food that is equal to different serving sizes of various foods. Then you will use a measuring tool (cup, spoon, scale) to compare your estimate to the actual amount. Then each team member will calibrate their hand to be a measuring tool for each of these serving size measurements. Your hand can then be used whenever you need to approximate the number of servings in a portion of food you are eating.

Materials

- Food measuring spoons/cups/devices used for cooking
- Balance, scale, or other device to measure the weight of food items (if available)
- Plates, bowls, or cups to measure foods onto
- Suggested foods to measure out (but use whatever is available):
 - Uncooked or cooked rice
 - Uncooked or cooked beans
 - Nuts or seeds
 - Dried fruit
 - Raw vegetables or fruit, such as carrots or apples
 - Leafy greens, such as lettuce or spinach
 - Milk
 - Cheese

Procedure

This activity is best done as individuals or in small groups, depending on the amount of materials available.

1. **Estimate one portion.** Without using any measuring devices, fill a plate/bowl/cup with a portion of each food item provided that you think equals one serving size as indicated in the Lebanon food guidelines. For example, one serving is equal to:
 - 1 cup raw vegetables
 - 2 cups leafy greens





- ½ cup cooked rice
- ¼ cup uncooked rice
- ½ cup dried fruit
- ¼ uncooked beans
- ½ cooked beans
- 1 cup milk
- 15 grams nuts/seeds
- 45 grams cheese

2. **Measure your estimated portion.** Use the appropriate measuring device to measure your estimated portion for each item. Use the data table to document how close your estimated portion was to the actual serving size. For example, you could mark it as smaller, equal, or larger than a serving size. (So if you measure your estimated portion amount and find it was smaller than the actual serving size measurement, mark it as smaller. If you measure your estimated portion amount and find it was larger than the actual serving size measurement, mark it as larger.)

- Using the data you collected, how did your portion estimates compare to the actual serving size measured amounts?
- Does the data show that you are more likely to underestimate or overestimate serving sizes when taking a portion of food?

Food item	One serving size amount	Estimated measurement comparison





3. Calibrate your hand. Now you will calibrate your hand to be an approximate serving size measuring tool.

a. One food item at a time, measure out onto a plate one serving size of each of the foods you have available. For example, one serving is equal to:

- 1 cup raw vegetables
- 2 cups leafy greens
- $\frac{1}{2}$ cup cooked rice
- $\frac{1}{4}$ cup uncooked rice
- $\frac{1}{2}$ cup dried fruit
- $\frac{1}{4}$ uncooked beans
- $\frac{1}{2}$ cooked beans
- 1 cup milk
- 15 grams nuts/seeds
- 45 grams cheese

b. Take your fingers and/or entire hand and shape it into the approximate size of one serving of the food item. Determine how much or what part of your hand could represent one serving size of that food item.

- For example, your hand in a fist shape could be about the same size as one serving of milk. Or your pointer finger could be about the size of one serving of cheese.
- You can also use the surface area of your open or cupped hand. For example, one serving of rice or beans covers how much of your open or cupped hand?

c. Use the data table and hand calibration icons to develop a hand calibration symbol and description for the different food item serving sizes.

- The hand calibration icons can be cut out, drawn on, or parts can be colored or circled to represent different amounts.
- If cut out, stick them to the data table.

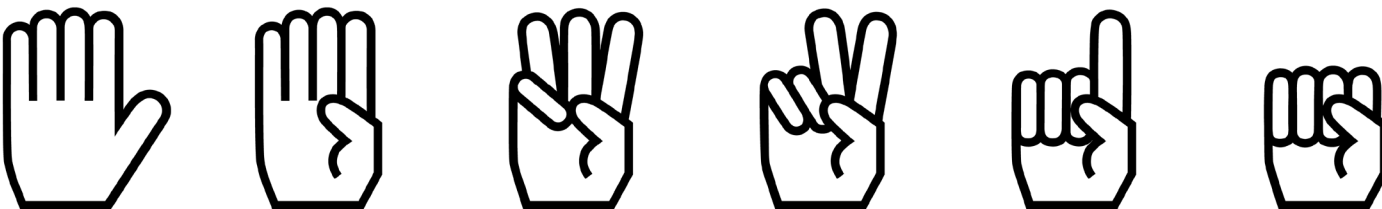
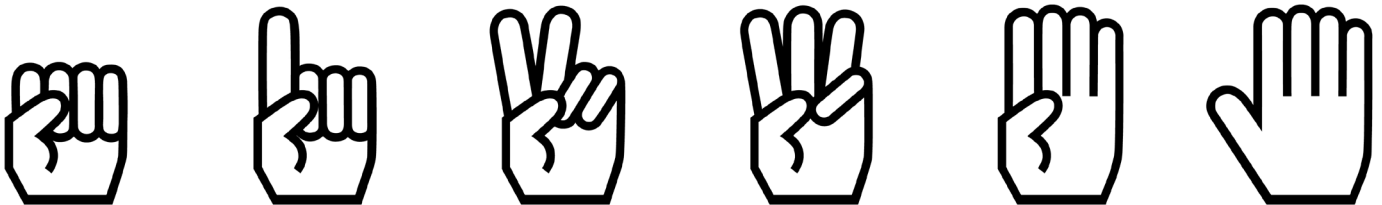
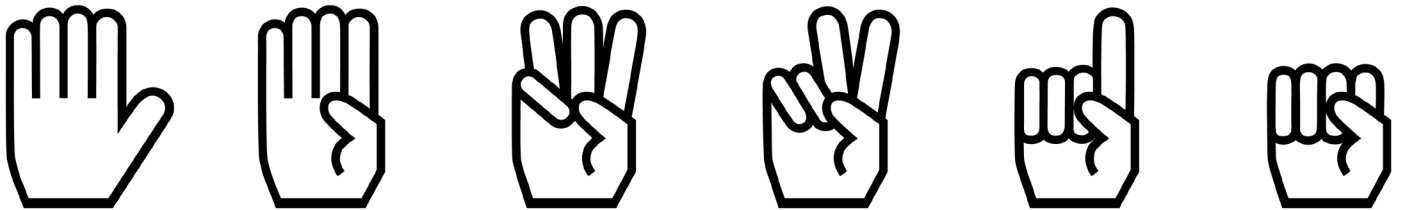
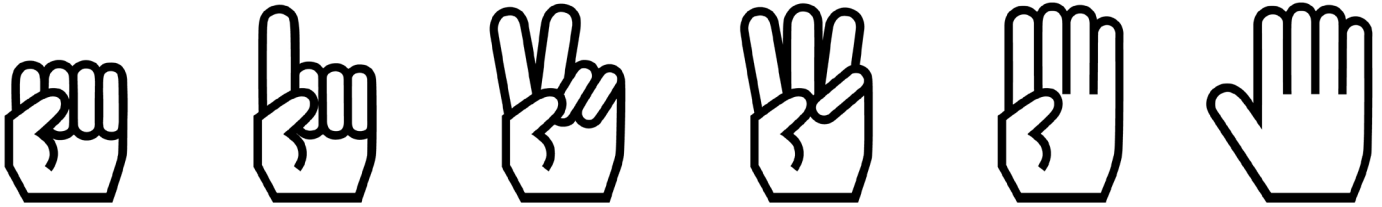




4. **Test your tool.** Team members will now test out their set of hand symbols and use the data to further calibrate their hand symbols.
 - a. Without the rest of the team seeing, have one team member measure out a known portion of various food items. This portion should be more or less than one serving. Do not share the exact portion size with the people testing their hand symbols.
 - b. Have the other team members use their data table and hand symbols to measure these portions of food. These team members are using their hand symbols to figure out the approximate number of servings in that portion.
 - c. Document this measurement on your data table.
 - d. After all food items have been measured with your hand symbols, have the person running the test reveal the exact measured amounts of each item.
 - e. Compare and contrast your hand serving size measurements with the actual measurements.
 - f. Based on the data, adjust or further calibrate your hand symbols to be more accurate.



Hand Calibration Icons





Hand Calibration Data Table

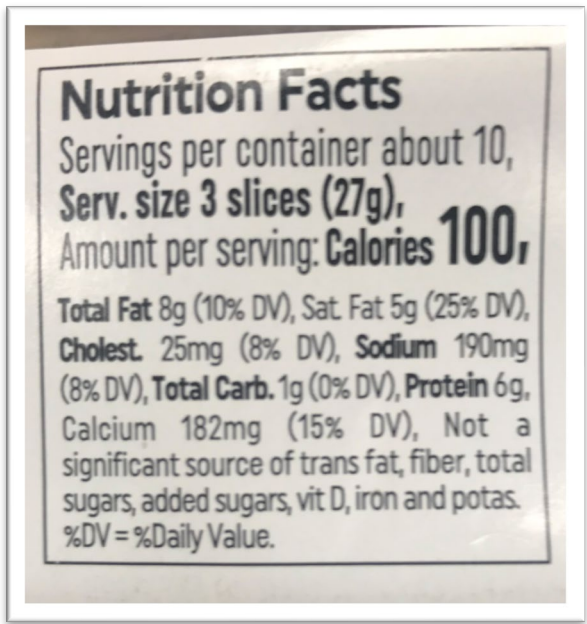
Name				
Food item	Food group	Serving size	Hand calibration symbol description	Hand calibration symbol drawing



Analyzing Nutrition Facts Labels

Many countries require food manufacturers to put Nutrition Facts labels on food items to inform consumers. Many packaged foods have this kind of label on the container. Here are two examples:

Cheese



MILK



These labels provide serving size information for the product. Determine the following for these two products.

	Cheese	Milk
Serving size unit		
Amount of one serving		
Number of servings in the whole container		
Calories in one serving		
Calories in the whole container		





Locate a variety of products with Nutrition Facts labels in your home or community that you can analyze. Bring in the actual container to analyze.

You will use the information on the labels to determine which hand symbol could be used to measure out a serving size of that product. Record your data below.

Name				
Food item	Food group	Amount of one serving size	Calories in one serving	Hand calibration icon for one serving

