

**P4. GROUP 3—PLATE WASTE OBSERVATION BOOKLET  
(INTERVIEWER-COMPLETED)**

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## PLATE WASTE OBSERVATION BOOKLET

School ID: \_\_\_\_\_

Book \_\_\_\_\_ of \_\_\_\_\_

School Name: \_\_\_\_\_

Date: \_\_\_\_\_

Meal(s):     Breakfast     Lunch    Day:     Mon     Tue     Wed     Thu     Fri

Meal Period	Meal Type <i>B = Breakfast</i> <i>L = Lunch</i>	Start Time	End Time	Grade Range	Target Number of Tagged Trays*
1	B / L				
2	B / L				
3	B / L				
4	B / L				
5	B / L				
6	B / L				

\*Over the course of the day, the two Field Interviewers (FIs) should aim to tag a total of:  
**15 breakfast trays and 40 lunch trays**

According to the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number. The valid OMB control number for this information collection is 0584-XXXX. The time required to complete this information collection is estimated to average 10 minutes per response, including the time to review instructions, search existing data resources, gather the data needed, and complete and review the information collection.





**NOTES**

**(Use this space to make notes to aid your work and to record issues that arise.)**

## SCRIPT FOR TAGGING TRAYS

Hi, my name is \_\_\_\_\_. I'm working on a study of the School Breakfast / Lunch Program. I'd like to write down what you have here and put a tag on your tray. When you are all done, please leave everything on your tray – don't throw anything away – and take your tray over to [INSERT PLACE].

Does this sound okay? [*Tag tray and record tag number and units of each item served.*]

Thank you very much, please remember to bring your tray to [INSERT PLACE] after you finish eating.

## SCRIPT FOR SPEAKING WITH SCHOOL STAFF

Hello, my name is \_\_\_\_\_. My colleague [INSERT OTHER FI'S NAME] and I are visiting today as part of the USDA School Nutrition and Meal Cost Study. During our visit, we will be collecting plate waste data in the cafeteria.

### [IN FRONT OFFICE]

... We have been in touch with [INSERT FOOD SERVICE MANAGER NAME] in foodservice and plan to meet with him/her before breakfast/lunch.

Where should we sign in?

We passed along a script last week for making an announcement about the study over the PA system. Did you receive this script?

[IF NO] Here is another copy. Would you be able to please arrange for this to be announced over the PA system?

Do you have any questions?

Thank you for your help. Can you please give us directions to the cafeteria?

### [IN CAFETERIA]

... We would like to speak with [INSERT FOOD SERVICE MANAGER NAME]. Where can we find him/her?

## PLATE WASTE PROTOCOL

### Before the Visit

In planning for the target week, obtain from the food service manager the number and timing of breakfast and lunch periods, the number of children usually purchasing reimbursable meals at breakfast and at lunch, and the number of cafeterias/serving lines for (1) reimbursable meals only, (2) both reimbursable meals and other foods, and (3) non-reimbursable meals only for each period. While two Field Interviewers will be assigned for most observations, this information will help to determine whether more FIs may be needed.

The goal is to complete 10 plate waste observations for breakfast (if served) and 30 for lunch. To allow for noncooperation in returning trays, **the goal is to tag 15 breakfast trays and 40 lunch trays**. Based on estimated meals served and the target number to observe, determine a sampling interval: For example, if the school serves 400 reimbursable lunches, the interval should be 1 in every 10 children to tag 40 trays. Each school will also be assigned a random number in advance that determines the first tray to be sampled.

On the Thursday or Friday before the target week, the lead plate waste FI (or field coordinator) should call the food service manager to remind him or her of the upcoming visit. Prior to the call, the FI should search online for a copy of the school's foodservice menu. During this call, the FI should:

- Confirm meal times and how long before the meal FIs will be permitted to arrive at the kitchen area. Confirm types of meal service arrangements (in order to ensure that there are enough FIs scheduled for the visit) and determine if there are any special circumstances that FIs need to be aware of (such as a change in meal times).
- Ask whether it will be possible to purchase reference portions of reimbursable meal items, and what methods of payment are used (cash, cashless, etc.). Reference portions are needed for items that are prepared from recipes or sold outside their original packaging, but not for beverages or commercially pre-packaged items, such as individual boxes of cereal.
- If the foodservice menu could not be located online, request that the food service manager send a copy of the menu by fax or e-mail.
- Review data collection procedures.
- Remind the food service manager that he or she will need to complete the Menu Survey during each day of the target week.

The caller will explain that the contractor will be faxing or e-mailing an information sheet that details what will be happening and when, so that the food service manager can share it with staff.

## Materials Needed

The day of the school visit, FIs need to bring:

- 1) School foodservice information:
  - Notes from telephone calls with food service managers
  - Printed menu for target week
- 2) Data collection materials:
  - Plate waste observation booklets  
(Bring two for breakfast and two for lunch, for each FI. If there are two FIs, bring 8 booklets.)
  - Pens
- 3) Plate waste measurement tools
  - Measuring cups
  - Portioned bean bags for measuring salad bar and other self-serve food bar waste
  - Beakers for measuring liquids and large bowl for pouring out liquids
  - Plastic bags, to ask students to deposit plate waste, if there are no cafeteria trays
  - Plastic gloves (several pairs) and materials to tie up hair for foodservice setting
  - Brightly colored tags (pre-numbered for tagging trays) and extra tags  
(Note that there should be a different color tag for each FI.)
  - Paper, markers, and masking tape for signs
  - Payment for purchasing reference portions of reimbursable menu items  
(According to payment method specified during reminder call)
- 4) Scripts:
  - FI script for speaking with students and tagging trays
  - FI scripts for speaking with school staff at the office and in the cafeteria
  - School staff script for making an announcement to students

## Upon Arrival at School

- Sign in at the main office—introduce yourselves and ask for directions to the cafeteria (See Script for Speaking with School Staff).
- Remind staff to make an announcement over the PA system using script (this should have been received in advance, but bring a back-up copy just in case).
- Introduce yourselves to the food service manager and other kitchen staff and explain what you will be doing during the day. Make sure that you clarify that you are observing what children eat, not the staff's performance.
- Ask about waste disposal procedures and discuss how the plate waste observations can be set up to minimize disruption to these procedures. Speak with janitorial staff as well, if appropriate.
- Determine the best locations for standing to tag trays, and for students to bring tagged trays. You may need to ask kitchen staff for a cart, table, or rack where students can return trays. Put up signs for students indicating where to return tagged trays as needed.
- If possible, ask teachers and cafeteria monitors working during meals to help to make sure tagged trays get returned to the designated location.

Obtain a printed menu (if it was not available in advance), confirm with kitchen staff what foods are offered as part of a reimbursable meal for the day, and ask for additional details about the foods being

served. If available, review the list of reimbursable foods posted on the service line. Both the menu and posted reimbursable foods list should be used for listing foods.

## Listing Foods

**IMPORTANT:** Both FIs should participate in compiling the food list, and agree upon what constitutes a “full” serving for each food item. Do not separate foods into separate components unless they can be offered to students that way. For instance, if a tuna salad sandwich on a whole wheat wrap is offered as an item, record “tuna salad on whole wheat wrap” (not “tuna salad” and “whole wheat wrap”).

List all foods offered in reimbursable meals on the Food List Form (inside cover of the Plate Waste Observation Booklet) prior to foodservice, after the food is put out on the serving lines. Detailed instructions are as follows:

- Using the printed menu, reimbursable foods list, information from staff, and observation, list all foods available as part of a reimbursable meal on the Food List Form. It is generally useful to group foods that are served together, or in the same area of the cafeteria. If different foods are served in different lines, consider assigning one FI to each line for both listing foods and tagging trays.
- If there are more foods than can be listed in one booklet, start a second booklet and clearly mark the “continuation” booklet on the cover of the Plate Waste Observation Booklet (for example, booklet 1 of 2).
- As you complete the Food List Form, FIs should agree upon what constitutes a “full” serving for each food item, except self-serve items (where a full serving is equivalent to a full serving container). Record notes on agreed-upon servings in the “Food Description” column on the Food List. Use purchased portions of foods, if available, for reference.
- Include enough information in the food description so that you can uniquely identify all menu items and later accurately link each item to the corresponding food reported on the Menu Survey. For example:

<b>Food Name</b>	<b>Portion Size</b> <i>(Include Units)</i>	<b>Food Description</b>
Chocolate milk	8 oz	1%, Dean
Canned pears	4 oz cup	in light syrup, Del Monte

- If different portion sizes of an item are available, list these on separate lines, indicating respective portion sizes. You do need to distinguish between all varieties of foods that may be nutritionally different, such as different types of milk, and different types of breakfast cereal. Do not include condiments or toppings on the Food List Form
- If it is not clear whether a food is allowed for a reimbursable meal, ask if it is available to students who get free meals.
- Ask the food service manager if there are any other foods that may be served if the foods on the menu run out, and add these foods to the list. At the end of the meal observation period, cross off any foods from the list that were planned to be served, but were not served.
- Servings from salad bars and other self-serve food bars should be listed as one item for each size of container that is available. So if two sizes of containers are available, they should be listed on two lines of the Food List Form.

## Sampling Students, Tagging Trays, and Observing What Is Served

Before sampling, be sure to speak to the cashier and explain what will be occurring. As with other staff, make clear that you are observing the children, not the staff's performance. Before each meal period, ask what grades will be served and note this on the cover of the Plate Waste Observation Booklet.

Observations should be divided across meal periods as determined in advance by sampling staff.

Confirm with the cashier what he or she considers a reimbursable meal. This is especially important with salad bar and other self-serve food bar items.

As children go through the line, FIs need to station themselves at or near cash registers to sample students, ask if they may tag their trays, observe what is on their plates/ trays, and ask for their cooperation in bringing their plate waste to the designated location. If no trays are used, FIs should give children a plastic bag and ask them to put all waste in the bag.

As children are going through the line, the FI should mentally count to determine which child is next for sampling, assessing to his or her best ability whether the meal is likely to be reimbursable. If the line includes both reimbursable meals and non-reimbursable meals, count only the reimbursable meals to the extent feasible. If possible, start to note the foods on the tray. If it turns out the assessment of which meals were reimbursable is not completely accurate, once the child reaches the cash register, that is all right, just keep counting as best as possible. Also, do not concern yourself if you miss a few children going through the line while speaking to a sampled child, just resume counting after that child is observed.

As each child to be sampled reaches the cash register, the FI should confirm the meal is reimbursable by inspecting the tray, explain the study (using the Script for Tagging Trays) and ask the child's permission to tag the tray. If the child turns out not to have a reimbursable meal, sample the next child in line with a reimbursable meal. Similarly, if the child refuses, sample the next child in line with a reimbursable meal.

Record the tag number in the “#” field at the top of the Plate Waste Observation Form. Record the portions on the tray in the “# Units Served” field as quickly as possible. For each food present, note if there is 1 serving, 2 servings, 1.5 servings and so forth, by comparing the serving visually to the reference servings previously observed. It is not needed for this estimate to be too precise—half-serving intervals are fine. It may be necessary to ask the child to pause briefly while the servings are entered—ideally, do this in a space beyond the cashier's station, so as not to hold up the line. Be sure to note any condiments that the child may have added. It may be necessary to follow the child to determine if they added any condiments (which are often kept in a separate location) or beverages after going through the line. Record salad bar or other food bar selections according to the volume of the container used. It is not necessary to distinguish the separate ingredients.

If non-reimbursable foods are included on the child's tray, do not include them on the Plate Waste Observation Form.

Note the child's gender whenever convenient during this process, by circling the “M” or “F” in the Observation Form.

## Collecting Trays and Measuring Waste

## USDA School Nutrition and Meal Cost Study

Mark the table or area where children are to bring their trays with a sign, and point this area out to children when they are sampled. Near this area, set up purchased reference portions and the various sizes of salad bar and other food bar containers. With these containers, use bean bags for visualization, instead of portioned servings.

As children complete their meals, at least one FI should be stationed at this area, to thank children as they bring their trays. The FIs should also keep an eye out for children with tagged trays who start to bring their trays to the usual disposal site. However, some children will discard their food without bringing it to be observed, will lose their tags, or will “mess up” their trays in such a way that the food left cannot be assessed. When this happens, check the box “Tray not returned” on the Plate Waste Observation Form for that tray number.

Once each tray is returned, FIs should assess the amounts remaining for each food served on the tray as follows and record these values in the “Amount Wasted” field next to each food item:

- For liquids, measure the amount left in fluid ounces by pouring any remaining liquid into the beaker. Enter the fluid ounces for the amount LEFT in the Amount Wasted column on the Plate Waste Observation Form. It will be useful to have a sink nearby or a bowl to pour out the liquid after measuring (and ideally, to rinse the beaker).
- For foods (other than liquids), assess the amount LEFT relative to the servings observed earlier and record the proportion of food left using the following values:

0—none remains  
1/8 --only a few bites of the food item left  
1/4 of the food item left  
1/2 of the food item left  
3/4 of the food item left  
7/8 left (or only 1-2 bites taken/most left)  
1 – for full portion left (nothing eaten)

Keep in mind the number of servings noted originally on the form, so that the proportion left is relative to the amount served. For example, suppose a serving was 1 slice of bread, but the child had 2 slices on her plate when the tray was tagged. After the meal, 1 full slice remains. The appropriate code for the bread would be “1/2.”

If foods are observed on the tray that were not there before, but are part of the reimbursable meal, include them, describing the amount left as well as possible, and write “MS” (“missing”) in the “# Units Served” field. It is possible the observer missed the food, but also possible that the food was obtained from another child. If FIs record the information, analysts have the maximum flexibility in figuring out how it should be treated in the analysis.

Note any problems in measuring waste on the Notes page.

## **Before Departure**

Check with staff to ensure you dispose of the food properly, and thank them for their cooperation.

## **Linking Food List to Menu Survey**

Following plate waste data collection, FIs will need to access the menu survey to match the food items on the completed Food List Form to the Reimbursable Foods Form of the Electronic Menu Survey (EMS). This can be completed only after the food service manager has completed these forms, during each day of the target week or at the end of the target week. Identify the line on the Reimbursable Foods Form of the EMS that corresponds to each food listed on the Food List Form. Write the line number from the EMS into the Line # column on the Food List Form.

FIs should remind the food service manager about the importance of completing Menu Survey Forms each day.