



No Time To Train

Short Lessons for School Nutrition Assistants

Determining When to Batch Cook

Lesson Overview

Lesson Participants: School Nutrition Assistants/Technicians

Type of Lesson: Short face-to-face training session

Time Needed to Conduct the Lesson: 15 minutes

Lesson Description: This lesson describes how holding of foods can harm food quality. Participants apply principles of batch cooking to determine which foods should be batch cooked. **It is recommended that the lesson *Effect of Batch Cooking on Food Quality* be taught before this lesson.** The lesson is designed for managers to teach school nutrition assistants/technicians.

Lesson Objectives:

At the end of this lesson, the participant will be able to:

1. Describe how extended holding of foods can harm food quality.
2. Determine which menu items should be cooked in batches.

Get Ready to Train

The format for the **No Time to Train** lessons includes an overview, preparation checklist, lesson at a glance with timeline for conducting the lesson, reference, and an instructor's script. The manager/instructor will use the script to present the lesson to the participants. The script gives directions to the manager/instructor—**DO, SAY, ASK, LISTEN, AND ACTIVITY**—to deliver the lesson.

No special audiovisual or electronic equipment is needed to conduct the lesson. The lesson can be presented in the cafeteria, media center, or classroom.

Preparation Checklist

Directions: Use the Preparation Checklist to prepare for the training session. Track your progress by checking off tasks as they are completed.

| Done <input checked="" type="checkbox"/> | Lesson Tasks |
|---|--|
| | <p>Gather Materials</p> <p>Materials Needed:</p> |
| <input type="checkbox"/> | <ul style="list-style-type: none"> • Instructor’s Script |
| <input type="checkbox"/> | <ul style="list-style-type: none"> • Handout 1: Determining When to Batch Cook (one for each participant) |
| <input type="checkbox"/> | <ul style="list-style-type: none"> • Handout 2: Determining When To Batch Cook with Suggested Answers (one for each participant) |
| <input type="checkbox"/> | <ul style="list-style-type: none"> • Pencils (one for each participant) |
| <input type="checkbox"/> | <ul style="list-style-type: none"> • Session Evaluation form (one for each participant) |
| | <p>Prepare for Lesson</p> <p>Before the Training:</p> |
| <input type="checkbox"/> | <ul style="list-style-type: none"> • Make copies of Handouts 1 and 2 (one for each participant). |
| <input type="checkbox"/> | <ul style="list-style-type: none"> • Make copies of Session Evaluation form (one for each participant). |
| | <p>On Training Day:</p> |
| <input type="checkbox"/> | <ul style="list-style-type: none"> • Place pencils on tables (one for each participant). |
| <input type="checkbox"/> | <ul style="list-style-type: none"> • Distribute Handout 1 to each participant. |
| <input type="checkbox"/> | <ul style="list-style-type: none"> • Distribute Handout 2 to each participant after activity. |
| | <p>On the Instructor’s Table:</p> |
| <input type="checkbox"/> | <ul style="list-style-type: none"> • Instructor’s Script |
| <input type="checkbox"/> | <ul style="list-style-type: none"> • Handout 1: Determining When to Batch Cook |
| <input type="checkbox"/> | <ul style="list-style-type: none"> • Handout 2: Determining When to Batch Cook with Suggested Answers (one for each participant to distribute after discussion) |
| <input type="checkbox"/> | <ul style="list-style-type: none"> • Session Evaluation forms |

Lesson at a Glance (15 minutes)

| Time | Topic | Task | Materials |
|-----------|--|--|--|
| 2 minutes | Introduction and Overview | Instructor defines batch cooking | Instructor's Script |
| 3 minutes | Objective 1: Describe how extended holding of foods can harm food quality. | Instructor leads a discussion of how quality declines when some foods are held at 135 °F for an extended period of time. | |
| 6 minutes | Objective 2: Determine which menu items should be cooked in batches. | Participants will determine if individual foods should be batch cooked. | Handout 1: Determining When to Batch Cook |
| 2 minutes | Wrap up and Review | Instructor asks for a volunteer to summarize factors for determining when to batch cook for food quality. | Handout 2: Determining When to Batch Cook with Suggested Answers |
| 2 minutes | Session Evaluation | Conduct a short evaluation of the lesson. | Session Evaluation form |

Note to Instructor:

Definition: Batch cooking, sometimes called **cooking to the line** or **just-in-time preparation**, means preparing food in small batches as needed throughout the serving period in order to preserve food quality and prevent waste due to leftovers.

Reference:

National Food Service Management Institute. (2008). *Cooking for the new generation: Storing, cooking, and holding the new generation foods*. (2nd ed.). University, MS: Author.

Instructor's Script



SAY:

Today's lesson will focus on determining which foods should be batch cooked and which can be successfully cooked all at one time without adversely affecting the quality.

Batch cooking, sometimes called **cooking to the line or just-in-time preparation**, means preparing food in small batches as needed throughout the serving period. Although all foods do not need to be batch cooked, the quality of many foods can benefit greatly by cooking them closer to the time they will be served.

Here are some benefits of batch cooking.

- Batch cooking preserves food quality. The appearance, texture or consistency, flavor, and nutritional value of many foods are negatively affected by holding them for an extended time.
- Batch cooking can also potentially reduce waste and food cost. When the total projected amount of a food is not needed, the amount prepared can be cut back during the last serving periods thus reducing waste and food cost.

Food quality refers to characteristics that an individual food possesses that make it desirable. For example, high quality steamed broccoli retains its bright green color, is tender but not mushy, is not brown or yellow on the edges, and holds its shape.

High quality foods deliver high quality nutrients. The quality of two pans of cooked broccoli from the same case of frozen product can be significantly different when served depending on how the product is cooked and at what temperature the food is held.

Let's consider steamed broccoli preparation in two kitchens. One kitchen steams the broccoli in small batches as needed. The second kitchen cooks the entire amount of broccoli in a pot on top of the stove at 9:00 a.m. and holds it at 135 °F until served. The broccoli in the first school is bright green and tender and slightly crisp.



ASK:

Can you describe how the broccoli served to the last students in the second school might look?



LISTEN:

Listen to responses.



ANSWER:

The broccoli is brown on some of the edges, and the rest is a dull olive green color. The crisp texture is gone and the broccoli is limp, mushy, and falling apart. The distinct shape no longer exists. Broccoli is a strong flavored vegetable. When overcooked, the flavor and aroma become stronger and can become unappetizing.



ASK:

Which broccoli would you prefer to eat and serve?



LISTEN:

Listen to responses.



SAY:

Of course, the broccoli cooked in batches is more appetizing and will deliver the nutrients we expect to find in this vegetable.

Many, but not all foods, should be batch cooked. Many vegetables can be batch cooked. If there is any question as to whether a food should be batch cooked, check with the kitchen manager and make the decision together.

The determining factor always should be “Does the food lose quality when it is held at the proper temperature for an extended period of time?” If the answer is yes, the food should be batch cooked. If the answer is no, the food may be cooked all at one time.



ACTIVITY:

Handout 1: Determining When To Batch Cook



DO:

Break into small groups and distribute **Handout 1: Determining When to Batch Cook**.



SAY:

Let's take a look at some of the foods we serve and decide whether the food should be

- cooked in batches to protect quality or
- cooked all at once and held at the proper temperature for an extended period of time yet retaining high quality.

Work together as a team. Determine which foods you think must be batch cooked and which may be cooked all at one time. Answer **yes** if the food should be batch cooked and **no** if the food may be cooked all at one time. You have 6 minutes to complete the handout and then we will discuss your answers.



DO:

Give the groups 6 minutes to complete the activity presented in **Handout 1: Determining When to Batch Cook**. When the participants have finished their discussion bring them together again as a class.



ASK:

Ask for volunteers to give answers to **Handout 1: Determining When to Batch Cook**.



LISTEN:

Listen to responses.



DO:

Guide discussion of answers as needed. Distribute **Handout 2: Determining When to Batch Cook with Suggested Answers**. Be sure to point out any correct answers that were not presented by the participants.



ASK:

Are there any other comments or questions about batch cooking?



LISTEN:

Listen to individual responses. Answer questions to the best of your ability. If there are questions you can't answer, tell the participants you will find out the answer and let them know later. If you need assistance in finding answers, please call the National Food Service Management Institute at 800-321-3054.



SAY:

Batch cooking is necessary to maintain top quality of certain food items. You can use the information learned in this session to batch cook foods in your cafeteria to provide your customers with top quality menu items!



DO:

Distribute the Session Evaluation form.



SAY:

Thank you for participating in the lesson today. Please take a couple of minutes to complete the Session Evaluation form. Thank you for your input.

Handout 1: Determining When to Batch Cook

When determining when to batch cook, the question to ask is “Does the food lose quality in appearance, texture, shape, or nutrition when it is held at the proper temperature for an extended period of time?”

In the table below, check **Yes** if the food should be batch cooked. Check **No** if the food may be cooked all at one time.

| Menu Item | Yes | No | Menu Item | Yes | No |
|-------------------------------------|-----|----|--------------------------------|-----|----|
| Spaghetti Sauce | | | Chicken Nuggets | | |
| Mashed Potatoes | | | Carrots | | |
| Hot Dogs | | | Corn on the Cob | | |
| Sloppy Joe Sandwich Filling | | | Green Beans | | |
| Oven Prepared French Fried Potatoes | | | Sausage Patties | | |
| Dinner Rolls | | | Chili Con Carne | | |
| Cheese Sauce, kitchen made | | | Cinnamon Toast | | |
| Corn, Whole Kernel | | | Beef Patties | | |
| Lasagna | | | Pork and Beans, canned, heated | | |
| Baked Potatoes | | | Escalloped Ham and Potatoes | | |
| Sausage Links | | | Breaded Fish Portion | | |
| Pizza | | | Cornbread | | |
| Garlic Toast | | | Oven Fried Chicken Pieces | | |
| Taco Filling | | | Oatmeal | | |

Handout 2: Determining When To Batch Cook with Suggested Answers

When determining when to batch cook, the question to ask is “Does the food lose quality in appearance, texture, shape, or nutrition when it is held at the proper temperature for an extended period of time?”

In the table below, check **Yes** if the food should be batch cooked. Check **No** if the food may be cooked all at one time.

| Menu Item | Yes | No | Menu Item | Yes | No |
|---|-----|----|--|-----|----|
| Spaghetti Sauce | | X | Chicken Nuggets (very important to maintain texture) | X | |
| Mashed Potatoes (stiffen and thicken over time) | X | | Carrots | X | |
| Hot Dogs (split and curl over time) | X | | Corn on the Cob | X | |
| Sloppy Joe Sandwich Filling | | X | Green Beans | X | |
| Oven Prepared French Fried Potatoes (get limp quickly) | X | | Sausage Patties | X | |
| Dinner Rolls (it would be nice to serve everyone rolls right out of the oven if it is possible) | | X | Chili Con Carne | | X |
| Cheese Sauce, kitchen made (becomes very thick and may break down) | X | | Cinnamon Toast (unless serving period is very short) | X | |
| Corn, Whole Kernel | X | | Beef Patties | X | |
| Lasagna (assembled all at one time, cooked in batches) | X | | Pork and Beans, canned, heated (lose firm texture over time) | X | |
| Baked Potatoes (get soggy over time; when baked in batches need not be wrapped in foil, better product; take care not to run out) | X | | Escalloped Ham and Potatoes | X | |
| Sausage Links | X | | Breaded Fish Portion | X | |
| Pizza | X | | Cornbread (it would be nice to serve everyone bread right out of the oven if it is possible) | | X |
| Garlic Toast | X | | Oven Fried Chicken Pieces | X | |
| Taco Filling | | X | Oatmeal | | X |



National Food Service Management Institute
The University of Mississippi

Session Evaluation

Instructions:

Completely fill in the circle of your answer. Use a #2 pencil.

Please select only one response for each statement. Do not fold or crease this sheet.

| | |
|-------------------------|---|
| Title of Meeting: _____ | |
| Session Topic: _____ | Trainer's Code: _____ |
| Date: _____ | Time Slot: _____ Location: _____ Length of Event (hrs/min): _____ |

Attendee Status:

- | | | |
|--|---|--|
| <input type="radio"/> District director | <input type="radio"/> Major city director | <input type="radio"/> Private consultant/trainer |
| <input type="radio"/> State agency staff | <input type="radio"/> Site-level manager | <input type="radio"/> Foodservice assistant |
| <input type="radio"/> Educator | <input type="radio"/> Other (please list) _____ | |

| Reaction to this Session | | Strongly Agree | Agree | Neutral | Disagree | Strongly Disagree |
|---|--|----------------|-------|---------|----------|-------------------|
| Please read the following statements related to the session. Rate your level of agreement by using the scale 5 (Strongly Agree) to 1 (Strongly Disagree). | | | | | | |
| 1. | The session objectives were clearly presented. | ⑤ | ④ | ③ | ② | ① |
| 2. | The session objectives were achieved. | ⑤ | ④ | ③ | ② | ① |
| 3. | I can apply what I learned in this session to my job. | ⑤ | ④ | ③ | ② | ① |
| 4. | Attending the session increased my skill on the topic. | ⑤ | ④ | ③ | ② | ① |
| 5. | Attending the session increased my knowledge on the topic. | ⑤ | ④ | ③ | ② | ① |
| 6. | I would recommend this session to others. | ⑤ | ④ | ③ | ② | ① |
| 7. | Overall, the session met or exceeded my expectations. | ⑤ | ④ | ③ | ② | ① |

| Comments about this Session |
|--|
| <p>The information I found MOST useful was:</p> <hr/> <hr/> <hr/> |
| <p>Please share any additional comments:</p> <hr/> <hr/> <hr/> |

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