

# Lesson Four Guidelines

## Working Safely and Efficiently

STEP	SUGGESTED TIME	COMMENTS
<b>Lesson Preparation</b>	Several days in advance or as needed	<ul style="list-style-type: none"><li>■ Review lesson objectives.</li><li>■ Choose and copy handouts.</li><li>■ Copy pretest and posttest.</li><li>■ Identify the location of the Material Safety Data Sheet (MSDS) manual and verify it is up-to-date with information on all chemicals used in the kitchen.</li><li>■ Gather markers, poster board, sticky notes, recipe, and lesson materials.</li><li>■ Decide if BLT videotape will be shown.</li><li>■ Arrange for audio-visual equipment if needed.</li></ul>
<b>Introduction</b> Review lesson objectives and training plan for the day.	5 minutes	<ul style="list-style-type: none"><li>■ Review words in the glossary.</li><li>■ Encourage participants to participate and to share their experiences. Remind participants to listen to and value others' comments and opinions.</li></ul>
<b>Pretest</b>	5 minutes	<ul style="list-style-type: none"><li>■ Distribute the pretest and pencils.</li><li>■ <i>(Optional)</i> The pretest can be given verbally if appropriate.</li><li>■ Review answers.</li></ul>

STEP	SUGGESTED TIME	COMMENTS
<p><b>Activities</b></p> <p>Kitchen Flow</p> <p>Making Work Easier</p>	<p>20 minutes</p> <p>20 minutes</p>	<p>Activities can be used independently as lessons. They are designed to encourage participants to think of ways to improve the work flow of the kitchen or production area. A manager or supervisor may be invited to join the lesson to participate in the discussion. Reasonable recommendations of the group should be implemented.</p>
<ul style="list-style-type: none"> <li>■ Improving Kitchen Efficiency</li> <li>■ Kitchen Safety</li> <li>■ Energy</li> </ul>	<p>20-30 minutes</p>	<p>Select the topics most appropriate to the participant group.</p>
<p><b>Posttest</b></p>	<p>5 minutes</p>	<ul style="list-style-type: none"> <li>■ Distribute the posttest and pencils.</li> <li>■ <i>(Optional)</i> The posttest can be given verbally, if appropriate.</li> <li>■ Review answers.</li> </ul>
<p><b>Follow-Up</b></p>	<p>5 minutes</p>	<p>Each month identify at least one way to continue improving work efficiently. Verify MSDS are available.</p>
<p><b>TOTAL MINIMUM TIME</b></p>	<p><b>1 hour, 20 minutes plus preparation time</b></p>	

## Glossary Words in This Lesson

consumable(s)

contaminate (contamination)

cross-contamination

flat top (hot top)

fryer

hood

MSDS

OSHA

small wares

thermostat



# Lesson Four

## Working Safely and Efficiently

In this lesson, the participant will review what can be done to improve the work flow in the food service operation. Employees can use many techniques to reduce the amount of energy or consumables needed to complete their jobs.

### LESSON OBJECTIVES

At the conclusion of this lesson the food service employee will be able to:

- Review kitchen work flow
- Make efficiency adjustments to the kitchen
- Identify a plan for improving kitchen work and safety
- Locate and understand the use of the Material Safety Data Sheet (MSDS) in the food service operation

## LESSON CONTENT

## INSTRUCTOR NOTES

### RESOURCES & INSTRUCTOR TIPS

This lesson will focus on how to make things flow better and more safely in the food service operation.

- Start this lesson in a quiet area.  
Plan to move into the kitchen to perform the activities.
- Colored markers, poster board, and sticky notes are optional.
- A recipe will be needed for the activity.
- The food service operation's Material Safety Data Sheet (MSDS) Manual should be located for this lesson.
- Pencils will be needed for the pretest and the posttest.
- Participants should be encouraged to ask questions and to share information and experiences of possible interest to the group.



### LESSON OBJECTIVES

- Review kitchen work flow
- Make efficiency adjustments to the kitchen
- Identify a plan for improving kitchen work and safety
- Locate and understand the use of the Material Safety Data Sheet (MSDS) in the food service operation

### ORGANIZING & REINFORCING THE MESSAGE OF THIS LESSON

Participants work in the food service operation environment every day. They may have ideas to contribute to this lesson that could be very helpful in improving the work flow and safety.

- Review the lesson objectives.
- Give the pretest.
- Review answers.

## LESSON CONTENT



- Have you ever thought that moving equipment or supplies around in the kitchen might increase our efficiency?
- Why would you select these items to move?
- What would you change in the work area to make things flow better?

## INSTRUCTOR NOTES

Start the lesson by asking questions of the participants.

- *Have you ever thought that moving equipment or supplies around in the kitchen might increase our efficiency?* Expect participants to answer yes.
- *Why would you select these items to move?* Participants will give different reasons based on the area they work in and the needs of their positions.
- *What would you change in the work area to make things flow better?* Participants may say they would want to move small wares or equipment closer to their work spaces.

When moving equipment, make sure gas piping and electrical outlets are sufficient in length to allow equipment to be moved safely. Make sure that equipment that needs to be under the hood is not moved. Before moving any equipment, check with building codes.

## LESSON CONTENT



### IMPROVING KITCHEN EFFICIENCY

#### *Improving Work Flow*

- Limit or eliminate cross-contamination.
- Remove equipment no longer in use.
- Use caution around fryers. Remember that fryers on the end of the cook line are more dangerous.

## INSTRUCTOR NOTES

### *(Optional) Kitchen Flow Activity*

There are many things that can be done to improve the work area. Start by making a drawing or sketch of the kitchen on a large piece of poster board. Do this prior to class or have the participants do it together. Draw the walls from the receiving area to the kitchen, including storage.

Draw boxes to represent equipment. Highlight the equipment that can be easily moved within the production area. Do not forget to take into account equipment with hood and drain needs.

Divide the participants into groups and ask them to reference a recipe. Draw a line to show the movement of food from the back door, through storage, to where it is prepared and served. Use one color for uncooked food and another color for cooked food. Pay close attention to points of potential cross-contamination.

Discuss ways to change work flow or equipment that would make work safer, smarter, and easier.

- Identify small wares and supplies convenient to the work space.
- Discuss removing old, unused equipment from the kitchen. It will make cleaning and work flow more efficient.
- Ask employees to think of simple solutions to larger problems. For example, if the fryer cannot be moved, use a cart beside the fryer to keep employees away from splatters, splashes, and oil.



## LESSON CONTENT



### ***Improving Work Habits***

- Organize small wares for an even flow and as few steps as possible.
- Try to avoid multiple trips to the sink.
- Work smarter to reduce tiredness.
- Use a cart to transport items.



### ***Efficiency Ideas***

- Organize pans, knives, and utensils near where they are first used after they are washed and sanitized.
- Use reach-in refrigerators and freezers near point of first use for commonly used items.
- Store commonly used items near the door of the storage area.
- Store catering and other seldom used equipment away from the main production area.

## INSTRUCTOR NOTES

If participants have to wash small wares repeatedly during the day, consider requesting the purchase of additional small wares. This will save labor, effort, and energy.

Tiredness impairs judgment and attention to detail and tempts employees to take short cuts. Tiredness, combined with the time constraints, leads to accidents, injury, and “burned out” employees.

Encourage participants to identify 1-3 ways in which they might reduce tiredness. Answers may be: take fewer steps, use a cart, turn off range tops to eliminate additional heat, drink water, take planned breaks, or wear shoes with more support.

### ***Making Work Easier Activity***

Ask each participant to state one way to make the kitchen area more efficient.

Pass out 2-3 sticky notes and pencils. Ask participants to write an idea on the note. Post the notes on a convenient wall or board.

Discuss the suggestions as a group. Share ideas with a supervisor as appropriate.

## LESSON CONTENT



### ***Reducing Lifting and Carrying***

- Use carts that are the proper height.
- Use mobile carts for additional storage.
- Use stepladders to minimize stretching and reduce accidents.
- Use carts when moving hot stockpots or emptying fry pots.
- Store heavy items between knee and waist height.



### **KITCHEN SAFETY**

In the kitchen, safety is extremely important. There are two important areas of safety.

- Safety of the employee
- Safety of the food

## INSTRUCTOR NOTES

Most items can be moved safely and with less effort by using carts. If there are short people, have lower carts available.

If storage is in limited supply, use mobile carts to keep the floor area clear and clean. This can reduce the labor to move supplies around to get to items.

Sturdy Occupational Safety and Health Administration (OSHA) approved stepladders provide safer climbing.

Lift with the legs, not with the back. Have more than one person lift a heavy load.

## LESSON CONTENT



### ***Chemical Use***

- What is an MSDS (Material Safety Data Sheet)?
- Why is the MSDS important?
- Where are the MSDS manuals located?



MSDS information includes:

- Information about safe use and handling of chemicals
- Physical, health, fire, and reactivity hazards
- Precautions
- Appropriate personal protective equipment (PPE)
- First aid information
- Manufacturer's name, address, and phone number
- Date the MSDS was prepared
- Hazardous ingredients and identity information

## INSTRUCTOR NOTES

It is necessary to use chemicals in the kitchen for cleaning and sanitizing purposes. However, chemicals are dangerous because they can contaminate food and equipment and can harm people. All chemicals should be used with care and stored away from food.

Ask participants questions such as:

- *What is an MSDS (Material Safety Data Sheet)?* Expect participants to know the answer, but make note of those who say they do not know or participants who do not respond.
- *Why is the MSDS important?* Expect comments to revolve around using chemicals safely. Deal with any incorrect ideas.
- *Where are the MSDS manuals located?* Expect most of the participants to know.

An MSDS is designed to provide food service employees and emergency personnel with the proper procedure for safely handling the product.

Employees must read and understand the MSDS (Material Safety Data Sheet) on each chemical that is used in the function of their jobs before they are allowed to use it. If an MSDS is missing, ask the distributor from whom the product is bought to supply it.

## LESSON CONTENT



### ***Chemical Use***

- Store chemicals away from food.
- Do not keep chemicals that are no longer used. Discard them properly and notify supervisor.
- Home-type cleaners cannot be used in the food service operation because there are no MSDS available.
- Do not “wipe off” sanitized equipment with a cleaning rag used on dirty surfaces.
- Keep cleaning rags and dish cloths separate.



### ***Cleaning Stainless Steel***

- Soft cloths and plastic scouring pads are preferred.
- Never use scouring powders or steel wool. They will scratch stainless steel.
- Specially designed stainless steel pads can be used as long as the motion is in the direction of the manufacturer’s polishing marks.
- Use alkaline, alkaline chlorinated, or non-chloride (without bleach) cleaners.
- Avoid using chloride-containing cleaners (bleach).
- Never use cleaners containing quaternary salts.

## INSTRUCTOR NOTES

Remind employees of the following:

- Use the least strong chemical that will do the job.
- Sanitized equipment can be contaminated with a dirty cleaning rag. Once it is sanitized, equipment should be covered or left to air dry.
- Sanitize food contact equipment before and after use.

Use proper cleaning procedures on metals such as stainless steel. Improper cleaning could damage the metal and contaminate food. Do not use regular steel pads, wire brushes, or scrapers on stainless steel. Using chemicals that contain chlorides (such as bleach), quaternary salts, or hydrochloric acid can cause the metal to break down and create dangerous fumes or reactions that could harm food.

## LESSON CONTENT



### ENERGY

#### *Saving Energy*

- Turn on equipment just in time to be preheated for use.
- Keep gas equipment clean and adjusted all the time.



#### *Energy Tips*

- Cover pots and braising pans. They will boil faster and use less energy.
- Flat tops or solid ranges are the least efficient pieces of equipment in the kitchen.
- Set the thermostat for correct temperature to preheat.
- Open-top ranges do not require pre-heating.



- Solid ranges will reach the proper cooking temperature after 10 to 20 minutes of preheating.
- Cooking utensils should make flush contact with the cooking surface. Dented pot bottoms will take longer to heat and cook.
- Avoid long preheat times for griddles.
- Turn off burners when not in use.

## INSTRUCTOR NOTES

Saving energy can reduce costs for a food service operation and make it more efficient.

- Delaying turning on equipment until needed will save up to 15% of the cooking energy cost.
- Poorly maintained gas equipment can double the cost of operation of the equipment.
- Use flat tops as a last resort because they are inefficient. Most of the energy goes up the hood. They make the kitchen hot.
- Equipment does not preheat quicker if you turn the thermostat to a higher setting.
- Full loads take about the same energy as a partial load.  
Example: 1 steamer pan takes about the same energy as 4.
- Leaks in steamers waste energy and can extend time to cook.
- Low-temperature cooking saves 15% – 18% energy and produces a better product. If temperature is lowered, standardize the recipe.

## LESSON CONTENT



### *Energy Tips (continued)*

- Notify supervisor when replacement is necessary for leaking steamer gaskets and valves.
- Dish machine room ventilation systems should only be turned on when dish machine is in operation.
- Do not tie back strip curtains in refrigerators and freezers.
- Turn off equipment as soon as you are finished with it.



- Turn off lights in little-used areas, such as storage.
- Turn off door heaters in reach-in refrigerators where possible.



Every kitchen can be safe and efficient.

## INSTRUCTOR NOTES

- Strip curtains are inconvenient, but they save significant amounts of money.
- Consider installing motion detector light switches in storage or little-used areas. They are inexpensive and easy to install.

- Give the posttest.
- Review the answers with participants.

# Lesson Four Pretest

## Working Safely and Efficiently

### 1. To improve kitchen work flow:

- a. Organize small wares for an even flow
- b. Reduce multiple trips
- c. Use a cart
- d. All of the above

### 2. Specially designed stainless steel pads can be used on stainless steel as long as you:

- a. Polish in the direction of the manufacturer polish marks
- b. Polish in a circular motion
- c. Polish in the opposite direction of the manufacturer polish marks.
- d. Never use steel pads

### 3. The reason you cannot use chemicals in the food service operation that you can buy at the grocery store or warehouse store is:

- a. They are too expensive
- b. They are not strong enough to use
- c. You don't have an MSDS for them
- d. They are fine to use if you have a problem getting the normal supply

### 4. Full loads should be used in steamers and ovens when possible.

- a. True
- b. False

### 5. Kitchen equipment takes a long time to come up to temperature so the best policy is to turn everything on at the beginning of the day. Then, it will be ready when needed.

- a. True
- b. False

# Lesson Four Pretest Key

## Working Safely and Efficiently

### 1. To improve kitchen workflow:

- a. Organize small wares for an even flow
- b. Reduce multiple trips
- c. Use a cart
- d. All of the above**

*Kitchen work flow can be improved to increase productivity and decrease tiredness.*

### 2. Specially designed stainless steel pads can be used on stainless steel as long as you:

- a. Polish in the direction of the manufacturer polish marks**
- b. Polish in a circular motion
- c. Polish in the opposite direction of the manufacturer polish marks.
- d. Never use steel pads

*Using these specially designed pads in the direction of the manufacturer's polish marks prevents the stainless steel from becoming scratched.*

### 3. The reason you cannot use chemicals in the food service operation that you can buy at the grocery store or warehouse store is:

- a. They are too expensive
- b. They are not strong enough to use
- c. You don't have an MSDS for them**
- d. They are fine to use if you have a problem getting the normal supply

*Household cleaners do not come with the legally required MSDS that industrial cleaners and chemicals do.*

### 4. Full loads should be used in steamers and ovens when possible.

- a. True**
- b. False

*Full loads use the same amount of energy as partial loads. One steamer pan takes the same energy as four pans.*



**5. Kitchen equipment takes a long time to come up to temperature so the best policy is to turn everything on at the beginning of the day. Then it will be ready when needed.**

a. True

**b. False**

*Generally, kitchen equipment comes up to temperature in less than 10 minutes. Some older equipment may take up to 20 minutes. Turning equipment on just before it is needed can save a lot of money. It also keeps the kitchen cooler!*

# Lesson Four Posttest

## Working Safely and Efficiently

### 1. Reducing fatigue during the busy day can best be accomplished by:

- a. Using carts instead of carrying heavy items
- b. Keeping tools and utensils that are used all day close at hand
- c. Creating the smallest work area between equipment, supplies, and prep area
- d. All of the above

### 2. MSDS stands for:

- a. Master State Dietary Statistics
- b. Municipal and State Department of Sanitation
- c. Material Safety Data Sheet
- d. Material Sanitation District Statistics

### 3. MSDS information includes:

- a. Information about safe use and handling of chemicals
- b. Employee responsible for cleaning slicer
- c. Location of the chemical in the kitchen
- d. Home cleaners to use as a replacement

### 4. You can use bleach to clean stainless steel.

- a. True
- b. False

### 5. Dented pot bottoms will take longer to heat and cook.

- a. True
- b. False

# Lesson Four Posttest Key

## Working Safely and Efficiently

### 1. Reducing fatigue during the busy day can best be accomplished by:

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- d. All of the above**

*All of the working habits listed will help to reduce fatigue.*

### 2. MSDS stands for:

- a. Master State Dietary Statistics
- b. Municipal and State Department of Sanitation
- c. Material Safety Data Sheet**
- d. Material Sanitation District Statistics

### 3. MSDS information includes:

- a. Information about safe use and handling of chemicals**
- b. Employee responsible for cleaning slicer
- c. Location of the chemical in the kitchen
- d. Home cleaners to use as a replacement

*A MSDS contains valuable information for all employees, including specific details on safe use and handling of the chemical.*

### 4. You can use bleach to clean stainless steel.

- a. True
- b. False**

*Using bleach to clean stainless steel could cause the metal to break down and create dangerous fumes or reactions that could harm food.*

### 5. Dented pot bottoms will take longer to heat and cook.

- a. True**
- b. False

*Cooking utensils should make flush contact with the cooking surface for most efficient energy use.*

## Lesson Four

### Working Safely and Efficiently

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## Lesson Objectives

- Review kitchen work flow
- Make efficiency adjustments to the kitchen
- Identify a plan for improving kitchen work flow and safety
- Locate and understand the use of the Material Safety Data Sheet (MSDS) in the food service operation

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- *Have you thought that moving equipment or supplies around in the kitchen might increase our efficiency?*
- *Why would you select these items to move?*
- *What would you change in the work area to make things flow better?*

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## Improving Work Flow

- Limit or eliminate cross-contamination.
- Remove equipment no longer in use.
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## Improving Work Habits

- Organize small wares for an even flow and as few steps as possible.
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- Work smarter to reduce tiredness.
- Use a cart to transport items.

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## Efficiency Ideas

- Organize pans, knives and utensils near where they are first used after they are washed and sanitized.
- Use reach-in refrigerators and freezers near the point of first use for commonly used items.
- Store commonly used items near the door of the storage area.
- Store catering and other seldom used equipment away from the main production area.

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## Saving Energy

- Turn on equipment just in time to be preheated for use.
- Keep gas equipment clean and adjusted at all times.

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## Energy Tips

- Cover pots and braising pans. They will boil faster and use less energy.
- Flat tops or solid ranges are the least efficient pieces of equipment in the kitchen.
- Set the thermostat for correct temperature to preheat.
- Open-top ranges do not require preheating.

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## Energy Tips (continued)

- Solid ranges will reach the proper cooking temperature after 10 to 20 minutes of preheating.
- Cooking utensils should make flush contact with the cooking surface. Dented pot bottoms will take longer to heat and cook.
- Avoid long preheat times for griddles.
- Turn off burners when not in use.

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Using Equipment Safely and Efficiently

## Energy Tips (continued)

- Notify supervisor when replacement is necessary for leaking steamer gaskets and valves.
- Dish machine room ventilation systems should only be turned on when dish machine is in operation.
- Do not tie back strip curtains in refrigerators and freezers.
- Turn off equipment as soon as you are finished with it.

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## Energy Tips (continued)

- Turn off lights in little-used areas, such as storage.
- Turn off door heaters in reach-in refrigerators where possible.

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