MODULE 3

Ordering, Receiving, and Inventorying Products for School Meals

Participant Workbook

Key Terms and Definitions

As Purchased – As Purchased foods need some preparation before they are ready to be served.

Edible Portion – Edible portion is the amount of product that can be consumed.

First-In-First Out (FIFO) – First-in, first-out (FIFO) is the process of rotating the older product to the front and the newer items to the back of the shelf. This is usually determined by the date the product was delivered.

Food Recall – A food recall occurs when there is reason to believe the products may be contaminated or misbranded.

Forecasting - Forecasting is the process of determining future needs of the school nutrition program by evaluating past usage, present demands, and future indicators.

Historical Data – Historical data is information about past conditions and trends that can be helpful in forecasting future trends.

Inventory – Inventory is defined as a detailed list or record of goods and materials in stock for use in the school nutrition program.

Issuing – Issuing is a control process used to monitor the removal of food products and other items from the storage area.

Overproduction – Overproduction in the school nutrition program refers to excessive production over need or stipulated amount.

Purchase Unit – purchase unit is the unit of measure used by the school district to order an item.

Receiving – Receiving involves the authorization for goods received, as well as their quantity, quality, and condition.

Recipe Adjustment – Using a formula to adjust the yield of a recipe to make either more or less than the quantity shown on recipe.

Decision-Making Process

Determine the Issue

What is the manager's role in acquiring and monitoring products needed for serving children in the school's nutrition program?

Explain the Issue

1. The school manager must have an understanding of the federal, state, and local school purchasing guidelines to protect the integrity of the school nutrition program.
2. The school manager must operate the school nutrition program to ensure that proper food ordering, receiving procedures, storage techniques, and inventory practices are followed.
3. The school manager must utilize effective forecasting techniques to determine the amount of food to order.

Create Procedures to Address the Issue

Determine what I need to know and do to manage the ordering, receiving, and inventorying processes for the school.

Involve Others: Who and How

1. **School Nutrition Director:** Discuss the district procedures for ordering items for the school nutrition program.
2. **Employees:** Ask for feedback on issues related to receiving, storing, and inventorying items purchased for the school nutrition program.

Decide to Succeed: Take Action

1. Follow the school district procedures for forecasting.
2. Monitor the ordering, receiving, storing, and inventorying of all school items used in the school nutrition program.
3. Delegate trained staff members to assist in receiving, storing, and inventorying.

Evaluate Success

Make an appointment with the school nutrition director to discuss my effectiveness in performing my role as part of the school nutrition program's purchasing procedures.

Section 1: Forecasting Amounts to Order

Objective: Use effective methods to forecast amounts of products to order.

Group Activity

Forecasting Number of Servings to Prepare

Scenario:

The manager in Lakeside Middle School has observed that over the past several weeks, the serving lines are running short of many food items almost daily. After reviewing the production records and average daily participation for the past 3 months, the manager calculates the average daily participation has increased from 825 to 860. Feeling confident this explains the food shortage, the manager plans to increase the number of servings for each menu item to lessen the likelihood of continued food shortages.

The manager decides to first call the school nutrition director for advice on increasing the weekly order. The director recommends two steps for forecasting the new amount of food to order.

1. Use past production records to calculate the percentage of times each menu item was served to 825 customers. For example, if item A is served 200 times, the percentage of selection is 200 ÷ 825 = 0.242 or 24%.
2. Multiply the percentage by the new estimate of 860 customers per day to determine how many servings to order and prepare of item A. For example, 860 customers x a 24% (0.24) selection rate = 206.4 or 207. This means the manager should plan to prepare 207 servings of item A instead of 200 servings.

Using this method will provide a solid foundation for increasing the number of servings for each menu item and eliminate "guessing."

Instructions: Use the information in Table 1 and Table 2 to determine how many servings of each entrée the staff needs to prepare in order to meet the increase in participation.

Step 1: In Table 1, calculate the percentage each menu item was served when participation averaged 825 and round to nearest whole number.

Hint: To get the percentage, divide the number of times an item was served by the total number eating on the day the entrée was on the menu. The Grilled Chicken Sandwich is calculated for you.

Table 1

Total number of previous customers served: 825		
Menu Item	**Number of previous servings**	**Percentage each item was served**
Grilled Chicken Sandwich	454	454 ÷ 825 = 55%
Beef Tacos with a Whole Grain Tortilla	289	
Chef Salad with Multi Grain Roll	82	
Total	825	

Step 2: In Table 2, write the *percentage* of times each item was served in the column two, and then multiply by the new estimated total meal count (860) to determine the new number of servings to prepare for each menu item. When you complete the table, answer the three questions.

Table 2

Menu Item	**Percentage item was served**	**Estimated Total Lunch Count**	**# Serving to Prepare**
Grilled Chicken Sandwich	55%	860	0.55 x 860 = 473
Beef Tacos		860	
Chef Salad		860	
		Total	

1. How many extra servings of Grilled Chicken Sandwich will the manager need to plan for to cover the increased participation?

2. How many extra servings of Beef Tacos?

3. How many extra servings of Chef Salad?

Group Activity

Adjusting the Forecast

Scenario:

Mrs. Jones, the school nutrition manager, gets an early call from the principal to tell her that due to a severe weather threat, parents are calling to say they are keeping their children home from school. The principal foresees an absenteeism of at least 250 students. The manager estimates the cafeteria will serve only about 610 customers instead of 860. The two entrées on today's menu are Pepperoni Pizza and Mandarin Chicken. Production records show that this combination is usually a popular day with high participation. Three weeks ago the school served 548 Pepperoni Pizzas and 314 serving of Mandarin Chicken for a total of 862.

1. What percent of customers selected each entrée?

2. Based on the projected number of 610 customers for the day, how many of each entrée should be prepared for lunch?

Section 2: Ordering Food

Objective: Use historical data and standardized recipes to determine the amount of food to buy in anticipation of forecasted sales and participation.

Individual Activities

(1) Practice using *Mississippi Recipes for Success*

Locate the MRS 1234 recipe for Melon Cubes to answer these questions.

1. What is the purchase unit for the fresh melons used in the recipe?

2. What is the meal component contribution for the melon cubes?

3. How many portions does the recipe yield?

4. How many pounds of raw cantaloupe will the manager need to order for 100 ½ cup servings of melon cubes?

5. How many pounds of fresh honeydew melons will the manager need to order for 100 ½ cup servings of melon cubes?

(2) Practice Using *Mississippi Recipes for Success*

Locate the MRS recipe 1348 for Stir Fried Rice to answer these questions.

1. What is the purchase unit for long grain brown rice used in the recipe?

2. What is the meal component contribution for the stir fried rice?

3. How many portions does the recipe yield?

4. What size is each portion of the Stir Fried Rice?

5. How many pounds of long grain brown rice will the manager need to order for 40 servings?

Individual Activity

Review MDE Office of Child Nutrition Formula

Formula Explanation

There are four components to the formula: A x B x C = D

A = Purchase Units

B = Recipe Adjustment Factor: $\frac{\text{Number of Servings Needed}}{\text{Number of Servings Listed}}$

C = Serving Size Adjustment Factor: $\frac{\text{Serving Size Needed}}{\text{Serving Size in Recipe}}$

D = Purchase units needed = A x B x C

Instructor Led Activity

Recipe Adjustment: MRS 1276 Blushing Chilled Pears (Canned Halves)

Instructions: Use the MRS recipe and adjustment formula to determine the quantity of canned pear halves to order when the forecast is 158 servings of ½ cup servings. Calculate the blank cells in the third and fourth row, and then answer the questions below the table.

Formula	*A*	x	*B*			x	*C*			=	D
Steps	Purchase Unit for Recipe Servings		Number servings needed	÷	Number portions in recipe		Serving size needed	÷	Servings size in recipe	=	Quantity (Purchase Units)
Lists	4 #10 cans		158	÷	100		½ cup	÷	½ cup		
Change to Decimal								÷			
Compute A x B x C = D		x				x				=	

Review Formula:

A= Purchase Unit for Recipe Yield (100 ½ cup servings)
B= Recipe adjustment factor (158 servings needed ÷ 100 servings in recipe)
C= Serving size needed ÷ serving size in recipe in decimal form (½ cup or 0.5 ÷ ½ cup or 0.5)
D= Units to purchase for servings needed (4 x 1.58 adjustment factor x serving size adjustment factor)

Apply the formula A x B x C = D (Show your work for answers to 2, 3, & 4.)

1. What is A?

2. What is B?

3. What is C?

4. What is D?

Group Activity

MRS Recipes and Adjustment Formula

Instructions: Work with others in your group to complete the problem. Recipes for all problems are located in the Recipe Section.

Problem 1: MRS 136: Country Fried Steak (Recipe Packet/Section)

Step 1: Decide the number and size of servings needed for the recipe.

Food Item: Beef Ground, 80/20 (20% fat), fresh or frozen

Number of servings needed: 290

Serving size needed: 1 country fried steak patty contributes 2 oz. meat

Number of Recipe Portions: 50

Purchase amount for number of portions in recipe: _____

Step 2: Use the Adjustment Formula and information above to determine the quantity of *ground beef* needed. Write all information necessary to make the calculations for each step in the adjustment formula.

	A	x	*B*			x	*C*			=	D
Steps	Purchase Unit for Recipe Servings		Number servings needed	÷	Number portions in recipe		Serving size needed	÷	Servings size in MRS	=	Quantity (Purchase Units)
Lists			290	÷			1				
Change to Decimal								÷			
Compute A x B x C = D		x				x				=	

A x B x C = D

Note: *Adjustments in a recipe may result in a slight change in the number of servings planned. For example, since the quantity to purchase is slightly over 50 lbs., the manager may change the number of Country Fried Steaks prepared to 289 to ensure that each sandwich contributes the 2 oz. requirement for the meat/meat alternate.*

Problem 2: MRS 550 Chicken Tetrazzini

Step 1: Decide the number and size of servings needed for the recipe.

Food Item: Diced Chicken, Cooked
Number of servings needed: 180
Serving size needed: 2 oz. of chicken
Number of Recipe Portions: 100
Purchase amount for number of portions in recipe:_____

Step 2: Use the Adjustment Formula to determine the quantity of cooked diced chicken needed to prepare 180 servings. Write all information necessary to make the calculations for each step in the adjustment formula.

	A	x	*B*			x	*C*			=	D
Steps	Purchase Unit for Recipe Servings		Number servings needed	÷	Number portions in recipe		Serving size needed	÷	Servings size in MRS	=	Quantity (Purchase Units)
Lists			180	÷			2 oz.				
Change to Decimal								÷			
Compute A x B x C = D		x				x				=	

Problem 3: MRS 550 Chicken Tetrazzini (100 servings)

Step 1: Decide the number and size of servings needed for the recipe.

Food Item: Pasta, Spaghetti, WGR
Number of servings needed: 180
Serving size needed: 1 ounce
Number of Recipe Portions: 100
Purchase amount for number of portions in recipe: _____

Step 2: Use the Adjustment Formula to determine the quantity of WGR spaghetti needed to prepare 180 servings. Write all information necessary to make the calculations for each step in the adjustment formula.

	A	x	*B*			x	*C*			=	D
Steps	Purchase Unit for Recipe Servings		Number servings needed	÷	Number portions in recipe		Serving size needed	÷	Servings size in MRS	=	Quantity (Purchase Units)
Lists			180	÷			1 oz.				
Change to Decimal								÷			
Compute A x B x C = D		x				x				=	

Problem 4: MRS: 1014 Steamed Broccoli Spears (frozen)

Step 1: Decide the number and size of servings needed for the recipe.

Food Item: Broccoli, frozen spears

Number of servings needed: 70

Serving size needed: 1/2 cup

Number of Recipe Portions: 100

Purchase amount for number of portions in recipe:_____

Step 2: Use the Adjustment Formula to determine the quantity of frozen broccoli spears needed for 70 servings. Write all information necessary to make the calculations for each step in the adjustment formula.

	A	x	*B*			x	*C*			=	D
Steps	Purchase Unit for Recipe Servings		Number servings needed	÷	Number portions in recipe		Serving size needed	÷	Servings size in MRS	=	Quantity (Purchase Units)
Lists			70	÷			½ cup				
Change to Decimal								÷			
Compute A x B x C = D		x				x				=	

Problem 5: MRS: 600 Chef Salad

Step 1: Decide the number and size of servings needed for the recipe.

Food Item: Turkey Ham, Diced
Number of servings needed: 45
Serving size needed: 1 ounce
Number of Recipe Portions: 100
Purchase amount for number of portions in recipe:_____

Hint: *We know by looking at the recipe, that other food items will be added to the Chef Salad to yield 2 ½ oz. eq. meat/meat alternates.*

Step 2: Use the Adjustment Formula to determine the quantity of Diced Turkey Ham needed to prepare 180 servings. Write all information necessary to make the calculations for each step in the adjustment formula.

	A	x	*B*			x	*C*			=	D
Steps	Purchase Unit for Recipe Servings		Number servings needed	÷	Number portions in recipe		Serving size needed	÷	Servings size in MRS	=	Quantity (Purchase Units)
Lists			45	÷			1 oz.				
Change to Decimal								÷			
Compute A x B x C = D		x				x				=	

Hint: *The answer tells us we have 2 lbs. plus 0.8125 of another lb. Convert 0.8125 of a lb. to oz. by multiplying 0.8125 times 16 (number of oz. in a lb.) Example: 0.8125 X 16 = 13 oz.*

Instructor Led Activity

Recipe adjustment

Occasionally a manager may want to serve a different portion size than is called for in the recipe. Changing the portion size of the recipe requires an adjustment. Complete the formula to calculate the amount needed for a larger portion size.

Problem: MRS 1279 Chilled Pears, Canned

Food Item: Pears, Canned, Light Syrup, Halves
Number of servings needed: 158
Serving size needed: ¾ cup
Serving Size in Recipe: ½ cup
Number of Recipe Portions: 100
Units needed for 158 portions: _____

Step 2: Use the Adjustment Formula to determine the quantity of canned pears needed. Write all information necessary to make the calculations for each step in the adjustment formula.

Formula	*A*	x	*B*			x	*C*			=	D
Steps	Purchase Unit for recipe Servings		Number servings needed	÷	Number portions in recipe		Serving size needed	÷	Servings size in recipe	=	Quantity (Purchase Units)
Lists	4 #10 cans		158		100		¾ cup		½ cup		
Change to Decimal								÷			
Compute A x B x C = D		x				x				=	

Individual Activity

Problem: MRS 1474 Chocolate Pudding

Step 1: Decide the number and size of servings needed for the recipe.

Food Item: Pudding, Chocolate, RTS, Fat Free, #10 can
Number of servings needed: 332
Serving Size Needed: ¼ cup
Serving Size in Recipe: ½ cup
Number of Recipe Portions: 100
Purchase amount for 332 servings: _____

Step 2: Use the Adjustment Formula to determine the quantity of canned chocolate pudding needed. Write all information necessary to make the calculations for each step in the adjustment formula.

	A	x	*B*			x	*C*			=	D
Steps	Purchase Unit for Recipe Servings		Number servings needed	÷	Number portions in MRS recipe		Serving size needed	÷	Servings size in MRS	=	Quantity (Purchase Units)
Lists	4 #10 cans		332		100				1/2 cup		
Change to Decimal								÷			
Compute A x B x C =D		x				x				=	

Sample Page from the *Food Buying Guide*

Section 1-Meat/Meat Alternates

1. Food As Purchased, AP	2. Purchase Unit	3. Servings Per Purchase Unit, EP	4. Serving Size per Meal Contribution	5. Purchase Units for 100 Servings	6. Additional Information
CHICKEN, canned (continued)					
Chicken, canned *Boned*	50 oz can	46.50	1 oz heated, drained poultry	2.2	50 oz can = about 46.5 oz heated, drained chicken meat with skin
	50 oz can	31.00	1-1/2 oz heated, drained poultry	3.3	
	No. 2-1/2 can (29 oz)	26.30	1 oz heated poultry	3.9	1 No. 2-1/2 can = about 26.3 oz heated, drained chicken meat with skin
	No. 2-1/2 can (29 oz)	17.50	1-1/2 oz heated poultry	5.8	
	Pound	14.70	1 oz heated poultry	6.9	1 lb AP = 0.92 lb heated, drained chicken meat with skin
	Pound	9.81	1-1/2 oz heated poultry	10.2	
CHICKEN, COOKED, frozen					
Chicken, cooked, frozen **Diced or Pulled** *no skin, wing meat, neck meat, giblet, or kidneys Includes USDA Foods*	Pound	16.00	1 oz cooked poultry	6.3	1 lb AP = 1.0 lb cooked chicken meat
	Pound	10.60	1-1/2 oz cooked poultry	9.5	
	40 lb pkg	640.00	1 oz cooked poultry	0.16	
	40 lb pkg	426.60	1-1/2 oz cooked poultry	0.24	

Individual Activity

Food Buying Guide (FBG)

Instructions: Use the information from the *FBG* page to answer these questions.

1. What purchase unit for the cooked, frozen chicken is listed first?

   _____

2. What is the first serving size given for the cooked chicken?

   _____

3. How many pounds of frozen chicken would you purchase to serve 100 portions if the dish required 1 oz. of frozen cooked poultry?

   _____

4. How many pounds of frozen chicken would you purchase to serve 100 portions if the dish required 1 ½ oz. of cooked poultry?

   _____

5. What additional information is given in column 6?

   _____

Group Activity

Food Buying Guide (FBG) and Adjustment Formula

Scenario:
Assume a school district decides to try the USDA recipe for Chicken Pot Pie. Mrs. Jackson, the manager, forecasts that her elementary school will serve 125 portions of the recipe. Use the adjustment formula provided in your workbook and the *FBG* handout to calculate the amount of diced frozen chicken to use in the USDA Chicken Pot Pie recipe. A copy of the recipe is located in the Recipe Section of your workbook.

Recipe: USDA Chicken Pot Pie Recipe (Last Page in Recipe Section)

Instructions: Use the information from the *FBG* to determine the quantity of cooked, frozen diced chicken Mrs. Jackson should order for 125 portions of Chicken Pot Pie.

Step 1: Name of Food Item to Order: Chicken, cooked, frozen
Number of servings needed: _____125_____
Serving size needed: _____2 oz._____
Serving size given in FBG: one ounce
Purchase Units given for 100 1 oz. servings:_____

Step 2: Use the Adjustment Formula to determine the quantity of frozen chicken needed.

	A	x	*B*			x	*C*			=	D
Steps	Purchase Unit for 100 Servings		Number servings needed	÷	Number servings/ purchase unit		Serving size needed	÷	Servings size in FBG	=	Quantity (Purchase Units)
Lists			125	÷			2 oz.		1 oz.		
Change to Decimal								÷			
Compute A x B x C = D		x				x				=	

Amount to order for 125 2 oz. servings _____

Individual Activity

Calculating Food Orders

Scenario:

The manager is preparing the weekly food order and needs to calculate the amount of product to order. The first day's menu offers Grilled Chicken Sandwich and Beef & Bean Burrito. According to food production records, an average of 473 customers choose the chicken sandwich each time it is served and an average of 270 customers choose the burrito. The manager determines neither food is in inventory.

Problem:

Using the information shown in the table, calculate the number of cases the manager will need to order by dividing the number of servings required by the number of servings in each case.

Food Order Calculations

Product	Portion Size	Number servings Required	Case Size (MDE Order Guide)	Cases to Order
Chicken Fillet MRS	One fillet contributes 2 oz. meat	473	100 pieces 2.8 oz. ea.	
Burrito, Beef and Bean MRS	One burrito contributes 2 ½ oz. meat	270	96 ct.	

Instructor Led Activity

Determining Purchasing Unit Size

Scenario

The menu offers Mandarin Chicken as a food choice. According to the MRS recipe and the Mississippi Ordering Guide, there are 28 servings per bag of the product being used currently. Each serving consists of 2/3 cup. The manager forecasts the school will need to prepare 230 servings of the Mandarin Chicken. Inventory records show there are 3 bags in the freezer. How many bags should the manager order for 230 servings?

Answer:

Item	Forecast servings	Serving per unit	Units needed	Units inventory	Units to order
Mandarin Chicken	230	28	230/28=8.214 or 9 bags	3 bags	

Group Activity

Checking Inventory as Part of the Ordering Process

Instructions: Use the information in the first four columns to determine the quantity to order. Note: all these food items are pre-prepared to meet the meal contribution amounts.

The Role of Inventory in Food Ordering

Food Item	Forecast servings	Minimum Purchase Unit	Units in inventory	Measure needed minus inventory	Units to order
Pizza Wedge, Sausage & Cheese, WG	250	Case 96 count	1 case (96)		
Egg Omelet cheese (Individual)	210	Case 175 ct.	25 omelets		
Breakfast Burrito, WG	550	Case 72 ct.	1 case + 22 or 94 Burritos		

Section 3: Receiving Products in the School Nutrition Program

Objective: Follow the policies and procedures for verification and acceptance of products delivered to the school nutrition programs.

Handout

Steps for Receiving Deliveries

1. Check the quantity of products delivered against the purchase order to verify the product delivered is the product ordered.
2. Check prices and price extensions to verify they match price quotes or delivery ticket prices.
3. Check to see that no unauthorized substitutions are being delivered.
4. Inspect the merchandise for damage such as re-taped boxes, signs of contamination, and other red flags.
5. Verify that the temperatures of all products are within the safe temperature zone.

If there are rejections of products or variations between ordered and delivered products, a correction must be made to the invoice and a written record of fact should be made. For example if the number of cases ordered was not delivered, but was invoiced, a note must be made on the invoice and signed by the delivery driver.

Group Activity

Receiving Products Case Study

Scenario:

Rena is the school nutrition manager of a large elementary school. Fresh produce is delivered twice a week to the school and invoiced on a separate ticket. Because of fluctuation in the produce market, the district request bids/quotes from produce providers monthly, and the director has cautioned managers to check invoices carefully to see that the newer prices are reflected. The vendor awarded the latest bid is new to the school district, so Rena knows it is important to check the delivery and invoice carefully against the school's purchase order.

When the produce delivery arrives, Rena asks the driver for the delivery invoice to check against her purchase order. She immediately finds several errors that include: invoice prices that do not match order prices, inaccurate extension prices, and differences in amount ordered and amount delivered.

Instructions: Compare the company invoice against the purchase order to verify (1) the unit price is correct on the invoice, (2) the amount delivered matches the amount ordered, and (3) accuracy of extended price.

1. Circle the errors and then write corrections.
2. After you are satisfied that you have found all the errors, answer the questions to determine the amount the errors would costs the school if not corrected.

Hint: *Check units delivered and unit price first. If they are inaccurate, the extended price must be recalculated.*

Copy of Purchase Order Sent to Vendor

Purchase Order		
Item	**Unit Price**	**Number of units Ordered**
Tomatoes, Whole, Red, Ripe (4x5)	$25.90 case	3 cases
Carrots, Raw Baby, cleaned	1.45 bag	75 bags (one 3-oz serving/bag)
Broccoli, Fresh florets	2.57 lb.	2 15 lb. bags
Grapes, Red Seedless, Bulk	19.32 lug	1 lug
Strawberries, Fresh, Whole	18.29 flat	2 flats
Slaw, Mix, Shred	13.80 pack	2 Packs

Prices based on Fruit and Vegetable Prices, USDAQ Economic Research Service. Available at www.ers.usda.gove/date-products/fruits-and-vegetable-prices.aspx

Delivery Invoice

Produce Company Invoice			
Item	**Unit Price**	**Units Delivered**	**Extended Price**
Tomatoes, Whole, Red, Ripe (4x5)	$25.90 case	3 cases	77.77
Carrots, Raw Baby, cleaned	1.54 bag	75 bags	115.50
Broccoli, Fresh florets	2.57 lb.	2-15 lbs. bags	77.00
Grapes, Red Seedless, Bulk	19.32 lug	1 lug	19.32
Strawberries, Fresh, Whole	18.92 flat	2 flats	37.84
Slaw, Mix, Shred	13.80 pack	3 packs	41.40
Total Amount Due			368.83

1. What produce items had incorrect "unit" prices on the company invoice?

2. List the produce item or items delivered in the wrong quantity?

3. How much should the invoice show as the total amount due?

4. What was the total amount of "error" on the invoice?

5. Suggest actions the school manager should take to improve the produce companies?

Section 4: Storage and Issuing Procedures

Objective: Explain the purpose of effective storage and issuing practices.

Handout

Guidelines for Best Practices in Product Storage

1. It is critical that products are moved into storage promptly. Spoilage is less of an issue when refrigerated and freezer products are stored immediately at the correct temperature.
2. Storage areas must be kept clean and dry. The person responsible for the storeroom must follow HACCP rules for safety and sanitation when storing food. Check the storage areas regularly for signs of infestation of pests. The storeroom should be well ventilated.
   Shelving must be sturdy, easy to clean, at least six inches off the floor, and six inches away from the wall.
3. Each item should always be stored in the same location. Chemicals should always be stored in a different location from food products
4. Store food at the correct temperature. Record dry, refrigerator, and freezer storage temperatures daily on the form provided by the school.

   a. Dry Storage

   The ideal temperature of dry storage is 50-70 degrees F with a humidity level of 50-60 percent.

   b. Refrigerated Storage

   Refrigerator temperatures should be maintained between 32 degrees F and 36 degrees F. Check internal temperature of refrigerated foods regularly, and do not overload the unit.

   c. Frozen Storage

   Keep freezer temperatures at – 10 degrees F to 0 degrees F or below and check internal thermometers regularly. Place frozen delivers in storage as soon as they have been inspected.

Individual Activity

Review Information

Food Code 2013

The Mississippi State Department of Health describes how food service should handle cleaning products in the 2013 Food Code. Each school site office should have a copy of the regulations in the kitchen office. If you need a copy, ask your School Nutrition Director to locate a copy for you.

A copy of the Food Code 2013 is also available for printing on the FDA website at http://www.fda.gov/downloads/Food/GuidanceRegulation/RetailFoodProtection/FoodCode/UCM374510.pdf

Notes:

Group Activity

Keeping Food Secure

Instructions: Work with your group to list at least five practices that every school kitchen should implement to ensure the safety of stored food. Write the list on a piece of flip chart paper and post on the wall. Select one person to share the list with the class.

Security Measures:

1. _____
2. _____
3. _____
4. _____
5. _____

Handout

Best Practices: Removing Items from the Storeroom

1. Limit the number of employees who have access to the storeroom. Allowing several different employees to remove products from storage areas decreases efficiency and increases potential for theft.
2. Keep records of products removed from storage. Storeroom records of issued products should be used along with production records to provide an audit trail for items used.
3. Always follow the "first in, first out" rule of storage. This means removing the oldest items in storage.
4. Follow district guidelines for issuing stock. The size of the school may impact how products are issued.
    - In large schools, employees review the menu and provide a written list of items needed. An employee trained in issuing gathers supplies, places them on trucks or carts and delivers to each work area.
    - In small schools, all production employees may obtain products from storage areas, record products removed, and sign a storeroom requisition. This system requires that all employees receive training in stock rotation, safe lifting, and recordkeeping.

Section 5: Inventory Control

Objective: Follow district policies and procedures for maintaining an accurate inventory system.

Handout

Inventory Best Practices

1. Managers may delegate responsibility for inventorying to other staff members, but it is crucial that persons responsible for inventorying are trained on district procedures.
2. One person should count and another should record.
3. Items should be inventoried by location and in the order the products are located in the storage areas. Some operations will only track counts of unopened units; other operations may count unopened cases as well as units from opened cases. The important thing to remember is to be consistent each time inventory is taken.
4. The school site should follow the school district policies for the date selected to take inventory. Most operations count and value inventory monthly with the actual date being determined as the "last working day of the month."

Section 6: Responding to a Food Recall

Objective: List responsibilities of the school nutrition manager when there is a food recall of a product shipped to the school.

Food Recall Classes

Class	Definition	Examples
Class I	A health hazard situation where there is a reasonable probability that eating the food will cause serious health consequences or death.	Food that contains *E. coli, Salmonella*, or an undeclared allergen
Class II	A health hazard situation where there is a remote probability of adverse health consequences from eating the food.	Food contains a foreign material
Class III	A situation where eating the food will not cause adverse health consequences	Product has minor labeling problems such improper format or undeclared ingredients that are not allergens

Documentation for a Food Recall

Documentation should include when the product is:

a. received
b. used in production
c. served, stored or discarded
d. shipped to another school
e. in inventory

It is important for school nutrition programs to have an action plan in place to respond to a food recall. Check with your School Nutrition Director for a copy of standard operating procedure used when there is a food recall and district requirements of the manager's responsibility.

Handout

Sample Standard Operating Procedure (SOP) for School Sites

Purpose: To prevent foodborne illness or injury by quickly identifying and containing products in the event of a food recall.

Procedures:

1. Train school nutrition employees on using the standard operating procedures in handling a food recall.
2. Follow school district and health department requirements.
3. Review the food recall notice and specific instructions identified in the notice. Contact the district office if there are questions about the instructions.
4. Collaborate with the district office to identify products in inventory that match the product code and lot numbers identified in recall notice.
5. Hold the recalled product using the following steps:
    a. Isolate the product, including any open containers, leftover product, and food items in current production that contain the affected product.
    b. Follow the district's procedure if an item is suspected to contain the recalled product but label information is not available.
    c. Mark recalled product "Do Not USE" and "Do Not Discard." Inform the entire school nutrition staff not to use the product.
6. Inventory and record:
    a. The amount of recalled product received at the school site. When possible, verify that affected items bear the product identification code and production date listed in the recall notice.
    b. The status of the recalled product (e. g., amount used, amount isolated).

7. Report quantity of the recalled food used and the amount isolated to the school district office as soon as possible, ideally in 24 hours or less.
8. Do not destroy any products until directed to do so by the School Nutrition Director. If directed to dispose of a product, follow the instructions provided by the district office.

THE SITE LEVEL SCHOOL NUTRITION MANAGER WILL

1. Implement this SOP to respond to a food recall.
2. Train site level employees on using the procedure in this SOP.
3. Visually observe that employees isolate and label all recalled products.

CORRECTIVE ACTION;

Retrain any employee found not following the procedure in this SOP.

VERIFICATION AND RECORD KEEPING:

The school nutrition manager will;

1. Record the name, product code, lot number, and quantity of the recalled food received.
2. Record the quantity of recalled food used and quantity isolated.
3. Record the date and time of destruction/disposal of the recalled product if applicable.
4. Update inventory records with adjustment for recalled product or products.
5. Maintain the recall records for a minimum of three years.

Adapted from Responding to a Food Recall, The Institute of Child Nutrition, The University of Mississippi, 2013

Link to view SOPs developed by the Institute of Child Nutrition

http://sop.nfsmi.org

Accountability in Ordering, Receiving, and Inventorying

Instructions: Use the following check list to assess accountability performance in your school related to ordering, storage, receiving, and inventorying procedures.

Accountability Performance Indicator	**Score = 5** **Full Implementation**	Score = 3 Considerable Implementation	Score = 1 Limited Implementation	Score
Standardized Recipes are used to calculated amount of food to order for prepared menu items.				
Confirm product received is the product ordered at time of delivery.				
Discrepancies between order form and delivery ticket/invoice are noted and recorded.				
Food dated and rotated according to FIFO system.				
Food storage areas are clean, dry, and free from infestation at all times.				
Food stored on pallets and shelves 6” from floor and wall to allow air circulation.				
Food products and chemicals are always stored in separate areas.				
Temperatures logs of all storage areas are maintained as required.				
Access to storage is strictly controlled.				
Products are issued from storage according to school district procedures.				
Inventories are conducted in accordance with local, state, and federal regulations.				
Documentation required for a food recall is on file and can be presented at all times.				

Score: 60 total points: 70% = 42 points; 80% = 48 points; 90% = 54 points; 100% = 60 points

If you scored 100%, that is excellent - keep up the good work. A score of 54 to 59 points is great – you are almost there. A Score of 43 to 48 is good, but you should look at the areas of lower scores and decide on a plan of improvement. If you have a score of 42 or less, work with your director to develop an action plan to improve the accountability performance for those indicators that have less than score of 5.

Module 3: Case Study Assessment
Ordering, Receiving, and Storage Case Study

Sarah Oaks is a new manager at Bethel High School. She attended the DECIDE to Succeed course and feels confident as she starts the school year. After discussing the school district procedures for receiving food and other products, Sarah is ready to check in the first deliveries for the new school year. The school nutrition director provided Sarah with the following list of steps to follow when she is checking in a delivery and placing it in storage.

School District Receiving Procedures

1. Have purchase orders/receiving report with product descriptions ready for expected delivery.
2. Have proper equipment used in receiving such as scales and thermometers ready prior to expected delivery.
3. Have storage areas prepared for product when delivery arrives.
4. Upon delivery of products, check actual product, brand, and product number using the purchasing order/receiving report to confirm products delivered are products ordered.
5. Count the cases/units and check that the number delivered is the same as ordered. If there is a shortage, notate the amount of shortage on the invoice and have driver sign. The business office will adjust the final price.
6. Inspect food immediately for quality. This includes
    a. Inspecting all produce for freshness and delivery temperature.
    b. Checking milk temperature at delivery (standard is 45 degrees F or lower).
    c. Inspecting frozen products for signs of thawing.
    d. Inspecting cases to determine if they have been opened and re-taped.
    e. Opening product cases (randomly) to see if all items are there and to check for damaged product/cans.
    f. Looking for signs of product mishandling or temperature abuse.
7. If products are not delivered in proper condition or cases have been opened, products should be refused. If products must be returned due to damage or wrong items delivered, note product returned, quantity returned, and reason for return. Have the delivery driver sign to confirm adjustment.
8. Check prices on the purchase order against prices on the invoice. If invoice prices are different, circle the error, and notate the purchase order price. Do not return the product.
9. Record the date received on cases/containers and store products appropriately as soon as possible.

Scenario

Sarah arrives at school and checks the delivery schedule. She notes that two companies are due to delivery products. ABC Company is scheduled to arrive sometime during mid-morning with the frozen products. XYZ Company is scheduled to arrive near the end of the work day with canned and staple goods. Sarah immediately pulls the purchase order for both deliveries, prepares the equipment, and checks the storeroom to ensure it is ready for deliveries.

When ABC Company with frozen goods arrived, Sarah checked in the products using the receiving procedures of the district and found the following discrepancies.

1. When checking the frozen food delivery, Sarah found that three cases of pizza had been delivered that was a different brand than ordered. In addition to the wrong brand, the size of each slice of pizza was smaller than the specified pizza brand. What should Sarah do?

2. According to Sarah's purchase order, the price of Breaded Beef Steak is $71.94 for a case of 144/3.50 ounces. She confirms the cases delivered are the right brand name and contain the correct amounts. However, the school is being charged $81.94 per case. What procedure should Sarah use to handle the issue of the wrong price on the invoice?

3. When Sarah counted the cases of Grilled Chicken Filets, she found that only 7 of the 8 ordered were delivered. Describe the procedure that Sarah should take regarding the shortage of 1 case.

4. When Sarah checked in the frozen Breaded Chicken Nuggets, she noticed that one of the boxes appeared damaged and had been re-taped. Describe the action Sarah should take.

5. When the delivery with canned goods and staples arrived earlier than expected and Sarah was on the phone with the director, she quickly delegated the job of receiving the delivery to Linda. As a first year manager Sarah was careful to observe the employees at work and during the observation recognized that Linda is an excellent cook. She is also an experienced employee having worked in the school nutrition program for 10 years. Sarah reasoned that Linda's expertise as a cook combined with years on the job would make her a good choice for receiving the delivery and that Linda would certainly know the procedures for storing products. After the delivery was complete, Sarah was pleased to see that Linda had done an excellent job of noting discrepancies on the invoice. Later in the day Sarah decided to check the storeroom and was surprised to find that the cases of canned goods had been opened and the cans stored neatly on the shelf; however there were no dates on any of the new cans and they were in front

of the dated cans. The bags of flour were stacked neatly on the floor next to a wall. Sarah also noticed that the canned green beans were mixed in with the canned English peas. She also discovered that several chemical products were stored near the staples.

a. List the errors Linda made in placing delivered products in the storeroom?

b. What advice would you give Sarah about the steps she should take for delegating the responsibility of receiving products in the future?