Inventory Management and Tracking

A Course for School Nutrition Managers and Staff

Instructor's Manual

INSTITUTE OF child nutrition
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USDA

Inventory Management and Tracking
2nd Edition

Instructor's Manual

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INSTITUTE OF *child nutrition*
RESOURCES • TRAINING • RESEARCH

Key Area 2: Operations
USDA Professional Standards: 2510 & 2520

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Institute of Child Nutrition
The University of Mississippi

The Institute of Child Nutrition was authorized by Congress in 1989 and established in 1990 at the University of Mississippi in Oxford and is operated in collaboration with The University of Southern Mississippi in Hattiesburg. The Institute operates under a grant agreement with the United States Department of Agriculture, Food and Nutrition Service.

PURPOSE

Improve the operation of child nutrition programs through research, education and training, and information dissemination.

VISION

Lead the nation in providing research, education, and resources to promote excellence in child nutrition programs.

MISSION

Provide relevant research-based information and services that advance the continuous improvement of child nutrition programs.

Disclaimer

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Table of Contents

Background Information

> **Instructor's Note:** The purpose of the background information section is to help you become familiar with the context of the training. It is not a part of the training detail.

The purpose of this training is to provide child nutrition professionals with a better understanding of inventory management and the importance of keeping accurate inventory records.

Inventory Management and Tracking is a four-hour training. The suggested audience for this training is child nutrition managers, staff, and new directors.

Effective inventory control begins long before products are purchased. Menu planning and recipe development are the first two steps in inventory management. The menu planner should utilize a minimum number of products while at the same time provide enough variety to maximize customer satisfaction and good nutrition. Procuring, forecasting, ordering, and receiving ensure that the right foods in the correct quantities are received just in time for production. Good storage practices keep food secure and minimize waste. Effective and efficient production and service practices ensure that customers consistently receive the foods they want, safe, freshly prepared, and served in correct portions.

Good inventory management may require some new tools. These tools can be customized to meet the needs of the school or district and will give staff a quicker path to implementation of recommended best practices. Key terms and definitions, sample standard operating procedures (SOPs), checklists, and resources are included in the Participant's Workbook and discussed in this training.

Traceability or the ability to track food items back to their original source may be a new concept for new staff in child nutrition programs. It encompasses recording delivery dates, delivery agent information, quantity, product codes, and lot numbers for items received by the school. Traceability also includes the disposition of the product, such as the date the food was served or disposed of, as a minimum best practice.

Prompts are as follows:

SAY:
What the instructor is to say to participants. This is the content that teaches the learning objectives.

ASK:
This prompt is used when the instructor should ask the participants a question. If the question warrants feedback, it will be followed by the FEEDBACK prompt.

FEEDBACK:
This prompt is used to ensure certain elements are covered in discussions, including possible answers for instructors to give.

DO:
This prompt is used to explain what the instructor/participants are to do. It may be used to lead into activities, do demonstrations, show videos, or any other action the instructor would need to know to do.

SHOW SLIDE:
This prompt is used for showing slides. Each slide must have its own unique title. All content in the slide presentation should be discussed in the Instructor's Manual using the "DO," "ASK," or "SAY" commands. Slides should not be content heavy or contain content not covered in the Instructor's Manual in case the slide presentation is unavailable.

PRE-/POST-ASSESSMENTS:
This training includes a Pre-/Post-Assessment that will be administered at the beginning and the end of the training.

Functional Areas and Competencies

School Nutrition Directors

Functional Area 8: Procurement and Inventory Management

Competency 8.2: Establishes operational procedures to effectively manage receiving and inventory systems.

Knowledge Statements
- Knows fundamentals of effective receiving procedures.
- Knows methods for effective inventory control.
- Knows methods for effective implementation of a central warehouse system, when appropriate.

Source: *Competencies, Knowledge, and Skills for District-Level School Nutrition Professionals in the 21st Century* (2009) available on the ICN website: https://theicn.org/icn-resources-a-z/CKS-district-school-professionals

School Nutrition Managers

Functional Area 5: Procurement and Inventory Management

Competency 5.1: Utilizes forecasting methods to ensure adequate quantities of food are purchased.

Knowledge Statement
- Knows forecasting methods to order accurate amounts of food and supplies.

Competency 5.2: Conducts procurement procedures that follow Federal, State, and local school purchasing guidelines.

Knowledge Statements
- Knows the importance of checking inventory before ordering.
- Knows the managers' responsibilities for ordering, receiving, storing, and conducting inventory of products for the school nutrition program.

Competency 5.4: Follows proper procedures for receiving food and supplies.

Knowledge Statement
- Knows policies and procedures for receiving and accepting products delivered to the school nutrition program.

Competency 5.5: Follows procedures to ensure that appropriate storage and issuing techniques are implemented.

Knowledge Statements
- Knows the importance of secure, efficient, and safe storage areas.

- Knows procedures for securing storage areas from theft and food tampering.
- Knows district standard operating procedures (SOPs) for dating and using products to reflect first-in, first-out (FIFO).
- Knows the importance of maintaining an accurate record of products used.
- Knows how and when to delegate responsibility for inventorying to staff members.
- Knows the importance of rotating stock when issuing food from the storage areas.
- Knows effective inventory procedures for managing the flow of products from storage to the serving line.
- Knows physical and perpetual methods of recording food products and supplies in inventory and knows when to use each method.

Source: *Competencies, Knowledge, and Skills for School Nutrition Managers* (2018) available on the ICN website: https://theicn.org/icn-resources-a-z/ckssnmanagers21

School Nutrition Staff

Functional Area 1: Food Production

Competency 1.2: Follow operational procedures for efficient and effective food production and service.

Knowledge Statement

- Knows importance of and procedures for maintaining an accurate inventory system.

Functional Area 4: Program Regulations and Accountability

Competency 4.2: Maintains accountability of recorded documentation for compliance with Federal, State, and local regulations.

Knowledge Statement

- Knows the importance of accurate recordkeeping.

Source: *Competencies, Knowledge, and Skills of Effective School Nutrition Assistants and Technicians* available on the ICN website: https://theicn.org/icn-resources-a-z/CKS-school-nutrition-assistants

PROFESSIONAL STANDARDS

Receiving and Storage – 2500
Employee will be able to ensure proper inventory management including correct delivery and storage of inventory, and that which has been placed on hold or recalled.

2510 – Develop processes for inventory management
2520 – Apply safe and effective receiving and storage procedures

Key Area 2: Operations

Training Objectives

At the end of this training, participants will be able to accomplish the following objectives:

Lesson 1: Receiving and Storing Food and Supplies
- Describe proper procedures and best practices for receiving and storing inventory.
- Summarize the storing process for dry, refrigerator, and freezer storage.

Lesson 2: Recordkeeping and Tracking
- Explain the concept of recordkeeping and why it is important in school nutrition programs.
- Distinguish the difference between the four types of dates that may be found on product packaging.
- Identify information needed for product traceability and state when this information should be recorded.
- Describe the difference between perpetual and physical inventory methods used in the school nutrition programs.

Lesson 3: Controlling Inventory Cost
- Explain the importance of an accurate inventory system and how cycle menus impact controlling inventory cost.
- Calculate food cost, inventory turnover, and days of inventory on hand.
- Identify recordkeeping best practices for keeping accurate records and tools to maintain accuracy.

Lesson 4: Forecasting
- Recognize the importance of an accurate inventory and the impact it has on forecasting.
- Explain the impact production records have on inventory control.
- Design an inventory management plan.

Ground Rules

- **Show up on time and come prepared.** Be prompt in arriving and in returning from breaks. Come with a positive attitude.
- **Stay mentally and physically present.** Be present and stay on task. Listen attentively to others and avoid disruptive side conversations.
- **Let everyone participate.** Be patient when listening to others speak. Treat all participants with the same respect that you would want from them.
- **Listen with an open mind.** Stay open to new ways of doing things, and listen for understanding. You can respect another person's point of view without agreeing with them.
- **Think before speaking.** Seek first to understand, then to be understood. Avoid using idioms, three-letter acronyms, and phrases that can be misunderstood.
- **Attack the problem, not the person.** Respectfully challenge the idea, not the person. Honest and constructive discussions are necessary to get the best results.

Preparation Checklist

Instructions: The following tasks are necessary for presenting this lesson. Assign each task to a specific person and determine the date that each task must be completed. Keep track of the progress by checking off tasks as they are completed. [Items may vary according to the needs of particular lessons.]

Task	Person Responsible	Completion Date	✓
Reserve equipment and gather supplies as needed for use on the day of class (6 weeks prior). **Instructor's Manual** Roster of participants attending for instructor Participants' sign-in sheets **List of equipment and supplies needed** Microphone (preferably wireless) Computer to present slides and/or DVD Projector and Screen Speakers Wireless presenter device and laser pointer Chart paper (self-adhesive strip sheets) Painter's tape (do not use masking tape) Calculators Markers (chart paper) Pens, pencils, self-adhesive notes, page markers, index cards (each table) Name tags and table tents	Instructor		
Participant's Workbook			
Agenda, roster of presenters/participants, and handouts			
Pre-/Post-Assessments (available at www.theicn.org)			

Lesson-at-a-Glance

Time Allowed	Topic	Activity	Materials
20 minutes	• Introduction to Lesson	• Pre-Assessment • Who Am I?	• Participant's Workbook • Pre-Assessment • Writing Utensils • Note Cards
Lesson 1: Receiving and Storing Food and Supplies			
Objective: Describe proper procedures and best practices for receiving and storing inventory.			
20 minutes	• Receiving	• Inventory Management Case Studies: Receiving	• Receiving Deliveries Handout • Using and Calibrating Thermometers Handout • Best Practices Handout • Inventory Management Case Studies: Receiving Worksheet
Objective: Summarize the storing process for dry, refrigerator, and freezer storage.			
35 minutes	• Storage • Dry Storage • Refrigerator/ Freezer Storage	• Inventory Management Case Studies: Storage • Lesson 1: Best Practices	• Inventory Management Case Studies: Storage Worksheet • Refrigeration/Freezer Temperature Log • Lesson 1: Best Practices Worksheet
Lesson 2: Recordkeeping and Tracking			
Objective: Explain the concept of recordkeeping and why it is important in the school nutrition programs.			
5 minutes	• Recordkeeping		• Participant's Workbook • Writing Utensils • Note Cards
Objective: Distinguish the difference between the four types of dates that may be found on product packaging.			
5 minutes	• Product Labeling • Case Markings • GTIN		• Common Case Markings & GTINs Handout • Global Trade Item Numbers (GTINs) Handout

Time Allowed	Topic	Activity	Materials
Objective: Identify information needed for product traceability and state when this information should be recorded.			
5 minutes	• Traceability		• Important Information Handout
Objective: Describe the difference between perpetual and physical inventory methods used in the school nutrition programs.			
25 minutes	• Perpetual Inventory • Physical Inventory	• Perpetual Inventory Case Studies • Writing Standard Operating Procedures • Lesson 2: Best Practices	• Perpetual Inventory Case Studies Worksheet • Writing Standard Operating Procedures Worksheet • Lesson 2: Best Practices Worksheet
Lesson 3: Controling Inventory Cost			
Objective: Explain the importance of an accurate inventory system and how cycle menus impact controlling inventory cost.			
10 minutes	• Controlling Inventory Cost		• Participant's Workbook • Writing Utensils • Note Cards
Objective: Calculate food cost, inventory turnover, and days of inventory on hand.			
20 minutes	• Food Cost/ Usage per Meal • Perishables	• Calculating Food Cost and Inventory Turnover Rate	• Calculating Food Cost and Inventory Turnover Rate Worksheet
Objective: Identify recordkeeping best practices for keeping accurate records and tools to maintain accuracy.			
30 minutes	• Recordkeeping • Loss Prevention	• Calculating Food Cost and Cost per Meal • Lesson 3: Best Practices	• Calculating Food Cost and Cost per Meal • Damaged or Discarded Product Log Handout • Inventory Control Sheet Handout • Storeroom Purchases and Disbursements Handout • Lesson 3: Best Practices Worksheet

Time Allowed	Topic	Activity	Materials
Lesson 4: Forecasting			
Objective: Recognize the importance of an accurate inventory and the impact it has on forecasting.			
30 minutes	• Forecasting • Ordering		• Participant's Workbook • Developing an Order Worksheet • Post-Assessment • Writing Utensils • Note Cards
Objective: Explain the impact production records have on inventory control.			
5 minutes	• Production • Purchasing	• Developing an Order	• Lunch Production Record Sample Handout • Developing an Order Worksheet • USDA Agriculture Marketing Service Specification Handout
Objective: Design an inventory management plan.			
15 minutes		• Developing an Inventory Management Plan	• Developing an Inventory Management Plan Worksheet
15 minutes	Wrap Up	• Post-Assessment	• Post-Assessment
4 hours			

Key Terms and Definitions

Key Terms	Definitions
Assets	Total inventory stored in schools
Best If Used By (or Used Before)	Indicates peak quality date – does not mean the product is unsafe or unfit to eat beyond this date
Buy American Act	Federal legislation that requires the U.S. governmental funds to be used to prefer U.S. made domestic products over foreign goods
Carrying Costs	Costs for transporting, handling, and storing inventory
Closed or Coded Dates	Packing numbers used by the manufacturer. These may be perpetual calendar dates with each day of the year given a consecutive number with January 1 coded as 001.
Critical Tracking Event (CTE)	A point when a product is moved between sites is transformed, or any point where a record is required to trace a product.
Cycle Menu	Menus that are repeated over a specific period of time. The menu is typically different each day during the cycle. At the end of the cycle, the menu is repeated. It is repeated over a specific period of time, such as 4 weeks.
Cycle Count	A physical count of a small group of randomly selected products conducted periodically. Typically used in high volume operations when a monthly physical inventory may not be practical.
First-Expired/First-Out (FEFO)	A way of dealing with perishable products or with a specified expiration date. The practice of processing those goods first that will expire first.
First-In/First-Out (FIFO)	An inventory accounting method by which the first items placed in inventory (i.e., foods and other meal service goods) are the first items used in meal preparation and production
GTIN	The Global Trade Item Number (GTIN) is a globally unique system with identification numbers for trade items, which encompasses both products and services. GTINs provide the capability to deliver unique identification worldwide.
Hazard Analysis and Critical Control Points (HACCP)	A food safety system based on principles used to identify, evaluate, and control hazards
Inventory	Food and supplies purchased for an organization but not yet used

Key Terms	Definitions
Lot Numbers	An identification number assigned to a particular quantity or lot of material from a single manufacturer Lot numbers can typically be found on the outside of packaging.
Par (Periodic Automatic Replacement) Value	The amount of product needed to fulfill menu requirements for one ordering period plus a small amount for safety stock
Perpetual Inventory	A system used to track the receipt and use of inventory and calculate the quantity on hand. Continuous recording of all receipts and issues of products in storage, providing a balance of each item at all times.
Physical Inventory	A process where designated school nutrition staff physically count the entire inventory An actual periodic count of products in storage areas
Product Code	A common barcode used to identify packaged products
Safety Stock	A small amount of product kept on hand to accommodate an unexpected rise in customer demand or a late delivery
Sell-By	The last date products should be displayed for sale. Although the product may still be safe, the quality starts to diminish once this date passes.
Shelf Life	Length of time food may be stored before safety or quality is diminished
Shrink	Loss of product due to waste, damage, spoilage, or theft
Stockkeeping Units (SKU)	An item of stock that is completely specified as to size, flavor, color, recipe, and any other attribute (e.g., two flavors of gelatin are different SKUs).
Standard Operating Procedure (SOP)	Established or prescribed methods to be followed routinely for the performance of designated operations or in designated situations. Detailed written instructions for a process that must be followed to ensure a desired outcome.
Time and Temperature Control for Safety (TCS) Foods	Foods that need time and temperature controls to prevent them from becoming unsafe due to biological hazards
Traceability	The ability to follow (trace) a specific food from farm to table; required as part of a food safety program
Universal Product Codes (UPC)	A bar code with a 12-digit GTIN used to uniquely identify a product and the company that owns the product brand
USDA Foods	Food purchased by USDA for use in school nutrition programs
Use-By	The last date recommended by the manufacturer for consuming the product for best quality.

Introduction

SHOW SLIDE: *<u>Institute of Child Nutrition</u>*

> **Instructor's Note:** Have this slide on the screen as participants enter the room.

SHOW SLIDE: *<u>Inventory Management and Tracking</u>*

SAY: Welcome to the Institute of Child Nutrition's (ICN) *Inventory Management and Tracking*. My name is (introduce yourself and give a brief background of your child nutrition experience). This 4-hour training is provided by (state the organization sponsoring the training), and it will provide child nutrition professionals with a better understanding of inventory management and the importance of keeping accurate inventory records.

ICN has provided you with a Participant's Workbook. The information and activities in the workbook were developed to help you gain a better understanding of the concepts and principles of inventory management as they relate to child nutrition programs.

Other items on your table (e.g., index cards, sticky notes, table name tents, pens, markers) may be used during the training.

Housekeeping

> **Instructor's Note:** Write "Bike Rack" at the top of a chart page and post it in a convenient area of the room.

SAY: There are a few "housekeeping" items to review.
- The restrooms and water fountain are located (point out the location).
- Be sure you are signed in on the sign-in sheets; there is one for ICN and one for the training sponsor.
- I will try to answer questions throughout the training; however, sometimes a question requires research or a longer answer than time allows. Because all your questions are important, a "Bike Rack" has been posted. Write your question on a sticky note and post it to the Bike Rack.

SHOW SLIDE: *<u>Pre-Assessment</u>*

DO: Distribute the **Pre-Assessment**. Explain the identifier to be placed in the upper right-hand corner.

SAY: Before we begin the training, I would like each of you to complete an assessment that will review what you already know about inventory management. It is anonymous. Before you begin answering the questions, please write a four-digit number as an identifier in the upper right-hand corner of the page. It is important to remember this identifier

because you will use the same four-digit number as an identifier on the post-assessment at the end of the training. The ID is used to match pre-assessment information with post-assessment answers to determine knowledge gained. You have approximately 10 minutes to complete the pre-assessment. After you complete the assessment, put it on one side of the table, and I will come by and collect them.

DO: Collect the pre-assessments.

SAY: Let's begin the training with a get-to-know-you activity.

SHOW SLIDE: _**Activity: Who am I?**_

DO: Read the instructions to the participants. Beginning with yourself, start the activity. When the activity is over, begin the training.

ACTIVITY: Who am I?

Materials: Notecards and pens or pencils
Time: 15 minutes

Instructions: Choose a notecard from the center of the table. On the notecard, write two true statements and one false statement about yourself. Give the participants about 3 minutes to complete their statements. Beginning with yourself, read your statements, then ask the participants to guess which statement is false. Take about 15 minutes to complete the whole activity.

SAY: Choose a notecard from the center of the table. On the notecard, write two true statements and one false statement about yourself. When it is your turn, stand up and state your name and the school district where you work. Then, read the three statements you have written, and the class will try to guess the false statement. I will begin.

DO: Complete the activity.

SAY: That was fun! Today we are going to talk about inventory management and tracking. There are several tools you can use to help with inventory management and controlling inventory costs:
- receiving and storage,
- standard operating procedures,
- accurate recordkeeping and tracking,
- cycle menus,
- production records, and
- forecasting.

Inventory management has long been considered a critical component of a well-managed child nutrition program. Controlling cost is the focus of inventory management practices.

Managing Inventory

SHOW SLIDE: *__Managing Inventory__*

SAY: Effective inventory control begins long before products are purchased. Menu planning and recipe development are the first two steps in inventory management. The menu planner should utilize a minimum number of products while at the same time provide enough variety to maximize customer satisfaction and good nutrition. Procuring, forecasting, ordering, and receiving correctly ensure that the right foods in the correct quantities are received just in time for production. Good storage practices keep food secure and minimize waste. Effective and efficient production and service practices ensure that customers consistently receive the foods they want safe, freshly prepared, and served in correct portions.

Good inventory management may require some new tools to help you succeed. These tools can be customized to meet the needs of your school or school district and will give you a quicker path to the implementation of recommended best practices. Templates, sample standard operating procedures, a link to some mini-posters, checklists, and resources are included in your Participant's Workbook and discussed in this training.

Traceability or the ability to track food items back to their source may be a new concept for the staff in child nutrition programs. It includes recording delivery dates, delivery agent information, quantity, product codes, and lot numbers for items received by the school. Traceability also includes the disposition of the product, such as the date served or disposed of as a minimum best practice.

Inventory management is more complex than just having food on hand. In this training, we will discuss
  • receiving and storing food and supplies,
  • three types of storage,
  • recordkeeping and tracking,
  • controlling inventory cost, and
  • forecasting.

Let's begin with receiving and storing food and supplies.

Lesson 1
Receiving and Storing Food and Supplies

Objective: Describe proper procedures and best practices for receiving and storing inventory.

SHOW SLIDE: *Lesson 1: Receiving and Storing Food and Supplies*

SAY: At the beginning of your Participant's Workbook, you will find the **Key Terms and Definitions** handout. If there is a word in the training that you are unfamiliar with, look at this handout for the term and it will explain what the term means.

The primary purpose of receiving is to ensure that your school nutrition program receives what was ordered in good condition. The receiving process allows you to:
  • verify that you receive the correct pre-approved products in the proper quantities,
  • check for food safety and freshness, and
  • ensure that products are of the best quality.

Receiving is a very important function of inventory control, and its value is often overlooked. Effective receiving requires well-trained staff and the following resources:
  • the list of pre-approved items, including product code or GTIN numbers;
  • a copy of the invoice;
  • calibrated thermometers for checking temperatures of temperature control for safety (TCS) products;
  • markers or date stamp, pens, pencils, wire snips, and clipboard;
  • delivery temperature recording charts;
  • hand trucks, carts, or dollies to move food to storage areas;
  • scales to weigh products sold by weight; and
  • a copy of your standard operating procedures for receiving food and supplies.

ICN has two handouts that might help with your receiving process. Locate the handouts, **Receiving Deliveries** and **Using and Calibrating Thermometers**, in your workbook while we review them. These handouts are sample standard operating procedures (SOPs) you can follow when accepting deliveries of food and supplies. Using and Calibrating Thermometers describes how to use the thermometer to check the temperature of foods when they arrive and two methods to calibrate thermometers. If you are the person accepting deliveries, review these SOPs or check with your manager for the SOPs your school uses.

Receiving Deliveries
(Sample SOP)

PURPOSE: To ensure that all food is received fresh and safe when it enters the school nutrition facility and to transfer food to proper storage as quickly as possible.

SCOPE: This procedure applies to school nutrition employees who handle, prepare, or serve food.

KEY WORDS: Cross Contamination, Temperatures, Receiving, Holding, Frozen Goods, Delivery

INSTRUCTIONS:
1. Train school nutrition employees on using the procedures in this SOP.
2. Follow State or local health department requirements.
3. Schedule deliveries to arrive at designated times during operational hours.
4. Post the delivery schedule, including the names of vendors, days and times of deliveries, and drivers' names.
5. Establish a rejection policy to ensure accurate, timely, consistent, and effective refusal and return of rejected goods.
6. Organize freezer and refrigeration space, loading docks, and store rooms before deliveries.
7. Gather product specification lists and purchase orders, temperature logs, calibrated thermometers, pens, flashlights, and clean loading carts before deliveries. Refer to the Using and Calibrating Thermometers SOP.
8. Keep receiving area clean and well lighted.
9. Do not touch ready-to-eat foods with bare hands.
10. Determine whether foods will be marked with the date arrival or the "use by" date and mark accordingly upon receipt.
11. Compare delivery invoice against products ordered and products delivered.
12. Transfer foods to their appropriate locations as quickly as possible.
13. Verify that Key Drop Deliveries are from an approved supplier, stored properly, protected from contamination, and presented authentically.

Receiving Deliveries, continued
(Sample SOP)

MONITORING:

1. Inspect the delivery truck when it arrives to ensure that it is clean, free of putrid odors, and organized to prevent cross-contamination. Be sure refrigerated foods are delivered on a refrigerated truck.
2. Check the interior temperature of refrigerated trucks.
3. Confirm vendor name, day and time of delivery, as well as driver's identification before accepting delivery. If driver's name is different from what is indicated on the delivery schedule, contact the vendor immediately.
4. Check frozen foods to ensure that they are all frozen solid and show no signs of thawing and refreezing, such as the presence of large ice crystals or liquids on the bottom of cartons.
5. Check the temperature of refrigerated foods.
   • For fresh meat, fish, and poultry products, insert a clean and sanitized thermometer into the center of the product to ensure a temperature of 41 °F or below. The temperature of milk should be 45 °F or below. Milk may be received at 45 °F, but must be stored at 41 °F.
   • For packaged products, insert a food thermometer between two packages being careful not to puncture the wrapper. If the temperature exceeds 41 °F, it may be necessary to take the internal temperature before accepting the product.
   • For eggs, the interior temperature of the truck should be 45 °F or below.
6. Check expiration dates of milk, eggs, and other perishable goods to ensure safety and quality.
7. Check the integrity of food packaging.
8. Check the cleanliness of crates and other shipping containers before accepting products. Reject foods that are shipped in dirty crates.

CORRECTIVE ACTION:

1. Retrain any school nutrition employee found not following the procedures in this SOP.
2. Reject the following:
   • Frozen foods with signs of previous thawing.
   • Cans that have signs of deterioration, such as swollen sides or ends, flawed seals or seams, dents, or rust.
   • Punctured packages.
   • Foods with out-dated expiration dates.
   • Foods that are out of safe temperature zone or deemed unacceptable by the established rejection policy.

Receiving Deliveries, continued
(Sample SOP)

VERIFICATION AND RECORD KEEPING:
Record the temperature and the corrective action on the delivery invoice or on the Receiving Log. The school nutrition manager will verify that school nutrition employees are receiving products using the proper procedure by visually monitoring receiving practices during the shift and reviewing the Receiving Log at the close of each day. Receiving Logs are kept on file for a minimum of 1 year.

DATE IMPLEMENTED: _____ **BY:** _____

DATE REVIEWED: _____ **BY:** _____

DATE REVISED: _____ **BY:** _____

Source: Institute of Child Nutrition. (2018). *Receiving deliveries*. Retrieved from https://theicn.org/icn-resources-a-z/standard-operating-procedures/

Using and Calibrating Thermometers
(Sample SOP)

PURPOSE: To prevent foodborne illness by ensuring that the appropriate type of thermometer is used to measure internal product temperatures and that thermometers used are correctly calibrated for accuracy.

SCOPE: This procedure applies to school nutrition employees who prepare, cook, and cool food.

KEY WORDS: Thermometers, Calibration

INSTRUCTIONS:
1. Train school nutrition employees on using the procedures in this SOP.
2. Follow State or local health department requirements.
3. Follow the food thermometer manufacturer's instructions for use. Use a food thermometer that measures temperatures from 0 °F (-18 °C) to 220 °F (104 °C) and is appropriate for the temperature being taken. For example:
    - Temperatures of thin products, such as hamburgers, chicken breasts, pizza, filets, nuggets, hot dogs, and sausage patties, must be taken using a thermistor or thermocouple with a thin probe.
    - Bimetallic, dial-faced stem thermometers are accurate only when measuring temperatures of thick foods. They may not be used to measure temperatures of thin foods. A dimple mark located on the stem of the thermometer indicates the maximum food thickness that can be accurately measured.
    - Use only oven-safe, bimetallic thermometers when measuring temperatures of food while cooking in an oven.
4. Have food thermometers easily accessible to school nutrition employees during all hours of operation.
5. Clean and sanitize food thermometers before each use. Refer to the Cleaning and Sanitizing Food Contact Surfaces SOP for the proper procedure to follow.
6. Store food thermometers in an area that is clean and where they are not subject to contamination.

Using and Calibrating Thermometers, continued
(Sample SOP)

MONITORING:
1. School nutrition employees will use either the ice-point method or boiling-point method to verify the accuracy of food thermometers. This is known as calibration of the thermometer.
2. To use ice-point method:
    • Insert the thermometer probe into a cup of crushed ice.
    • Add enough cold water to remove any air pockets that might remain. Allow to sit for 1 minute.
    • Allow the temperature reading to stabilize before reading temperature.
    • Temperature measurement should be 32 °F (± 2 °F) [or 0 °C (± 1 °C)]. If not, adjust according to manufacturer's instructions.
3. To use boiling-point method:
    • Immerse at least the first two inches of the probe into boiling water.
    • Allow the temperature reading to stabilize before reading temperature.
    • Reading should be 212 °F (± 2 °F) [or 100 °C (± 1 °C)]. This reading may vary at higher altitudes. If adjustment is required, follow manufacturer's instructions.
4. School nutrition employees will check the accuracy of the food thermometers:
    • At regular intervals (at least once per week, ideally daily)
    • If dropped
    • If used to measure extreme temperatures, such as in an oven
    • Whenever accuracy is in question

CORRECTIVE ACTION:
1. Retrain any school nutrition employee found not following the procedures in this SOP.
2. For an inaccurate, bimetallic, dial-faced thermometer, adjust the temperature by turning the dial while securing the calibration nut (located just under or below the dial) with pliers or a wrench.
3. For an inaccurate, digital thermometer with a reset button, adjust the thermometer according to the manufacturer's instructions.
4. If an inaccurate thermometer cannot be adjusted on-site, discontinue using it, and follow the manufacturer's instructions for having the thermometer calibrated.
5. Retrain employees who are using or calibrating food thermometers improperly.

Using and Calibrating Thermometers, continued
(Sample SOP)

VERIFICATION AND RECORD KEEPING:

School nutrition employees will record the calibration temperature and any corrective action taken, if applicable, on the Thermometer Calibration Log each time a thermometer is calibrated. The school nutrition manager will verify that school nutrition employees are using and calibrating thermometers properly by making visual observations of the employees during the calibration process and all operating hours. The school nutrition manager will review and initial the Calibration Log daily. The Calibration Log will be kept on file a minimum of 1 year. The school nutrition manager will complete the Food Safety Checklist daily. The Food Safety Checklist is to be kept on file for a minimum of 1 year.

DATE IMPLEMENTED: _____ **BY:** _____

DATE REVIEWED: _____ **BY:** _____

DATE REVISED: _____ **BY:** _____

Source: Institute of Child Nutrition. (2018). *Using and calibrating thermometers*. Retrieved from https://theicn.org/icn-resources-a-z/standard-operating-procedures/

SAY: It is important to schedule deliveries during a time that reduces the impact on program operations. Deliveries that occur during mealtimes can be disruptive and lead to a rushed receiving process.

SHOW SLIDE: ***Best Practices***

ASK: What are some best practices for the time deliveries received?

FEEDBACK:
- Schedule deliveries so that the child nutrition staff have time to check food items thoroughly and store products immediately.
- Deliveries should not be accepted before trained staff are available to receive them.
- Avoid deliveries during mealtimes.
- Notify vendors if deliveries are occurring at inconvenient times.
- Staff should be familiar with expected deliveries so that the receiving process can move as quickly as possible.

SAY: Following proper receiving procedures is a critical step in inventory management. Errors during the receiving process can lead to shortages, receiving incorrect items, receiving items of poor quality, or overcharges. ICN has several food safety mini-posters you may find helpful when receiving foods and supplies on their website (https://theicn.org/icn-resources-a-z/food-safety).

ASK: What are some steps you take before you receive food products and supplies?

FEEDBACK:
- Prior to receiving deliveries, ensure your storage spaces (dry, refrigerator, freezer) are organized, and there is enough space for the delivered stock.
- Check that deliveries arrive in a clean truck that is capable of maintaining food at correct temperatures and securing products from tampering.
- Identify the driver if he/she is not familiar to the receiving agent by requesting an ID and recording the driver's name on a receiving log.
- Check-in products by category. Examine and store refrigerated items first, then frozen items, and dry goods last.
- Ensure every item on the invoice is received in the proper quantities, is inspected, and is the correct product with no damage.
    - o open boxes of produce to ensure freshness and to check for wilting or spoilage
    - o carefully inspect open cartons for damaged or missing product, weigh items sold by weight
    - o check temperatures and "use by" dates of refrigerated and frozen foods,
    - o check for thawing of frozen foods
    - o ensure all products adhere to your district's Buy American policies and reject any products that do not

> • Obtain a credit receipt for missing or rejected products.
> • Check items that were substituted against the approved substitution list.
> • Once you are satisfied that the delivery is correct, or that any discrepancies are noted, sign the invoice.
> • Stamp or mark all products with the receiving date.

ASK: What are some reasons for rejecting a product that is being delivered?

FEEDBACK:
> • Product is out of date.
> • Frozen product has been thawed and refrozen (ice crystals are visible).
> • Delivery temperatures are incorrect.
> • Produce is of poor quality.
> • Product is not the product that was ordered.
> • Product was not ordered but was added to your order by mistake.

SAY: Using software for ordering and receiving helps ensure the correct product is received at the right price. Once products are entered into the software database, only products identified for each site may be ordered. Orders are automatically converted, and once orders are approved, the software will generate a receipt of only the desired products. Other ways to track ordering and receiving can include online vendor ordering and spreadsheets.

Poor practices can negatively affect inventory management. The next activity provides practices that may be helpful when managing inventory.

DO: Read the instructions and assign one of the case studies to each table.

SHOW SLIDE: ***Activity: Inventory Management Case Studies: Receiving***

ACTIVITY: Inventory Management Case Studies: Receiving

Materials: Inventory Management Case Studies: **Receiving** worksheet
Time: 10 minutes

Instructions: Assign a case study to each table. Ask the participants to read their assigned case study, discuss it with their table team, and answer the questions after the case study. Choose a spokesperson to report to the group your team's findings. Allow 5 minutes to read and discuss the assigned case study and 5 minutes for class discussion.

Inventory Management Case Studies: Receiving

Case Study #1:

Warren Elementary School has very little storage space. The distributor delivers food every Tuesday, right before lunch is served. To help the manager, a custodian accepts the delivery and signs the delivery ticket. He has the delivery driver put the frozen and cold foods directly into the freezer and refrigerator. The dry goods are left in the hallway until after service. The manager checks in the order after lunch service has been completed. It appears that the delivery invoice matches the order, so the manager signs the invoice and sends it in for payment.

1. Does this procedure follow best practices for receiving?
2. How does the case study relate to inventory management?
3. Does the solution fix the problem or potentially make it worse?
4. What could be done to improve the inventory management system?

Case Study #1 Possible Answers:
- The procedure does not follow best practices for receiving. You do not know if the custodian checked in the delivery.
- Was the custodian trained to check in the delivery?
- Temperatures were not taken of the frozen or refrigerated items.
- The items sold by weight were not weighed.
- The dry foods were vulnerable to theft or tampering.
- None of the products were inspected.
- The driver's ID was not checked.
- The truck was not inspected.
- The invoices were not checked against orders with discrepancies noted on the delivery receipt.
- This solution could potentially make it worse.
- The staff should request that the distributor deliver food at a time when school nutrition staff can check it in.

Case Study #2:

It is the last week of school. You have put out the last two cases of apple juice (the student's favorite). You are serving a normal breakfast. A student brings back their apple juice and states that it smells funny. You smell it, and it has fermented. You check all of the other cases of juice and find that most of them are molded, and the others do not smell good. When you checked the boxes, the label with the date of receipt on it has the date of October of the previous year.

1. Does this procedure follow best practices for receiving?
2. How does the case study relate to inventory management?
3. List possible reasons why the juice was still in the cooler.

4. Discuss ways this could have been prevented. What needs to be done to prevent it from
    happening again?
5. What do you need to do to complete the breakfast components? Remember, the breakfast
    meal must be reimbursable.

Case Study #2 Possible Answers:
   • Best practices were not followed because the date on the cases of juice was not
     checked if the juice was just received.
   • The person putting up the food did not use the First-expire/First-out (FEFO) or First-in/
     First-out (FIFO) method to stock the food. New deliveries of juice were put in front of
     the older juice.
   • Train or retrain the staff that put up the deliveries to use the proper method for stocking
     inventory.
   • Check to see if you have plenty of fresh, canned, or frozen fruit to serve.
   • Call another school to see if they have extra juice or fresh, canned, or frozen fruit you
     could serve.
   • Inform your director of the issue.
   • Developing an inventory management system could improve the current system.
   • Use the FEFO or FIFO method to stock inventory.
   • Train or retrain the staff that put up the deliveries using the FEFO or FIFO.

DO: Compliment the teams on the solutions to the problems.

ASK: Does anyone have any questions before we move on to storage?

DO: Answer questions to the best of your ability. If there are questions you cannot answer, tell the participants you will find out the answer and get back with them.

Storage

Objective: Summarize the storing process for dry, refrigerator, and freezer storage.

SHOW SLIDE: *Storage*

SAY: Secure, efficient, and safe storage are key elements of inventory control. Security begins with well designed, equipped, and secured storage areas, proper placement of food and supplies, and staff trained in proper storage and issuing processes. Efficient storage layout can save time and maintain safety and security. USDA Foods and commercial foods do not need to be stored separately.

Storage is important to the overall operation because it links receiving and production. Proper storage maintenance, temperature control, and cleaning and sanitizing are actions to ensure the quality of stored foods. Well trained competent staff are as important for storage positions as they are for any other positions in a school nutrition program. Staff who check-in products being received, help provide security for products and establish good handling procedures.

All foods should be placed in storage as soon as possible after delivery. Nonperishable foods, canned foods, and staples should be placed in dry storage. Perishable foods must be placed in refrigerated or frozen storage promptly. A separate, locked storage area must be available for nonfood products, such as paper supplies, detergent, and cleaning products. Chemicals must not be stored in the same area as food.

Dry Storage

SHOW SLIDE: *Storage: Dry*

SAY: The dry storage area should provide food with protection from the elements, insects, rodents, and theft. Storing cleaning supplies and pesticides in a separate, locked room will prevent the chemical items from contaminating food products. Shelving must be sturdy enough to support heavy loads without sagging or collapsing.

Products should be arranged according to a plan, and every product should be assigned a definite place. Time can be saved when checking inventory if the inventory sheets are designed to match the arrangement of products on the shelves.

Food items such as canned goods, baking supplies, grains, and cereals may be held safely in dry storage areas. The following guidelines should be followed.
- Dry storage areas should be kept clean with good ventilation to control humidity and prevent the growth of mold and bacteria.
- Temperature for the dry storage area should be maintained between 50 °F and 70 °F.
- Place a thermometer on the wall in the dry storage area.
- Check and log the temperature of the storeroom daily.
- Store food 6 inches off the floor and 2 inches away from walls to allow for air circulation.
- Pallets may be used to store items such as cases of paper towels or cleaning supplies off the floor.

ASK: What are some things you do when storing dry food to ensure food safety and inventory control?

FEEDBACK:
- Use mobile shelving with adjustable shelf heights, dunnage racks, and dollies rather than stationary shelving.
- Place high use products near the door for easy access.
- Ensure food is stored 6 inches off the floor and 2 inches away from the wall.
- Keep products in original cases unless pest infestation is a problem.
- Place products in storage areas to create "zones."
- Monitor the temperature of the dry storage unit.
- Avoid storing foods in direct sunlight.
- Dry storage units should be rodent- and insect-proof by sealing any openings to the outside and keeping doors and windows closed.
- Monitor humidity in the dry storage unit.
- Store chemicals in a separate locked section of the storage area away from food to protect food and supplies from contamination.
- Store the heaviest containers near entry on lower shelves, dollies, or dunnage racks to reduce the chance of injuries when moving products (See the following diagram).
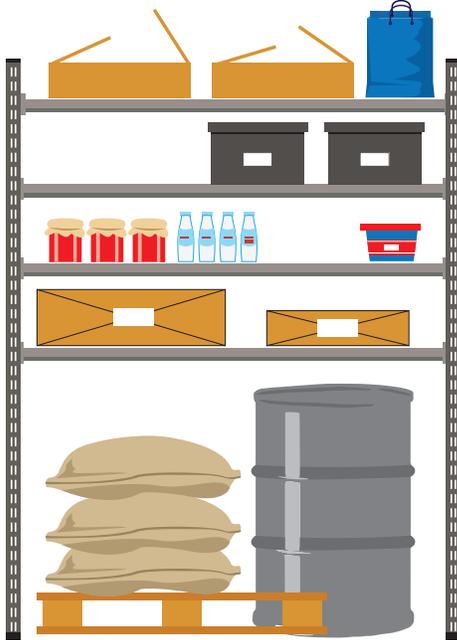
Used Infrequently
Decorations, Uniforms

Lightweight Items
Paper Trays, Light Foods

Medium-weight Items
Cans, Bottles, Jars

Cases, Racks, Boxes

Heaviest Items
Sacks, Barrels, Crates

Security is critical to protect foods from theft and intentional contamination or bioterrorism. Since the terrorist actions of 9/11/2001, threats to the security of food have been re-examined. Purposeful contamination of our food and water supply has been identified as potential soft-targets that require special means of protection.

ASK: What are some measures you can take to ensure food is secure and not vulnerable to theft or tampering?

FEEDBACK:
- Keep all storage areas and outside access doors locked at all times.
- Control keys – establish a policy for securing keys in a locked safe or cabinet. Issue keys only to those employees who need access and sign keys in and out to those who do not need routine access, collect keys immediately from employees when they transfer or resign.
- Restrict kitchen access to school nutrition personnel.
- Enforce policies requiring visitors to check in at school offices, and provide lockers for employees to store bags, purses, and other personal items.
- If possible, install security cameras by access doors to the establishment and all storage areas, and post signs to warn employees and visitors that premises are monitored.

SAY: Keyless entry systems, otherwise known as key cards, eliminate the need for keys. They can be reprogrammed when personnel change and can leave an audit trail of who has gained access to storage areas.

We are going to look at two more case studies about inventory management.

DO: Read the instructions and assign a case study to each table.

SHOW SLIDE: *__Activity: Inventory Management Case Studies: Storage__*

ACTIVITY: Inventory Management Case Studies: Storage

Materials: Inventory Management Case Study: Storage worksheet
Time: 10 minutes

Instructions: Assign a case study to each table. Ask the participants to read their assigned case study, discuss it with your table team, and answer the questions following the case study. Choose a spokesperson to report to the group your team's findings. Allow 5 minutes to read and discuss the assigned case study and 5 minutes for class discussion.

Inventory Management Case Study: Storage

Case Study #1:
Your manager had to go to another school to get some more fresh fruit for lunch. While he was gone, one of your coworkers took something out of the storeroom and put it in the trunk of their car. Nothing was said to the manager when he returned. A couple of weeks later, it happened again only this time the item taken was a case of ground beef. Again, no one said anything to the manager. When you finally get the nerve to tell the manager, he does nothing about the situation. The staff member continues to take from the storeroom and refrigerator/freezer.

1. What should you have done to prevent the theft?
2. Since the manager did nothing, what should you have done at that point?
3. How long do you think someone should steal from the child nutrition program before you say something?
4. What could be done to improve the inventory management system?

Case Study #1 Possible Answers:
   • Tell the manager about the theft.
   • If the manager does nothing about the theft, report it to the school nutrition director.
   • It should be reported right away. The child nutrition program is a federally funded program using our tax dollars.
   • All storage areas should be locked with the manager and two other people responsible for the keys.
   • The manager should have listened to you and thanked you for telling him about the theft. Then he should have called that person into his office and talked to them about the theft.

Case Study #2:
It is the last week of school. You are ready for school to be out for the summer. You are thinking about all the things you and your family have planned. At the beginning of the month, the manager assigned a list of things to be done before the last day of school to each of the staff. You have been assigned to clean the walk-in cooler and freezer and inventory the items left in both. The manager is having minor surgery and will not be at school the last week. The last day of school is finally here, and you have completed all of the items on your list except cleaning out the freezer. You took inventory of all the items in the freezer; that should be enough. Who is going to know if you cleaned it out? The manager was at the school four days after the last day of school and noticed the thermometer on the freezer registered 60 °F. She looked at the temperature log and noticed the temperature was not taken during the last week of school.

1. What should the manager do?
2. What could be done to improve the inventory management system?
3. Could this have been prevented?
4. Go through the following list of food items and decide what needs to be done by placing an X in the appropriate box

The inventory was taken at the end of the school year.

Quantity	Food Items	Keep & Move to Another School	Throw Away
2	5 gal bucket cherries – USDA Foods	•	X
15	4 oz containers peaches – USDA Foods		X
2 cases	frozen whole eggs		X
2 qts	frozen egg whites		X
3 cases	ham – USDA Foods	•	X
2 sticks	ground turkey	•	X
1	2" pan leftover corn, dated 4/14		X
1	2" pan leftover sloppy joe meat, dated 1/31		X
1 bag	Oriental blend vegetables		X
2.5 cases	frozen biscuits		X
2 cases	sausage patties	•	X
4 cases	breakfast pizza		X
1 case	blueberry muffins		X
1 case	chopped broccoli		X
1/2 case	100% fruit juice		X
1 case	diced chicken – USDA Foods	•	X
1	4" pan leftover spaghetti, no date		X
1	2" pan uncovered, cooked, ground meat, no date		X

•If the food item is still frozen, it can be moved to the freezer of another school. Otherwise, it should be thrown away because it is not known how long the food has been in the danger zone. The food must be labeled with the date, temperature, and the name of the school it came from.

Case Study #2 Possible Answers:
- First, inform the director and maintenance about the condition of the freezer if the temperature is rising.
- Get the ending inventory list and begin taking temperatures of the food that is left in the freezer. This information will be used to determine if the food can be transferred to another school or thrown away.
- The manager will then do a cost analysis on the food that will be kept and thrown away.
- If the temperature of the freezer was recorded during the last week of school, the thermometer might have shown signs of rising temperature. At that point, the director should have been contacted so maintenance could check on the freezer and possibly fix it before any food was spoiled.
- Train or retrain staff on proper procedures for checking, cleaning, and inventorying the refrigerator and freezer.

DO: Compliment the teams on the solutions to the problems.

ASK: Does anyone have any questions before we move on to refrigeration/freezer storage?

DO: Answer questions to the best of your ability. If there are questions you cannot answer, tell the participants you will find out the answer and get back with them.

Refrigeration/Freezer Storage

SHOW SLIDE: <u>Storage: *Refrigeration/Freezer*</u>

SAY: Refrigeration increases the shelf life of most food products and slows the growth of bacteria. Perishable foods should be held in refrigerated or frozen storage to preserve the quality and nutritive value immediately after delivery. Like dry storage, everything in a refrigeration/freezer unit should be stored at least 6 inches off the floor and 2 inches from the walls to provide air circulation. Pallets may be used to store items such as crates of milk or cases of 100% fruit juice off the floor. The temperature of the refrigerator should be maintained between 32 °F to 41 °F. Some food items may freeze at 32 °F (e.g., lettuce). Put these food items in the warmest section of the refrigerator. Be sure the doors have a good seal and close tightly to maintain the proper temperature. Appliance thermometers inside the refrigerator/freezer will serve as a backup in case there is a power outage.

SHOW SLIDE: <u>*Refrigerate for Safety*</u>

SAY: Food must be placed in a specific order in the refrigeration unit. The order must be from the lowest cooking temperature to the highest temperature.
The order is as follows:
  • Top Shelf: Ready-to-Eat. These are foods that will be served without cooking. Examples include fresh fruit, salad, fresh vegetables, cheese, and deli meats.
  • Second Shelf: Foods that will be hot-held at 135 °F (57 °C). These foods are not included in the other categories. Examples include cooked fruits and vegetables.
  • Third Shelf: Foods that will be cooked to 145 °F. Examples include whole cuts of beef, pork, and seafood.
  • Fourth Shelf: Foods that will be cooked to 155 °F. Examples include ground beef or pork, fish nuggets or sticks, and cubed or Salisbury steak.
  • Bottom Shelf: Foods that will be cooked to 165 °F. Examples include casseroles, poultry, stuffed beef, pork, seafood, and stuffed pasta.

Products requiring colder temperatures should be placed near the back of the cooler, where temperatures are cooler and do not fluctuate. Thermometers should be placed both near the door and at the back of the cooler to monitor adequate proper holding temperatures. Keep in mind that holding temperatures refer to the temperature of the food, not the air temperature of the cooler. Cooler air temperatures should be 2 °F below recommended product temperatures.

All refrigerator/freezers should include one or more of the following types of thermometers:
- Remote reading thermometer is placed outside the unit to permit reading the temperature without opening the door.
- Recording thermometer is mounted inside or outside the unit. It continuously records temperatures in the unit or transmits temperatures to a computer for tracking.
- Refrigerator/freezer thermometer is mounted or hung on a shelf in the coolest and warmest areas inside the unit.

Temperatures in all units should be checked at least twice a day (first thing in the morning and before leaving). The staff member assigned needs to check and record the temperatures at specified times as a control measure. Staff should be trained to open refrigerator doors as infrequently as possible. Obtaining all foods needed at one time keeps temperatures down and conserves energy. A handout of a **Refrigeration/Freezer Log** can be found in your workbook. If you are not using a temperature log to record temperatures, you can use the one on the next page. It can be used in any of the storage areas.

SAY: In refrigerator, freezer, and dry storage, foods that absorb odors must be stored away from those that give off odors. The following are examples of foods that give off odors and those that absorb odors.

Refrigeration/Freezer Temperature Log

Instructions: A designated school nutrition employee will record the location or description of holding unit, date, time, air temperature, corrective action, and initials on this log. The school nutrition manager will verify that school nutrition staff have taken the required temperatures by visually monitoring food staff during the shift and reviewing, initialing, and dating this log daily. Maintain this log for a minimum of 1 year.

Location/ Unit Description	Date	Time	Temperature	Corrective Action	Food Worker Initials	Manager Initials/Date

Food	Gives off odors	Absorbs Odors
Apple, fresh	Yes	Yes
Butter	No	Yes
Cabbage	Yes	No
Cheese	Yes	Yes
Eggs, dried	No	Yes
Eggs, fresh shell	No	Yes
Flour	No	Yes
Milk, nonfat dry	No	Yes
Milk, fresh	No	Yes
Onions	Yes	No
Peaches, fresh	Yes	No
Potatoes	Yes	No
Rice	No	Yes

Source: Foodservice Organizations: A Managerial and Systems Approach. (2017).

SAY: Freezers should be maintained at 0 °F or below. Check to make sure there is enough open, slotted shelving to allow for air circulation around the food, shelves, and walls. Be sure the doors have a good seal and close tightly to maintain the proper temperature. Appliance thermometers inside the unit will serve as a backup in case there is a power outage.

ASK: Does anyone have any questions about storage?

DO: Answer questions to the best of your ability. If there are questions you cannot answer, tell the participants you will find out the answer and get back with them.

SAY: The last activity for this lesson is about best practices and implementing them at your school.

DO: Read the instructions and let the participants work on this by themselves.

SHOW SLIDE: *Activity: Lesson 1 Best Practices*

ACTIVITY: Lesson 1 Best Practices

Materials: Lesson 1 Best Practices worksheet
Time: 5 minutes
Instructions: Make a list of best practices for receiving and storing products that you learned in this lesson. List ways you can apply today's information to improve your receiving and storage procedures in your school. Take about 3 minutes to list the best practices. When everyone has completed their list, spend about 2 minutes asking for volunteers to share one of their best practices. There are no right or wrong answers to this activity.

Lesson 1 Best Practices

Instructions: Make a list of best practices for receiving and storing products that you have learned in this lesson. List ways you can apply today's information to improve your receiving and storage procedures in your school.

_____

_____

_____

_____

_____

_____

_____

_____

_____

DO: Before starting Lesson 2, divide the participants into new learning groups. Let the participants get into their new groups then take a 10-minute break. You can use the following to form new learning groups:
- Group 1 – The person that has the most pets
- Group 2 – The person that has on the most jewelry
- Group 3 – The person with the longest hair
- Group 4 – The tallest person
- Group 5 – The remaining people

SAY: Before we move on to Lesson 2, let's get into new learning groups.

Lesson 2
Recordkeeping and Tracking

Objective: Explain the concept of recordkeeping and why it is important in school nutrition programs.

SHOW SLIDE: _**Lesson 2: Recordkeeping and Tracking**_

Introduction

SAY: While individual districts may have different rules and unique tools to track inventory, consistency within the district is important. Most schools require a total physical inventory to be taken monthly, usually on the last working day of the month, following any deliveries received and invoiced that day.

ASK:
- How are inventory counts recorded in your school?
- Do you use plain paper and a pencil?
- Do you use an order guide to record the amounts of items in your operation?
- Do you have software that automates this process and generates reports for you?
- Do you have a program or app that sends data to a computer or the cloud?
- How do items get added or taken out of inventory?

DO: These are rhetorical questions to ask to get the participants thinking about how inventory is taken in their schools. No answer is necessary; however, allow participants to respond to each question before you ask the next question.

SAY: These are all important questions that pertain to how your school nutrition program takes inventory.

Items are added into inventory when deliveries are received. The delivery may be from a distributor, another building in the district, or off-site storage. Items are removed from stock when used in production, are damaged beyond use, or they are no longer wholesome or safe to consume. An emergency could happen in your district where stock is lost due to a natural disaster or a loss of power. A food emergency could also happen if items are recalled, if an illness is suspected, or food becomes contaminated either accidentally or intentionally.

Product Labeling

> **Objective:** Distinguish the difference between the four types of dates that may be found on product packaging.

SHOW SLIDE: ***Product Labeling***

SAY: Interpreting product dating and shelf life can be confusing. Four types of dates may be found on product packaging, and each type has a different meaning.
- **Sell-By** is the last date products should be displayed for sale. Although the product may still be safe, the quality starts to diminish once this date passes.
- **Best If Used By** (or Used Before) is a peak quality date. It does not mean the product is unsafe or unfit to eat beyond this date.
- **Use-By** is the last date recommended by the manufacturer for consuming the product for best quality.
- **Closed or coded dates** are packing numbers used by the manufacturer. These may be perpetual calendar dates with each day of the year given a consecutive number with January 1 coded as 001 or some variation of a date such as 20190615 representing June 15, 2019.

Due to harvest schedules, it is not unusual for pack dates to be several months before schools receive the product.

These dates are not intended to be interpreted as "Use By" dates; however, they are often needed for recalls. None of the four types of dating indicates that a product is unsafe to eat. Ideal food storage temperatures and shelf life for various food products may be found in *USDA Use-By Guidance* (December 14, 2016) and *USDA Foods Fact Sheets* (July 20, 2017). Internet links to these resources may be found in the Resources section of this training.

ASK: What do you do when you are confused about whether a product is safe to use?

FEEDBACK: If in doubt, throw it out or ask your director or manager for clarification. There should be a reasonable window of time for schools to use the items.

ASK: Why do we need to understand product labeling?

FEEDBACK:
- Product labels ensure that the product received meets specifications.
- Used-by date is an indication of the freshness of the product.
- It provides important information in case of a recall.

SHOW SLIDE: ***Common Case Markings & GTINs***

SAY: There is much more information on labels than the "use by" date. The handouts, **Common Case Markings** and **Global Trade Item Numbers (GTINs)**, include example markings and GTINs you may find on product packaging.

DO: Review the handout with the participants pointing out some of the information on the slide.

Common Case Markings & GTINs

COOKED BEEF PATTY MIX
CARAMEL COLOR ADDED

(no more than 20% fat, WATER, TEXTURED Protein concentrate, caramel color) SODIUM hydrogyzed soy and corn protein, salt) CARAMEL

"CONTAINS COMMODITIES DONATED BY THE UNITED STATES DEPARTMENT OF AGRICULTURE–THIS PRODUCT SHALL BE SOLD ONLY TO ELIGIBLE RECIPIENT AGENCIES"

U.S. Inspected and passed by Department of Agriculture EST. 38

USDA PROCESS VERIFIED
processverified.usda.gov

Establishment Number

Manufactured by Meat Provisions Co.
Harrison, OH 45030 866-12-4567
KEEP FROZEN

CN

The 2.5 oz ground beef and vegetable protein product provides 2.00 equivalent meat/meat alternate for the Child Nutrition Meal Pattern Requirements. (Use of this logo and statement authorized by the Food and Nutrition Service)

CN

CN

NET WT. 30 LB

(01) 1 0614141052506 (10) 10036

CN

Lot Number

GTIN

Donated Commodity
Ingredients: Fresh apples, ascorbic acid (Vitamin C) and calcium
Zero trans fat
Lot # 0110058
100 ct/2.0 oz bags Net Weight 2.5 lbs
Pack Date: 02/27/19
Use by: 03/20/19

09 FEB 2019 UT 15:31
Best By 14 Aug 2019

1 06 14141 27852 4

Global Trade Item Numbers (GTINs)

When the indicator code is 0, school operators need to be aware that the items inside the case will not have the same item reference number as the case or shipping container. For example, a school orders three cans of peaches and three cans of pears. The distributor might put the six cans in one case. Therefore, the items within the case will have different reference numbers. Extra care will need to be taken to ensure the correct item references are recorded.

GS1 ITF-14 Barcode
Inside packages will have different item reference number.

0 00 38000 03665 1
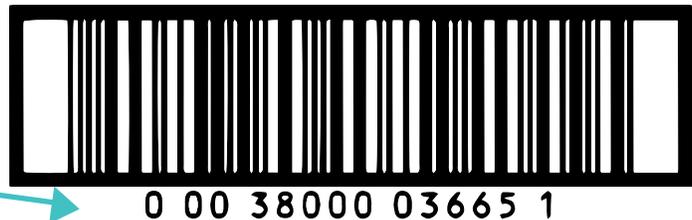
The indicator codes will be one (1) if the inner packages have the same reference number.

GS1 ITF-14 Barcode
Inside packages will have the same item reference numbers.

1 06 14141 00685 1
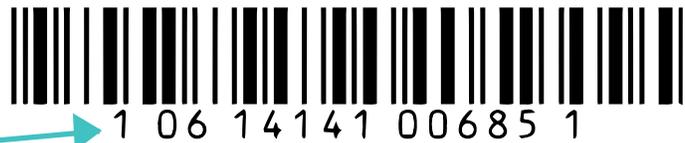
Manufacturers choosing to use a GS1-128 barcode have the option to add a lot number next to the GTIN.

(01) 1 0614141 052506 (10) 10036

GS1-128 Barcode with application identifiers.
This one shows a lot number of 10036.

Source: Institute of Child Nutrition. (2012). *Inventory management and tracking reference guide.*

Traceability

Objective: Identify information needed for product traceability and state when this information should be recorded.

SHOW SLIDE: *Traceability*

SAY: Traceability is the ability to track products from their original source, such as the field to every organization through which it travels until it is consumed or discarded. To effectively trace products, all organizations must have a common number for the item, an understanding of what information to collect, and a means for recording or collecting the information.

Using a common name or code for each unique product has increased the ability for companies to be able to track their products forward to their customers and backward to their suppliers. If there is a problem with a product, it is easier to identify only the product affected. This system reduces the number of products that need to be discarded.

ASK: What are the unique names or codes on the products you buy from vendors or grocery stores?

FEEDBACK: The foodservice industry has agreed to use GTIN (numbers) as encoded in GS1-128 and ITF-14 bar codes on product cases.
  • GTINs are 14-digit numbers containing a company prefix and an item reference number.
  • GS1–128 bar codes may contain application identifiers that include additional information such as lot numbers.
  • UPC codes are a type of GTIN; however, the UPC is a 12-digit number designed to be scanned in retail point of sale registers.

SAY: Critical tracking events (CTE) are activities or processes in the supply chain that should be documented to capture key information for each event. This information is necessary to trace product movement accurately up or down the supply chain. Dates, product name, GTINs or product codes, lot numbers, quantities, and locations should be recorded at CTEs. Technology may be used to capture information used for traceability more accurately and efficiently than manual processes.

The biggest benefit of incorporating traceability in schools is cost savings. When recalls occur, products from the same manufacturers or with the same ingredients unrelated to the recall are often pulled or destroyed, "just to be safe." Damage and costs are reduced if schools:
  • are specific about which foods are involved in a recall,
  • react quickly to recall notices, and
  • assure the safety of related products.

DO: Review the handout, **Important Information.**

SAY: The key to handling emergencies is to plan for them. The handout, **Important Information**, is a list of information to provide for any product if an emergency occurs. Always check with your local health department. The health department may have other procedures for you to follow. As a best practice, keep samples of any cooked and reheated food items, and label them with:
- recipe number,
- date of preparation,
- name of personnel who prepared the item,
- date the item was served, and
- date the sample should be discarded.

Important Information

When a problem occurs with any food product, whether commercial or USDA Foods, it must be reported. If the problem is with a commercial product, report it to the distributor. However, if the problem is with USDA Foods, it must be reported to the State Distributing Agency (SDA). The SDA will determine if the problem can be resolved at the local or State level, and if not, the SDA will report the problem to USDA Food and Nutrition Service. A record of the complaint must be kept. The child nutrition staff should be prepared to provide the following information to the SDA.

- name of the food product and code number
- case codes including lot, batch, or manufacturing or use-by date
- description of the problem with special circumstances involved
- date the food was received
- quantity of product affected
- quantity and physical address of product remaining and if the remaining product is affected or not
- contract number (may be stenciled on the outer carton)
- delivery order number and notice to deliver number
- digital photographs of damaged product or foreign object, if helpful
- payee information and documentation of loss if requesting reimbursement

Types of Inventory

> **Objectives:** Describe the difference between perpetual and physical inventory methods used in the school nutrition program.

SHOW SLIDE: *Types of Inventory*

SAY: A physical inventory is a process where designated school nutrition staff physically count the entire inventory. A perpetual inventory system continually tracks and updates inventory records of food and supplies:
   • received,
   • used in production,
   • moved from one location to another, and
   • discarded.

   Some states require schools to maintain perpetual inventory records. A perpetual manual inventory is time-consuming and, unless required by the State agency, may not be cost-effective for small operations.

ASK: What are some advantages of a perpetual inventory?

FEEDBACK:
   • provides information about current stock levels,
   • serves as a tool for ordering,
   • provides information for food and supply cost control,
   • prevents theft, spoilage, and other shrinkage,
   • improves the ability to trace foods in the event of a recall or foodborne illness, and
   • improve logistics for large school nutrition operations with warehouses and central kitchens.

SAY: Keeping a perpetual inventory is not for everyone; proper procedures must be followed. If done manually, daily check out sheets or cards need to be filled out as inventory is reduced through use. Monthly physical inventory is a best practice; however, it is not required by all school food authorities (SFAs).

   The next activity might give you a better understanding of perpetual inventory.

DO: Assign a case study to each table. Read the instructions and let each table team come up with a plan for their case study and present it to the class.

SHOW SLIDE: *Activity: Perpetual Inventory Case Studies*

ACTIVITY: Perpetual Inventory Case Studies

Materials: Perpetual Inventory Case Studies worksheet
Time: 10 minutes

Instructions: Read the case study assigned to your table team. Discuss with your team how you would handle the situation. Choose a spokesperson to report to the group your team's findings. The answers to the questions are subjective. Therefore, accept all reasonable answers. Take about 5 minutes to read and discuss the case studies. Then, we will spend about 5 minutes to review your decisions.

Perpetual Inventory Case Studies

Case Study #1:

The East Middle School child nutrition manager, June, asked two of the staff, Steve and Gloria, to take inventory for her this month. It is almost time to leave. Gloria promised to be at her son's soccer game at 3:00. Gloria said that she would count while Steve wrote down the count. They finished the inventory in record time. Steve handed the inventory count to June. The next day June was working on the weekly food order to be placed on Monday. According to the inventory count she received from Steve, there are four cases of ground beef. June's perpetual inventory indicated that there were only 1.5 cases of ground beef. When June went to double-check the inventory, she found that there were 4 boxes of ground beef but only 1.5 sticks. The other boxes were empty. June is now wondering what other items were miscounted.

1. How would you handle this situation if you were June?
2. Discuss ways this could have been prevented.
3. What does June need to do to make sure this does not happen again?

Case Study #1 Possible Answers:

- June will either need to take a complete inventory or check the inventory that Steve and Gloria took against the perpetual inventory that she has.
- If there is time before the order has to be submitted, the manager and Gloria need to take inventory.
- All staff need to be trained/retrained on how to take inventory. Assign a staff person to take and record temperatures of the refrigerator, freezer, and storeroom if the manager is out.
- As an activity at the training, ask the staff to pair up in teams of two. Each team will go in the freezer and take inventory. Then each team will take temperatures of the three storage areas. When all teams have finished, bring everyone together, and discuss the outcomes.

Case Study #2:

Tony Roberts is a new manager at Sunnydale High School. The previous manager retired, leaving very little paperwork completed for the last two months of the school year. When going through the files in the manager's office, Tony found a menu for February, a production record for April 20, a perpetual inventory sheet from December, and an order form from the previous year. He did not find any recipes. It is three weeks before the first day of school, and Tony must place an order.

1. What would you do if you were in Tony's situation?
2. Discuss ways this could have been prevented.
3. What can you do to keep this situation from happening again?

Case Study #2 Possible Answers:
  • Tony needs to contact the director or his supervisor and discuss the situation with them. The director/supervisor should already have menus prepared.
  • Together, they can come up with a game plan. The director/supervisor can help Tony take inventory.
  • The director/supervisor should require managers to take inventory the last working day of the month and the last day of school. Managers should also be required to turn in production records to their director/supervisor monthly and the last day of school.

DO: Compliment the teams on the solutions to the problems.

ASK: How do you take a physical inventory in your school?

DO: Allow 2 or 3 participants to answer.

ASK: Why is an accurate physical inventory important?

FEEDBACK:
> • make menu changes if needed
> • calculate food cost
> • plan food orders
> • identify potential problems with theft and waste

SHOW SLIDE: _Physical Inventory_

SAY: You need to ensure you have enough products to prepare the meals and not run out of food. However, you want to keep inventory low enough to minimize spoilage, waste, shrinkage, or theft.

Food and supplies purchased, but not immediately used (inventories), often represent a significant portion of operational revenue. Inventory control is a method of controlling food costs. This method maintains inventory levels high enough to ensure menu items can be produced in the right quantity. It also keeps inventory low enough not to have excess product sitting in storage.

Excess inventory can result in increased waste from foods that are spoiled, pilfered, or wasted due to overproduction or obsolescence. When inventory is high, it is harder to keep track of what products are on hand. A high inventory requires more storage space, money is tied up, and it is harder to control waste than when inventory is kept at low levels. The same is true for both raw ingredients and finished products. The value of waste may be tracked on production records, or by maintaining a waste report.

However, not producing enough of each menu item, whether due to lack of raw ingredients or inadequate forecasting, leads to customer disappointment and may violate program regulations. The goal is to have all choices available to students but not have excessive amounts of leftovers. Although the concept appears simple, it requires careful planning, standardized procedures, and monitoring of food production and inventory to achieve desired results.

It is a best practice to have two people taking inventory; one to count and one to record. To maintain integrity, at least one of these people should not be involved with day-to-day storekeeping responsibilities such as receiving or issuing.

Do not forget to account for items used in catering or for special functions. Some schools may also store items off-site that need to be counted. Check with your director before adding off-site items.

It is important to note that counting and recording items must be done consistently. Follow the instructions from your director/supervisor. If one month you only count full cases, and the next month you include open cases, the food costs for your meals will be skewed. While both food and non-food items are usually recorded separately, there is a single food inventory that includes them all, whether USDA Foods or purchased items.

In the next activity, we will look at a Standard Operating Procedure (SOP) for taking a physical inventory. Based on what you have learned in this lesson, look at the procedures and identify any room for improvement. Then, note all Critical Tracking Events (CTE).

DO: Read the instructions and let each table team review the following SOP sample. Ask participants to discuss how it might be improved, noting the Critical Tracking Events (CTEs).

SHOW SLIDE: *__Activity: Writing Standard Operating Procedures__*

ACTIVITY: Writing Standard Operating Procedures

Materials: Writing Standard Operating Procedures worksheet
Time: 10 minutes

Instructions:
1. Each table team is to read the following SOP and add or revise any steps that would improve the traceability of products. Discuss how the SOP might be improved and note changes on the form.
2. Write CTE by the Critical Tracking Events.
3. Each table team should choose someone to report to the group.
4. Give the group 5 minutes to complete the task. Take another 5 to discuss their findings.

Instructor's Note: The possible additions/answers for this activity are **bolded**.

Writing Standard Operating Procedures

Instructions:
1. Read the following SOP and add or revise any steps that would improve the traceability of products. Discuss how the SOP might be improved and note changes on the form.
2. Write CTE by the Critical Tracking Events (CTE).

Taking a Physical Inventory – School Site
(Sample SOP)

PURPOSE: To determine the value of commercial foods, USDA Foods, and supplies on hand for use in determining food and supply costs. This information is also used for developing school district financial reports such as a Statement of Net Position (balance sheet).

SCOPE: This procedure applies to site child nutrition staff responsible for inventory control.

KEY WORDS: Inventory control, food cost, tracking

INSTRUCTIONS:
1. Follow State or local health department requirements.
2. Take inventory after all products have been received or issued for the day.
3. Count each product accurately.
4. Assign two staff members to take a physical count of food and supplies in storage on the last serving day of the month or at the end of the accounting period.
5. Count all items in storage or received and invoiced during the month (or at the end of the accounting period.)
6. Instruct one staff member to say the product name and quantity. **Include GTIN or product code and unit of measure.**
7. Instruct the second staff member to record the quantity of each item counted on an inventory sheet. **Include a pre-printed worksheet with the product names, GTIN, and unit of measure.**
8. **Turn cases or cans so that the product name and date received or used-by date is visible, and the oldest date product is in front.**
9. Count the inventory in the top left-hand side of the storage area, moving to the bottom right-hand side.
10. Note if a product is placed in the wrong location or in a position that compromises food safety, e.g., chemical over food products. Do not move items to a different location until after the inventory is completed.
11. Count all full cases and unopened sub-units such as cans and packages. Estimate the amount in open sub-units such as sugar, flour, or spices in 1/4, 1/2, or 3/4 unit.
12. Inventory products ordered by weight by the same weight units as ordered.
13. Count and write-in leftovers noting the use-by date on the inventory sheets.

THE UNIT SUPERVISOR WILL:

1. Train child nutrition staff on using the procedures in this SOP. Train different staff to take inventory, receive products, and issue food items.
2. Provide a pre-printed inventory worksheet without the expected quantities of each item. List items on the inventory worksheet in the same order as products are stored on shelves starting at the top left and working toward the bottom right-hand corner in each storage area.

MONITORING:

Child nutrition manager will utilize the Site Inventory Management and Tracking Checklist each month. (Note: This document may be found in the Appendices.)

CORRECTIVE ACTION:

Use the SOP to retrain any child nutrition staff found not following the standard operating procedures.

VERIFICATION AND RECORD KEEPING

1. Child nutrition staff will record the name and quantity count of the food items on the Physical Inventory Worksheet.
2. The child nutrition manager will verify that appropriate corrective actions are being taken by reviewing, initialing, and dating the inventory control section of the Site Inventory Control checklist.
3. Update a perpetual inventory record with physical inventory count.

DATE IMPLEMENTED: _____BY:_____

DATE REVIEWED: _____BY: _____

DATE REVISED: _____BY: _____

Standard Operating Procedures

SAY: Standard operating procedures (SOPs) can help ensure consistent results in the processes that are implemented to manage inventory and improve product traceability. They should be updated or developed for inventory management and food tracking. SOPs can
  • improve processes,
  • improve compliance with regulations and policies,
  • clarify and improve staff performance, and
  • provide content for training programs.

Because the concept of tracking inventory may be new to you, updating SOPs or creating new ones will ensure that staff will consistently handle inventory in a manner that controls cost, improves productivity, and provides safe products with consistent quality.

ASK: Does anyone have any questions on what we have covered?

DO: Answer questions to the best of your ability. If there are questions you cannot answer, tell the participants you will find out the answer and get back with them.

SAY: The last activity for this lesson is about best practices and implementing them at your school.

DO: Read the instructions and let the participants work on this by themselves.

SHOW SLIDE: *Activity: Lesson 2 Best Practices*

ACTIVITY: Lesson 2 Best Practices

Materials: Lesson 2 Best Practices worksheet
Time: 5 minutes

Instructions: Make a list of best practices for receiving and storing products that you learned in this lesson. List ways you can apply today's information to improve the recordkeeping and tracking procedures in your school. Take about 3 minutes to list the best practices. When everyone has completed their list, spend about 2 minutes asking for volunteers to share one of their best practices. There are no right or wrong answers to this activity.

Lesson 2 Best Practices

Instructions: Make a list of best practices for receiving and storing products that you have learned in this lesson. List ways you can apply today's information to improve the recordkeeping and tracking procedures in your school.

_____

_____

_____

_____

_____

_____

_____

_____

_____

Lesson 3:
Controlling Inventory Cost

Objective: Explain the importance of an accurate inventory system and how cycle menus impact controlling inventory cost.

SHOW SLIDE: *Lesson 3: Controlling Inventory Cost*

Introduction

SAY: Inventory is a major asset that helps the menu planner with tasks such as menu planning and staying within budget. Therefore, maintaining accurate inventory records is a major management tool that has multiple benefits. Keeping extra inventory on hand ties up the school district's funds. Good inventory management is crucial in the school nutrition program. However, unlike money in a bank, inventory of food and supplies does not earn interest. For this reason, school districts must limit the amount of inventory each school keeps on hand.

SHOW SLIDE: *Steps to Controlling Inventory*

SAY: To control your inventory cost, you must first control your inventory. Inventory control can be accomplished in a few steps.
 • Develop a system to track and record inventory.
 • Develop and implement procedures for ordering.
 • Develop standard operating procedures (SOPs) for receiving deliveries.
 • Determine how often and who will take inventory.
 • Analyze the inventory data and identify needs for improvement.

Cycle Menus

ASK:
 • How many of you use cycle menus in your school?
 • Why do you think cycle menus are important for inventory management?

DO: Allow time for two or three participants to respond after each question.

SHOW SLIDE: *Cycle Menus*

FEEDBACK:
- different each day
- save time
- allow menu planner to offer a variety of choices
- control food cost
- reduce storage costs
- reduce food waste
- can be seasonal (offering a different cycle each season)
- make it easier to forecast food needs
- predict the quantity of each item needed using sales and production history
- plan for a small amount of each item leftover to ensure all students have the same choices
- forecast batch cooking needs
- freeze usable leftovers to serve the next time the cycle is repeated
- record production projections and leftovers to be used on the production record for the next menu cycle immediately after completing each day's production record

SAY: Menu planning is the foundation of inventory control because the menu establishes what items are needed and how frequently they are going to be used. Effective menu planning requires skill to ensure that menus are cost-effective and popular with customers. In addition, the menus must meet nutrition and program guidelines.

Using a cycle menu controls inventory by making the items and quantity needed predictable. When serving the same items together, a pattern emerges. This pattern can be used to predict what customers will purchase. The cycle menu helps managers improve forecasting. The menu consists of more than reimbursable meals, such as á la carte items. Menu planning and ordering should be carefully planned.

Having enough stock on hand for production is essential. When products are substituted due to insufficient stock, historical records cannot be used to forecast production. Therefore, current records will not be useful for forecasting. This lack of information often begins a cycle of inaccurate forecasting that is difficult to break.

Inventory Turnover and Number of Days on Hand

SHOW SLIDE: *<u>Inventory Turnover</u>*

SAY: Inventory can make or break your program. Inventory turnover is the number of times inventory is used in a period. It can be used to determine if a school is holding too much inventory. For example, a school that receives a weekly delivery for most products should have a turnover rate of once every 7-10 days or 2-3 times a month. Some items, such as spices and seasonings, have a long shelf life, but it is important to order these items in quantities that will be used in a reasonable time. The goal of inventory management is to control food and supply costs. Inventory rate indicates a school's ability to control inventory levels.

ASK: What happens when inventory is not accurate?

FEEDBACK:
- incorrect food cost
- possible theft
- money is tied up in food instead of other areas where it may be needed
- unhappy customers

ASK: How often do you take inventory?

DO: Accept all reasonable answers.

FEEDBACK: Physical inventory should be taken at least once a month. If you suspect theft, you may want to monitor your inventory more often.

SAY: Inventory levels are usually expressed as days of inventory or inventory turnover rate. Your director or supervisor is responsible for determining the number of days of inventory and the inventory turnover rate for your school. Check with your director or supervisor to find out the number of days of inventory you should have on hand and the recommended turnover rate for your school. Each month your director or supervisor should be able to tell you the number of days of inventory you had in stock at the end of the last month and your current turnover rate. You can use this information to evaluate your inventory levels and adjust your ordering. If the turnover rate is low and the number of days of inventory is higher than the recommended levels, it means that inventory needs to be reduced or used.

The best way the manager can reduce inventory is to use food and supplies from inventory rather than continuing to purchase new items. The actual inventory should be reviewed before placing an order.

When taking a physical inventory, technology can improve the process. The simplest system provides:
• items listed in the order of storage areas,
• quantities on hand,
• unit pricing, and
• total inventory value.

More sophisticated systems allow the user to scan in bar codes for items and type in quantities. Both will lead to faster and more accurate inventory counting than traditional methods.

Food Cost/Usage per Meal

Objective: Calculate food cost, inventory turnover, and days of inventory on hand.

SHOW SLIDE: *Calculating Food Cost #1*

SAY: Food costs may be calculated in two ways.
1. Calculate the total food used from daily storeroom requisitions. This method may be useful when using a perpetual inventory system and provides an actual food cost associated with the day's menu.

SHOW SLIDE: *Calculating Food Cost #2*

SAY:
2. Another method is using monthly inventory values and food purchases. When inventory values are used to calculate food costs, timing of monthly physical inventories should coordinate with invoice processing. Invoiced items are included in the ending inventory and the food and supplies purchased for the month.

Our next activity is **Calculating Food Cost and Inventory Turnover Rate**.

DO: Read the instructions. Have the participants work together as table teams to fill in the chart and answer the questions.

SHOW SLIDE: *Activity: Calculating Food Cost and Inventory Turnover Rate*

ACTIVITY: Calculating Food Cost and Inventory Turnover Rate

Materials: Calculating Food Cost and Inventory Turnover Rate worksheet
Time: 10 minutes

Instructions: Using the information in the scenario, calculate the food cost for East Middle School and West Middle School. Work together in your table teams to determine how many days of inventory both schools have on hand as of March 31. How many times did the inventory turnover at each school? Answer the questions that follow. Allow the participants 5 minutes to complete the activity and 5 minutes to review the answers.

Calculating Food Cost and Inventory Turnover Rate Answer Key

Scenario:

Central School District has two middle schools, East Middle and West Middle. The district director plans a 3-week cycle menu for both middle schools. Each school receives a weekly delivery by a distributor of both commercial and USDA Foods. They receive twice-a-week deliveries for bread and milk.

On February 28, the last serving day of the month, the managers in both schools took a physical inventory of their commercial and USDA Foods. The value of East Middle School's inventory was $5,525, and West Middle School's total inventory was $6,985.

During March, East purchased $8,900 in food and received $750 in USDA Foods. West purchased $4,300 in food and received $250 in USDA Foods. There were 23 serving days during the month. On March 31, both managers took another physical inventory. East's total inventory was $4,440, and West's total inventory was $7,120.

East Middle School	West Middle School
Step 1	**Step 1**
Beginning Inventory 3/1 $ **5,525**	Beginning Inventory 3/1 $ **6,985**
+ Food Purchases/USDA $ **9,650**	+ Food Purchases/USDA $ **4,550**
- Ending Inventory 3/31 $ **4,440**	- Ending Inventory 3/31 $ **7,120**
= Food Cost $ **10,735**	= Food Cost $ **4,415**
Step 2	**Step 2**
Food Cost $ **10,735** ÷ 23 Serving Days	Food Cost $ **4,415** ÷ 23 Serving Days
= Daily Food Cost $ **466.74**	= Daily Food Cost $ **191.96**
Step 3	**Step 3**
Ending Inventory $ **4,440**	Ending Inventory $ **7,120**
÷ Daily Food Cost $ **466.74**	÷ Daily Food Cost $ **191.96**
= Days of Inventory on Hand **9.5**	= Days of Inventory on Hand **37.1**
Step 4	**Step 4**
# of serving days **23**	# of serving days **23**
÷ Days of Inventory on Hand **9.5**	÷ Days of Inventory on Hand **37.1**
= Inventory turnover rate **2.4**	= Inventory turnover rate **0.62**

Questions:

1. Does East Middle School have an acceptable days of inventory on hand?
   a. Yes
   b. No
   c. Not enough information

2. Which site has the best days of inventory on hand?
   a. East Middle School
   b. West Middle School
   c. Both have similar days of inventory on hand
   d. Not enough information

3. Does West Middle School have an acceptable inventory turnover rate?
   a. Yes
   b. No
   c. Not enough information

4. Which site has the best inventory turnover rate?
   a. East Middle School
   b. West Middle School
   c. Both have similar "inventory turnover rate"
   d. Not enough information

5. What is the beginning inventory for April at East Middle School?
   a. $7,120
   b. $4,415
   c. $4,440
   d. $6,985

6. What is the beginning inventory for April at West Middle School?
   a. $7,120
   b. $4,415
   c. $4,440
   d. $6,985

ASK: Does anyone have any questions on what we have covered?

DO: Answer questions to the best of your ability. If there are questions you cannot answer, tell the participants you will find out the answer and get back with them.

Perishable Foods

SHOW SLIDE: *Perishable Foods*

ASK: Who can tell me what perishable foods are?

FEEDBACK: Perishable foods are food items that have an expiration date or food that will go bad if not eaten or used in a certain amount of time. Two examples are milk that has soured or bananas that are too soft or mushy.

SAY: Inventory management systems, first-in/first-out (FIFO), and first-expired/first-out (FEFO) are tracking systems that are most often used with perishable food items. In school nutrition programs, the ideal inventory management system is to produce the right amount of food items, in the right quantity, at the right time.

Tracking the shelf life of perishable foods requires planning, documentation, and an inventory control system. The inventory control system will help guard against waste and financial loss caused by letting the best-used date expire.

ASK: Can anyone tell me some of the strategies they use in their school district to guard against perishable foods going bad?

FEEDBACK:
• Establish a stock control policy and train the staff who work with perishable inventory.
• Consider storage conditions. Some perishables need protection from heat and light, or they may need refrigeration.
• Identify expiration dates of perishable foods when received.
• A color-coding plan may be used to identify which food item to use first. If different color dots are used, change the color to correspond with the date the food is received. The color of the dots can change each week. Make a chart to indicate the day and/or week each dot represents and post it at the storage area.
• Develop a plan for physical FIFO or FEFO stock rotation.
• Visually inspect perishable inventory. Use the food items that will spoil first.

Recordkeeping

Objective: Identify recordkeeping practices for keeping accurate records and tools to maintain accuracy.

SHOW SLIDE: _**Recordkeeping**_

SAY: The manager can use inventory records to:
- provide accurate information on food and supplies in stock,
- determine purchasing needs,
- provide data for food cost control, and
- control theft.

Recordkeeping is a basic requirement for inventory management. Without accurate records of foods received, issued, and used, the manager cannot manage food production or meet meal pattern requirements. Inventory records provide the manager with current and reliable information on food cost that is then used to make day-to-day decisions.

With good inventory records, the manager
- knows the food and supplies that are in stock,
- can determine the food and supplies that should be ordered to meet production needs,
- has information for food cost control, and
- can control theft.

Food and supplies account for 40% or more of program revenues and warrant the time it takes to keep adequate and accurate records of products. In order to have a complete picture or audit trail, a good recordkeeping system needs to include menus, orders, receiving records, requisitions, production records, and point-of-sale or serving records. Each type of record has a specific purpose; however, collectively, they lay the groundwork for internal traceability for each food item. The handouts, **Damaged or Discarded Product Log** and **Inventory Control Sheet**, can help you control the inventory at your school and determine how much you have on hand.

Damaged or Discarded Product Log

Instructions: School nutrition employees will record the product name, quantity, action taken, reason, initials, and date each time a food or food product is damaged and/or will be discarded. The school nutrition manager will verify that school nutrition staff are discarding damaged food properly by visually monitoring school nutrition staff during the shift and reviewing, initialing, and dating this log daily. Maintain this log for a minimum of 1 year.

Date	Time	Vendor or School	Product Name	Quantity	Corrective Action Taken	Reason	Initials/Date	Manager Initials/Date

Source: Institute of Child Nutrition. (2016). *Food safety SOP resources*. Retrieved from https://theicn.org/icn-resources-a-z/standard-operating-logs/

Inventory Control Sheet

Name of Site: _____   Manager: _____

On Site: Yes _____ No: _____   Central Kitchen: Yes: _____ No: _____

Inventory Period: ___/___/___ to ___/___/___   Beginning Inventory: $_____

Food Item	Purchase Unit – Size & Description (case, bag, can, lb)	# of units on hand	Unit Cost	Total Cost
			$	$
			$	$
			$	$
			$	$
			$	$
			$	$
			$	$
			$	$
			$	$
			$	$
			$	$
			$	$
			$	$
			$	$
			$	$
			$	$
			$	$
			$	$
			$	$
			$	$
			$	$
			$	$
		Page_____ Total		$

Source: Institute of Child Nutrition. (2016). *Food safety SOP resources*. Retrieved from https://theicn.org/
icn-resources-a-z/standard-operating-logs/

SAY: Many point-of-sale (POS) systems have an inventory recordkeeping module available. Managers can check with their director to see if the POS you are using has this module, and if you have access to it.

Removing or issuing food or supplies is another point where controls are needed. Allowing several different staff to remove products from storage areas decreases efficiency and increases the potential for theft. Practicing FIFO or FEFO stock rotation and training staff to check "use-by date" or delivery date to ensure older products are used first are two best practices your staff can learn to use. Look in your workbook at the handout, **Storeroom Purchases & Disbursements**. It can help you keep track of the inventory.

Storeroom Purchases and Disbursements

Date	Food Items	Purchase Unit (case, bag, can, lb)	Quantity In	Quantity Out	# of Units on Hand	Unit Cost	Total Cost
						$	$
						$	$
						$	$
						$	$
						$	$
						$	$
						$	$
						$	$
						$	$
						$	$
						$	$
						$	$
						$	$
						$	$
						$	$
						$	$
						$	$
						$	$
	Inventory Total (page ____)					$	$

Source: Institute of Child Nutrition. (2016). *Food safety SOP resources.* Retrieved from https://theicn.org/icn-resources-a-z/standard-operating-logs/

SHOW SLIDE: *Recordkeeping and Production Records*

SAY: Production records and/or storeroom requisitions will verify items used. Keeping records of food in storage is critical for maintaining an accurate inventory count. The specific product code number or GTIN should be listed on the requisition along with the initials of the person(s) who removed the stock. For improved traceability, lot numbers should also be listed. Food and supplies that are delivered directly to production or serving areas rather than storage areas, such as milk, must also be recorded on a requisition. Requisitions can also be used for completing production records.

All staff should review the menu and standardized recipes at least one day in advance and provide a written list of items needed or a requisition. A staff member trained in issuing food and supplies, gathers the requested items and places them on carts, checks items off the list, and delivers to each work area. This method requires sufficient refrigeration storage in the production areas to keep cold foods at the proper temperature during production. If cold storage is not available, multiple requisitions with the addition of delivery time may be needed to accommodate batch-cooking methods.

SHOW SLIDE: *Ingredient Rooms and Production Areas*

SAY: Ingredient rooms increase control of inventory by assigning a person(s) tasks related to pulling inventory, as well as weighing and measuring all ingredients needed for the day's production. They are effective in high volume kitchens and centralized production facilities where centralizing equipment is needed to weigh and measure food. Two benefits of an ingredient room are that they can save time and improve accuracy.

When there is a small staff or insufficient cold storage in the production areas, staff obtain products from storage areas, write down products removed, and sign a storeroom requisition. This system requires that all staff receive training on stock rotation, safe lifting, and recordkeeping.

Loss Prevention

SHOW SLIDE: *Loss Prevention*

SAY: Loss of inventory for any reason increases food and supply costs.

ASK: Has your school experienced a loss of inventory?

DO: Allow 3 or 4 participants to answer.

SAY: Some causes of inventory loss may include:
- **Spoilage caused by food kept too long (beyond useful life) or is improperly stored**
  Food that is not rotated and/or properly stored will spoil and result in loss of inventory. Using best practices for storage will prevent loss of product.

- **Carelessness with supplies such as silverware and small dishes**
  Students and dish room staff may be careless when removing and discarding paper
  or disposable waste from trays and may remove silverware and small dishes. When
  these small items are thrown away, it results in substantial costs over a school year.
- **Customer, staff, or distributor theft**
  Although most people are honest, good foodservice management practices include
  controls to prevent theft. Control procedures should be planned to eliminate the
  opportunities for theft by employees, other persons who may have access to the
  kitchen, and customers on the service line.

Food and supply products may be lost due to distributor theft in the form of ordered
items not delivered, delivery of poor quality items, or substitution of a product without
authorization. Although everyone may be careful about locking doors, other openings into
the production areas, such as the windows between the dish room or service lines and the
cafeteria, maybe overlooked as points of entry. Unsecured kitchen access leaves supplies
and small equipment that is stored in the kitchen vulnerable to theft. Although their
disappearance may seem insignificant, replacement costs can mount up over time.

ASK: Does anyone remember the formula for calculating the cost of food used?

FEEDBACK: The formula for calculating food cost is

$$\begin{array}{r} \text{Beginning inventory} \\ + \text{ food purchases} \\ \underline{- \text{ ending inventory}} \\ \text{cost of food used} \end{array}$$

SAY: This method provides an accurate monthly cost. However, it will not provide enough
information to identify the days that food costs are too high or what portion of the food
cost can be attributed to waste or shrinkage. Post costing menus will help determine if
high food costs can be attributed to incorrect forecasting or waste.

The next activity is a continuation of the previous activity and designed to help you
understand the importance of calculating food costs and knowing the cost of a meal.

DO: Read the instructions. Participants should work on their own this time. Give the participants
about 5 minutes to complete the activity and 5 minutes to go over the answers.

SHOW SLIDE: <u>Activity: Calculating Food Cost and Cost per Meal</u>

ACTIVITY: Calculating Food Cost and Cost per Meal

Material: Calculating Food Cost and Cost per Meal worksheet
Time: 10 minutes

Instructions: Using the worksheet from the previous activity, calculate Step 5 to determine
the cost per meal. Then answer the questions that follow. Work on your own to complete this
activity. Take about 5 minutes to complete the activity and 5 minutes to review the answers.

Calculating Food Cost and Cost per Meal

East Middle School		West Middle School	
Step 1		**Step 1**	
Beginning Inventory 3/1	$ 5,525	Beginning Inventory 3/1	$ 6,985
+ Food Purchases/USDA	$ 9,650	+ Food Purchases/USDA	$ 4,550
- Ending Inventory 3/31	$ 4,440	- Ending Inventory 3/31	$ 7,120
= Food Cost	$ 10,735	= Food Cost	$ 4,415
Step 2		**Step 2**	
Food Cost $ 10,735 ÷ 23 Serving Days		Food Cost $ 4,415 ÷ 23 Serving Days	
= Daily Food Cost	$ 466.74	= Daily Food Cost	$ 191.96
Step 3		**Step 3**	
Ending Inventory	$ 4,440	Ending Inventory	$ 7,120
÷ Daily Food Cost	$ 466.74	÷ Daily Food Cost	$ 191.96
= Days of Inventory on Hand	9.5	= Days of Inventory on Hand	37.1
Step 4		**Step 4**	
# of serving days	23	# of serving days 23	
÷ days of inventory on hand	9.5	÷ days of inventory on hand	37.1
= Inventory turnover rate	2.4	= Inventory turnover rate	0.62
Step 5		**Step 5**	
Daily Food Cost	$ 466.74	Daily Food Cost	$ 191.96
÷ Meals Prepared	250	÷ Meals Prepared	110
= Cost per meal	$ **1.87**	= Cost per meal	$ **1.74**

1. Which school had the lowest food costs per meal?
     a. East Middle School
     b. West Middle School

2. When the ending inventory was taken at East Middle School on March 31st, a mistake was made in the February inventory. The person recording the stock on hand failed to record 14 cases of deluxe pre-cooked chicken breast at the cost of $82.00 per case. Calculate the value of this mistake to determine the actual value of the ending inventory for March 31st for East Middle School. Recalculate the food cost per meal.
     Beginning Inventory $ 5,525
     + Food Purchases/USDA $ 9,650
     - Ending Inventory $ **4,440 + 1,148**
     = Food Cost $ **9,587**

Food Cost $ **9,587** ÷ **23** Serving Days
= Daily Food Cost $ **416.83**

$416.83 Daily Food Cost
÷ 250 meals prepared
= Cost per meal $ **1.67**

3. Which school has the lowest food costs per meal?
   a. East Middle School
   b. West Middle School

ASK: Does anyone have any questions before we move on to forecasting?

DO: Answer questions to the best of your ability. If there are questions you cannot answer, tell the participants you will find out the answer and get back with them.

Have the participants complete the **Lesson 3 Best Practices** activity.

ACTIVITY: Lesson 3 Best Practices

Materials: Lesson 3 Best Practices worksheet
Time: 5 minutes

Instructions: Make a list of best practices for receiving and storing products that you learned in this lesson. List ways you can apply today's information to improve the controlling inventory cost procedures in your school. Take about 3 minutes to list the best practices. When everyone has completed their list, spend about 2 minutes asking for volunteers to share one of their best practices. There are no right or wrong answers to this activity.

Lesson 3 Best Practices

Instructions: Make a list of best practices for receiving and storing products that you have learned in this lesson. List ways you can apply today's information to improve the controlling inventory cost in your school.

_____

_____

_____

_____

_____

_____

_____

_____

SAY: Before we begin the next lesson, I want to divide you into new learning groups. Start on this side of the room (point to one side or begin in the middle) and count off. All the ones form a new group, twos another, threes another, etc.

Let's take a 10-minute break.

Lesson 4
Forecasting

Objective: Recognize the importance of an accurate inventory and the impact it has on forecasting.

SHOW SLIDE: _**Lesson 4: Forecasting**_

Introduction

SAY: Forecasting is the process of analyzing current and historical data to determine future trends. In child nutrition, it involves predicting and estimating the goods, works, and services needed in specified areas for the upcoming year and/or assessing your needs by reviewing past and current purchasing activities. An ordering system can be used to assist the manager with forecasting. One acceptable ordering system you can implement to prevent over-ordering is a par value system that establishes a maximum quantity to keep on hand. The par value is the amount needed to fulfill menu requirements for one ordering period, usually one week, plus a small amount for safety stock. Some factors to consider when setting up par levels is storage space, frequency of deliveries, vendor minimum delivery amounts, and value of the product. Meaning, you do not want high-cost items sitting in inventory.

ASK: How does forecasting affect inventory?

FEEDBACK:
- prevents over/under ordering
- helps maintain food costs
- ensures you receive the correct items
- assists distributor to maintain stock to prevent substitutions

ASK: What effects can result from either over or under ordering?

FEEDBACK:
- Under ordering can lead to running out of menu items, which may lead to customer dissatisfaction and possible loss of customers.
- Reduction of other items needed for menu
- Over ordering equals money sitting on your shelves, can lead to waste, spoilage, or theft, which also costs you money

SAY: Accurately forecasting orders is not a simple task. It is a work in progress that needs to be maintained weekly.

Ordering

> **Objective:** Design an inventory management plan.

SHOW SLIDE: *Ordering and Forecasting*

SAY: When placing an order using a par level system, the order is the amount needed to bring inventory back to the maximum or par level. If an item is served more than once between deliveries, you must also consider how much will be used before the order is received, such as milk. Inventory on hand should be checked before placing the order and subtracted from the total quantity needed. A par stock method works well for items where consistent amounts are used each week or order period. Par values on products like milk, paper trays, or even cereal need to be monitored throughout the year and adjusted when menus and participation change.

Forecasting

SAY: Forecasting can greatly affect inventory control. When forecasting is not accurate, and products are ordered in excess:
   • too much money is tied up in inventory, which reduces cash flow;
   • there is more opportunity for spoilage;
   • the possibility of theft is increased;
   • more products become obsolete; and
   • the quality of products deteriorates over time.

SAY: Predictability improves inventory control for everyone. It also allows manufacturers to lower costs by producing only the quantity of products needed by end-users. This process helps distributors stock sufficient quantities of products without overstocking. When schools order larger quantities or different products than vendors expect, items may be out of stock.

SHOW SLIDE: *Ordering and Forecasting Best Practices*

SAY: There are several best practices to help reduce having out of stock food items:
   • planning cycle menus,
   • ordering based on menus,
   • sharing menus and expected order quantities with vendors in advance,
   • minimizing menu substitutions, and
   • maintaining a low inventory of menu items, so ordering reflects usage.

   If you are placing an order based on the menu, then the quantity of the product to be ordered is the amount needed to fulfill the menu or the amount needed to produce enough for your customers. Order guides are designed to match weekly menus. You still consider the amount committed before the order arrives, and the amount of "inventory on hand." The only difference is the item would not be ordered until right before it is on the menu.

Production

Objective: Explain the impact production records have on inventory control.

SHOW SLIDE: *__Production__*

SAY: Production records impact inventory control by ensuring correct products are used, portion sizes are correct, and waste from production is controlled. If using cycle menus, production records can be pre-printed with the following information:
- product codes/GTIN,
- recipe numbers,
- serving size, and
- serving utensils required.

All recipes used should be standardized for consistent yields. Recipes should be extended to the number of servings needed. Match recipe extensions to standard serving pan sizes to discourage overproduction. In some cases, this may mean purchasing smaller pans such as half pans for lasagna or half sheet pans for pizza. Using standard or whole production measures on production records and recipe extensions helps control waste. Planning the use of whole cans rather than specifying a partial can allows production staff to use the entire contents rather than saving the remainder as a leftover. Production records are not just a requirement; they are also an important management tool.

ASK: What other benefits do you see the production records providing?

FEEDBACK:
- ensures enough food was planned
- provides the number of meals prepared and served for reimbursement
- creates a history of customer likes/dislikes
- records leftovers to be used next time in the cycle menu
- determines if menu item should remain on menu.

DO: Review the sample production record with the group, and have them identify the important serving numbers used for ordering purposes.

SAY: Look at the **Lunch Production Record Sample** in your workbook. You see a record similar to this production record every day.

ASK: Why is the production record so important to the school nutrition program?
FEEDBACK:

- a document that USDA requires schools to keep
- can be used to control high-quality food production
- complete production information
- reviewed by the State agency to verify compliance with USDA regulations
- helps the manager make better plans the next time the menu is served

ASK: Looking at the production record, what would you need to know if you were placing an order for this menu?

FEEDBACK:

- Portion size
- Number of planned servings

Lunch Production Record Sample

Date: April 15	Planned Milk	
Site: Rainy Day Middle School	1% Unflavored	100
Manager: Joe Middleton	FF Unflavored	100
	FF Flavored	100

	Meals Planned	Meals Served
Student Meals	260	100
Adult Meals	40	100
Total Meals	300	100

Menu Item	Recipe or Product #	Portion Size	Planned # of Servings	Total Planned Quantity	Meat/meat alt	Grain/Bread	Fruit	Dark Green Veg	R/O veg	Legumes	Starchy Veg	Other Veg	Additional Veg	Actual # of Servings	Actual Quantity Used	After Cook	Begin Service	End Service	Production Notes
Catfish Fillets		1 fillet	150		2 oz	1 oz													
Chicken Nuggets		5 pieces	150		2 oz	1 oz													
Garden Salad		1 c	100					½ c	¼ c			¼ c							
Cole Slaw		¼ c	75									¼ c							
Broccoli and Carrots w/ Dip		½ c	150					¼ c	¼ c										
Seasoned Corn		½ c	100								½ c								
Steamed Broccoli		¼ c	80					¼ c											
Apple Wedges		½ c	150				½ c												
Strawberry and Bananas		½ c	150				½ c												
Whole Wheat Rolls		1 oz	125			1 oz													
Tarter Sauce		12 g	150																
Ranch Dressing FF		1.5 oz	250																
Barbeque Sauce		1.5 oz	75																
Catsup		9 g	100																

Component Contribution — 6-8 Grade/Group

Temperatures

Note: List the amount of leftovers or discarded. If leftover, label and date.

        • Grade group

SAY: Let's do an activity where you help the manager of Rainy Day Middle School place an
        order.

DO: Read the instructions and ask the participants to work together at their table.

SHOW SLIDE: *Activity: Developing an Order*

ACTIVITY: Developing an Order

Materials: Developing an Order worksheet
Time: 10 minutes

Instructions: Rainy Day Middle School places its food order on Monday and receives the
previous weeks' order on Monday. Mr. Middleton, the manager, checks the inventory on
Thursday to begin making his order. Look at the order guide and help Mr. Middleton develop
his order for the following menu. The average daily participation is 260 student lunches and 40
adult lunches. Milk is delivered on Monday and Thursday. Take about 5 minutes to complete
the activity. Spend about 5 minutes going over the answers.

Developing an Order

Product Name	Product #	Pack Size	Monday			Thursday		
			O/H	PAR	Order	O/H	PAR	Order
Meat/Meat Alternate								
Catfish, Whole Grain-Rich Fillets	100201	4/10 lbs bags		3 cases		½ case	3 cases	**3 cases**
Chicken Nuggets Whole Grain-Rich	110462	4/2.5 lbs case		4 cases		2 cases	7 cases	**5 cases**
Vegetables								
Baby Carrots, Fresh	100352	12/2 lbs bags/cs		1 case		¾ case	1 case	**1 case**
Broccoli Florets, Fresh	110480	38/6 lbs bags/cs		1 case		8 bags	1 case	**1 case**
Broccoli, Frozen	110473	6/5 lbs case		1 case		4/5 lb boxes	2 cases	**2 cases**
Corn, Whole Kernel	100313	6/#10 cans		3 cases		1 ½ cases	6 cases	**5 cases**
Cole Slaw Mix	100343	2/5 lbs bags/cs		1 case		¼ bag	1 case	**1 case**
Fruit								
Apples, Fuji, Fresh	100522	40 lbs		1 case		¼ case	1 case	**1 case**
Strawberries, Sliced, Frozen	100254	6/5 lbs bags/cs		1 case		4 bags	1 case	**3 cases**
Bananas	110161	40 lbs		1 case		5 lbs	1 case	**1 case**
Breads								
Frozen Whole Wheat Rolls	100466	180 rolls/case		4 cases		2 ¾ cases	4 cases	**2 cases**
Dairy								
Milk 1% unflavored	100011	50/8 oz /crate		21 crates		21 crates	21 crates	**0**
Milk fat-free unflavored	100012	50/8 oz /crate		21 crates		21 crates	21 crates	**0**

Product Name	Product #	Pack Size	Monday			Thursday		
			O/H	PAR	Order	O/H	PAR	Order
Milk fat-free flavored	100013	50/8 oz /crate		21 crates		21 crates	21 crates	**0**
Condiments								
Tartar Sauce 9 g	100388	500 pkt/ case		0 case		¾ case	1 case	**1 case**
Ranch Dressing FF 1.5 oz	100350	84 pkt/ case		4 cases		1 case	7 cases	**6 cases**
Barbeque Sauce 9 g	100340	96 pkt/ case		2 cases		2 ¼ cases	7 cases	**5 cases**

Product Name	Product #	Pack Size	Monday			Thursday		
			O/H	PAR	Order	O/H	PAR	Order
Catsup 9 g	110187	1000 pkt/ case		2 cases		½ case	2 cases	**2 cases**

SAY: All orders either must be in writing, in print copy, or electronically submitted.

Note the products that are set aside as samples on the production record. Keep the samples for two weeks. Central kitchens should retain samples from each batch of products prepared and must periodically send random samples to a lab for microbiological analysis.

State agencies and USDA are involved in recalls of USDA Foods. However, they are not involved in recalls of commercial foods and USDA Foods that have received further processing. The same types of information, such as GTIN and lot numbers, should be collected and recorded for all products.

ASK: Does anyone have any questions before we move on to purchasing?

DO: Answer questions to the best of your ability. If there are questions you cannot answer, tell the participants you will find out the answer and get back with them.

Purchasing

SHOW SLIDE: *Purchasing*

SAY: USDA requires participating schools in the National School Lunch Program/School Breakfast Programs (NSLP, SBP) to follow competitive procurement bid processes. These processes require schools to submit nutritional specifications for each item they want to purchase, ensuring all products meet regulations. Although this is usually done at the district level, item specifications will assist managers in purchasing the correct items.

Look at the USDA Agricultural Marketing Service specification, **FEDERAL PURCHASE PROGRAM SPECIFICATION (FPPS) FOR PORK LOIN ROAST, BONELESS, FROZEN (FPPS-PLR-2018).** This handout is an example of a bid specification with nutritional requirements.

Notice some of the items:
 • Effective date is November 2018 – the changes to the previous specification are noted in blue – this specification supersedes the previous
 • Number 110 is a description of the food product.
 • Number 300 lists food safety requirements.
 • Number 420 describes the meat component in detail.
 • Number 500 describes the processing procedures.
 • Numbers 610 indicates the fat content, and 620 expresses the sodium level requirements.

- Number 830 tells you how the product should be labeled.
- Number 833.3 indicates the traceability code.
- Numbers 824.1 through 910 are in blue, indicating a change since the previous requirements and became effective November 2018.

USDA

Agricultural Marketing Service

APPROVED

Agricultural Marketing Service (AMS)
Livestock and Poultry (LP) Program
Food Safety and Commodity Specification (FSCS)Division
Room 2628 S-Bldg, Phone: (202) 692-0342

FEDERAL PURCHASE PROGRAM SPECIFICATION (FPPS) FOR PORK LOIN ROAST, BONELESS, FROZEN (FPPS-PLR-2018)

Supersedes: FPPS-PLR-2018 August 2018 – Changes from previous requirements in **blue**

Effective: November 2018

100   ITEM DESCRIPTION

110   Pork Loin Roast, Boneless, Frozen – This item is as described in the Institutional Meat Purchase Specifications (IMPS) Item Number 414, Purchaser Specified Option (PSO) 3. Individual boneless roast units shall not be marinated, weigh 5.0 ± 0.75 pounds, and be vacuum packaged.

200   APPLICABLE DOCUMENTS

210   IMPS for Fresh Pork - Series 400, effective November 2014.

300   CHECKLIST OF REQUIREMENTS

310   All items shall be produced in accordance with Food Safety and Inspection Service (FSIS) regulations. The contractor's production plan, submitted to the FSCS Division, shall adhere to the following AMS Checklist of Requirements.

400   MATERIALS

410   The contractor's production plan shall include procedures to address conformance with the following material requirements.

420   MEAT COMPONENT

421   Pork derived from hog carcasses shall be the only meat component allowed. Pork
        derived from boar and sow carcasses is not permissible.

422   Domestic Origin – All pork shall originate from U.S. produced livestock as defined in
        the Master Solicitation for Commodity Procurements and Supplement.

423   Harvesting – Hogs shall be harvested in facilities that comply with the following
        requirements:

        Humane Handling – Hogs shall be humanely handled in accordance with all applicable
        FSIS regulations and AMS requirements.

        Spinal Cord Removal – All spinal cord tissue shall be removed during the harvesting
        process.

424   Pork – Pork shall comply with the following requirements:

        Traceability – Contractors are responsible for providing sufficient product traceability
        and shall have records to verify the source of raw materials used in each lot of product.

        Handling – All pork shall be maintained in excellent condition. The contractor's
        production plan shall include detailed production scheduling that addresses time and
        temperature controls necessary to maintain excellent condition of the pork.

        Lean Quality – Fresh-chilled pork shall be reasonably uniform in color (slightly two-tone
        color is permissible) ranging from light pink to red. The pork muscles shall not exhibit
        any evidence of pale, soft, and/or exudative conditions.

        Objectionable Materials – Pork shall be free of skin, bone, cartilage, organ tissue,
        significant glandular tissue, heavy connective tissue and foreign materials.

425   Mechanical Separation – Pork that is mechanically separated from bone with
        automatic deboning systems or advanced lean (meat) recovery (AMR) systems is not
        allowed.

500   PROCESSING

510   Processing Date – Pork loin roasts shall be processed into finished product form no
        more than 60 days prior to shipment.

511   Pork loin roasts shall be produced as outlined in **Section 100 – Item Descriptions**
        and as defined in IMPS Item Number 414, PSO 3.

512   Pork loin roasts shall have the belly strap removed.

513   Weight – Individual pork loin roasts shall weigh 5.0 ± 0.75 pounds each.

520   METAL DETECTION

521   All products shall be free of metal contaminants. Detection of stainless steel,
        ferrous, and non-ferrous (e.g., lead, copper, and aluminum) metals is required. The
        contractor's production plan shall identify and describe the equipment, location,
        detection procedure, sensitivity levels, frequency of equipment validation, and
        corrective action procedures.

600   FINISHED PRODUCT LIMITATIONS

610   The declared serving size, fat content and sodium level shall be stated on the nutrition
        facts panel on each label according to FSIS nutritional labeling regulations.

610   FAT

611   The fat content of the finished product shall not exceed 10 percent.

611.1   ((Declared Fat (g) / Declared Serving Size (g; reference amount customarily
        consumed (racc))) X 100) ≤ 10 percent.

612   External (subcutaneous) fat thickness of individual pork loin roasts shall be an
        average of one-eighth (⅛) in. (3 mm) with the maximum thickness at any one point not
        to exceed one-quarter (¼) in. (6mm).

620   SODIUM

621   Sodium level shall not exceed 70 mg per 100 gram basis

622   ((Declared Sodium Level (mg) X 100) / Declared Serving Size (g; racc)) ≤ 70.

700   STATE OF REFRIGERATION

710   Pork loin roasts shall be frozen to an internal temperature of not higher than 0°F
        (-17.8°C) within 72 hours from the time of final fabrication of the production lot.

800   PREPARATION FOR DELIVERY

810   PACKAGING

811   Individual pork loin roasts (5.0 ± 0.75 lbs. each) shall be placed into a flexible

immediate container and vacuum packaged.

820   PACKING

821   For material number 111015, twelve (12) individual pork loin roasts (5.0 ± 0.75 pounds each) shall be packed per shipping container with a net weight of 60 ± 4 pounds. For material number 111061, six (6) individual pork loin roasts (5.0 ± 0.75 pounds each) shall be packed per shipping container with a net weight of 30 ± 2 pounds.

830   LABELING

831   The shipping containers shall be in compliance with the National Motor Freight Classification, or the Uniform Freight Classification, as applicable. Both the immediate and shipping containers shall be labeled to include all information required by FSIS regulations, be illustrated in the contractor's production plan, and contain the following information:

832   Immediate Container Labels – Immediate container labels shall be commercially labeled (e.g. "Brand X") and contain the following information:

832.1   Product name.

832.2   Manufacturer name and address.

832.3   Ingredient declaration (including single ingredient products).

832.4   An allergen statement in a format which complies with the Food Allergen Labeling and Consumer Protection Act (FALCPA) for any product which contains milk, eggs, fish, crustacean shellfish, tree nuts, peanuts, soy or wheat;
e.g. Allergen: Contains _____.

832.5   A traceability code that includes information regarding production establishment, production date and production lot.

832.6   Nutrition Facts panel based on actual nutritional analysis of the product.

832.7   Cooking Instructions.

832.8   Safe handling instructions.

833.2   Applicable purchase order number.

833.3   A traceability code that is traced back to establishment number, production lot, and

date.

833.4   A nutrition facts panel based on actual nutritional analysis of the product.

833.5   The appropriate material number listed in the following table:

Packing Orientation	Material Number
12 roasts / 60 ± 4 pound case	111015
6 roasts / 30 ± 2 pound case	111061

832.8   Safe handling instructions.

832.9   A "Best-If-Used-By" date that is 180 calendar days from the date of production.

833   Shipping Container Labels – Shipping container labels will contain the following information:

833.1   USDA sh[...]hes high and appearing on the top of the container or on the principal [...]

833.6   Product Name: Pork Loin Roast, Boneless, Frozen

833.7   An allergen statement in a format which complies with the Food Allergen Labeling and Consumer Protection Act (FALCPA) for any product which contains milk, eggs, fish, crustacean shellfish, tree nuts, peanuts, soy or wheat;
e.g. Allergen: This product contains _____ .

840   CLOSURE

841   Shipping containers shall be closed by strapping, taping or gluing. When strapping is used, the initial closure (usually the bottom of container) shall be secured by the gluing or taping method.

850   PALLETIZED UNIT LOADS

851   All product shall be stacked on new or well-maintained pallets and palletized with shrink wrap plastic, unless otherwise specified in the solicitation. Pallet loads shall be

stacked in a manner that minimizes the overhang of the shipping containers over the edges of the pallets and exposes each shipping container's
principal display panel to facilitate certification examination

900   DELIVERY UNIT

910   For material number 111015, each delivery unit shall consist of 640 cases (7,680 individual pork loin roasts) with a net weight not to exceed 39,040 pounds. For material number 111061, each delivery unit shall consist of 1,280 cases (7,680 individual pork loin roasts) with a net weight not to exceed 39,040 pounds.

1000   DELIVERED PRODUCT

1010   SIZE AND STYLE OF CONTAINER

1011   Only one size and style of immediate and shipping containers shall be offered in an individual shipping unit.

1020   TEMPERATURE

1021   All products shall not exceed 0 °F at the time of loading, throughout shipment, and at delivery.

1030   SEALING

1031   Sealing - All products shall be delivered to AMS assigned destinations under seal with tamper proof, tamper resistant, serially numbered, high security seals that meet the American Society for Testing and Materials Standard (ASTM) F 1157-04 and/ or the International Organization for Standards (ISO) 17712-2010 as required under the Master Solicitation. Seals shall be >⅛th inch diameter cable, high-security bolt, or equivalent.

1100   PRODUCT ASSURANCE

1110   WARRANTY AND COMPLAINT RESOLUTION

1111   Warranty – The contractor shall guarantee that the product complies with all contractual requirements required under the Master Solicitation and the Supplement.

1112   Complaint Resolution – The contractor's production plan shall provide steps taken to resolve complaints received on the product (i.e. point of contact, cause and effect analysis, corrective and preventative actions taken, and product replacement).

1120   NON-CONFORMING PRODUCT

1121   The contractor shall have documented procedures that assure nonconforming product identification, segregation, and disposition in order to prevent misuse and that nonconforming product is not delivered to USDA. The plan must address 1) control and segregation of non-conforming product, 2) removal of any USDA markings, and 3) disposition of non-conforming product, including vendor documentation of final disposition (e.g., diverted to commercial production, or destroyed).

1130   CONTRACTOR CHECKLOADING

1131   Contractor shall perform checkloading examinations at the time of shipment and issue a contractor's certificate to accompany each shipment that includes all of the following information:

1131.1   Purchase Order Number/Purchase Order Line Item Number;

1131.2   Sales Order Number/Sales Order Line Item Number;

1131.3   Destination of shipment;

1131.4   Name of Product and applicable Material Number;

1131.5   Shipping Date;

1131.6   Production lot number(s) and date each lot was produced along with shipping container and immediate container code(s) and the code used that provides traceability to establishment number, production lot and date;

1131.7   Count of shipping containers and total projected net weight in each production lot;

1131.8   Identity of car or truck (car numbers and letters, seals, truck license, etc.) as applicable;

1131.9   Contractor certification that product conforms with the applicable specification (FPPS-PLR-2018);

1131.10   Count and projected net weight verified and;

1131.11   Signature of company official responsible for checkloading.
ASK: Why do item specifications need to be so detailed?

FEEDBACK:
- to ensure items meet USDA nutritional specifications as well as meal component contributions
- to ensure Buy American regulation is met as much as possible
- to ensure consistency with pack size and number of servings per case

ASK: Are there any questions about what we have covered today?

DO: Answer questions to the best of your ability. If there are questions you cannot answer, tell the participants you will find out the answer and get back with them.

*SHOW SLIDE: **Activity: Developing an Inventory Management Plan***

Objective: Design an inventory management plan.

SAY: The last activity is developing an Inventory Management Plan.

DO: Read the instructions, then ask the participants to work in their table teams to develop an inventory management plan. They can use any of the information they learned today and any of the handouts and forms in the activities and Appendix. They are to put their plan on a piece of chart paper and post it on wall space near their table group. Allow about 15 minutes for the participants to complete the activity. When everyone has finished, ask the groups to walk around the room, moving clockwise to review the other group's plans.

ACTIVITY: Developing an Inventory Management Plan

Materials: Developing an Inventory Management Plan worksheet
Time: 20 minutes

Instructions: Work in your table teams to develop an inventory management plan. Using the information you have learned today and any of the handouts and forms in the activities and Appendix, develop an inventory management plan. When you have completed the plan, put it on a piece of chart paper, and post it on wall space near your table group. Allow about

15 minutes for the participants to complete the activity. When everyone has finished, ask the groups to spend about 5 minutes and walk around the room, moving clockwise to review the other group's plans. There are no right or wrong answers to this activity.

Possible Answer

The plan may include:
- Training (all school nutrition staff): School district policies and procedures for inventory control, ICN's Inventory Management and Tracking Training, all necessary forms for inventory control, Employee Inventory Management Training Record

- Assign staff responsible for inventory (manager and 2 staff): School district policies and procedures for inventory control, ICN's Inventory Management and Tracking Training, all necessary forms for inventory control, Employee Inventory Management Training Record

- Recordkeeping (perpetual and physical and PAR levels): All forms necessary for taking and maintaining inventory control

- Receiving (incoming): Order printout/order guide and invoice to compare to the order, thermometer, pen/pencil, Vendor Check List, inventory control sheet, Damaged or discarded product log, obtain a credit receipt for missing or rejected products

- Storing (food, supplies, and chemicals): Inventory management checklist, inventory control sheet, receiving log, storeroom purchases and disbursements form

- Disbursements (outgoing): Production record/log, inventory control sheet, disbursement log, storeroom purchases, and disbursements form

• Tracking (in case of sickness or recall): Inventory control sheet with GTIN and Lot number of the product, storeroom purchases and disbursements form

Wrap Up

DO: Allow 10 minutes for participants to take the Post-Assessment. Collect all of the assessments before going over the correct answers. Make sure participants have put their identifying number in the upper right-hand corner of the page for comparison of learning. Once they have completed the post-assessment, collect them, and go over the answer key with the participants. While the participants are completing the post-assessment and evaluation, check the bikerack for any questions.

SHOW SLIDE: _Post-Assessment_

SAY: Now it is time to see how much you have learned. You will find the Post-Assessment on your tables. Make sure you put the same identifier on the top right-hand corner as you did for the pre-assessment. Complete the post-assessment and lay it to one side of the table when you are finished. (Instructor may choose a different way to collect the assessments.) When everyone is finished, we will go over the correct answers. Before you leave today, you may pick up a copy of the **Pre-/Post-Assessment Answer Key** to take with you.

Thank you for attending today's training. The Institute of Child Nutrition partners with USDA's Food and Nutrition Service (FNS) to develop and support training events like today's session. We want your feedback on this training program.

DO: Provide participants the training evaluation form. Make sure all participants have signed the Attendee Roster.

SAY: I have a Certificate of Completion for each of you for completing Inventory Management and Tracking training. Keep this record in your files.

Congratulations, and thank you for participating today! I hope you will keep learning.

SHOW SLIDE: *ICN on Social Media*

DO: Provide attendees with a Certificate of Completion.

Appendix

- Thermometer Calibration Log
- Vendor Checklist
- Employee Inventory Management Training Record
- Inventory Management Checklist
- Site Inventory Management and Tracking Checklist

Thermometer Calibration Log

Instructions: School nutrition staff will record the calibration temperature and corrective action taken, if applicable, on the Thermometer Calibration Log each time a thermometer is calibrated. The school nutrition manager will verify that school nutrition staff are using and calibrating thermometers properly by making visual observations of employee activities during all hours of operation. The school nutrition manager will review and initial the log daily. Maintain this log for a minimum of 1 year.

Date	Thermometer Being Calibrated	Temperature Reading	Corrective Action	Initials	Manager Initials/ Date

• Production Log
• Receiving Log

Vendor Checklist

Do your vendors meet your approval?

_____ Vendor delivers food or other supplies during agreed upon time frame.

_____ Driver is clean, courteous, and wearing a uniform.

_____ Driver does not smoke, eat, or drink while delivering.

_____ Driver does not waste time chatting with child nutrition staff.

_____ Driver works quickly to deliver food or supplies to appropriate area.

_____ Vendor truck is clean.

_____ Products have been shipped at appropriate temperature.

_____ Driver does not use vulgar language.

_____ Driver does not sexually harass child nutrition staff.

_____ Driver does not say anything negative about their company, your operation, or anyone or anything else.

_____ Vendor delivers complete order with few substitutions.

_____ Vendor follows appropriate policies on substitutions.

_____ Vendor has very few mis-picks or out-of-stock on the truck.

_____ Products are billed at the contract price.

_____ Products are shipped so that they can be used before expiration dates.

_____ Driver does not ask you to accept products that you did not order.

_____ Driver handles the products in such a way that he does not damage them.

Employee Inventory Management Training Record

Date: _____

Location: _____

Directions: Use this form to record inventory management training provided to employees. Maintain this record for a minimum of 1 year.

Employee Name	Length of Training	Training and Materials Provided

Source: Institute of Child Nutrition. (2018). *Employee inventory management training record*. Retrieved from
https://theicn.org/icn-resources-a-z/standard-operating-procedures/

INVENTORY MANAGEMENT CHECKLIST

Date_____ Observer_____

Instructions: Use this checklist daily. Determine areas in your operations requiring corrective action. Record corrective action taken and keep completed records in a notebook for future reference.

COLD HOLDING	Yes	No	Corrective Action
• Refrigerators are kept clean and organized.	☐	☐	_____
• Temperature of cold food being held is at or below 41 ºF.	☐	☐	_____
• Food is protected from contamination.	☐	☐	_____

REFRIGERATOR, FREEZER, AND MILK COOLER	Yes	No	Corrective Action
• Thermometers are available and accurate.	☐	☐	_____
• Temperature is appropriate for pieces of equipment.	☐	☐	_____
• Food is stored at least 6 inches above the floor or in walk-in cooling equipment.	☐	☐	_____
• Refrigerator and freezer units are clean and neat.			
• Proper chilling procedures are used.	☐	☐	_____
• All food is properly wrapped, labeled, and dated.	☐	☐	_____
• The FEFO or FIFO (First-expire/First-out or First-In/First-out) method of inventory management is used.	☐	☐	_____
• Ambient air temperature of all refrigerators and freezers is monitored and documented at the beginning and end of each shift.	☐	☐	_____

FOOD STORAGE AND DRY STORAGE	Yes	No	Corrective Action
• Temperature of dry storage area is between 50 ºF and 70 ºF or State public health department requirement.	☐	☐	_____
• All food and paper supplies are stored at least 6 inches above the floor.	☐	☐	_____
• All food is labeled with name and received date.	☐	☐	_____
• Open bags of food are stored in containers with tight fitting lids and labeled with common name.	☐	☐	_____

FOOD STORAGE AND DRY STORAGE   **Yes**   **No**   **Corrective Action**

- The FEFO or FIFO (First-expire/First-out or First-In/First-out) ☐   ☐   _____
  method of inventory management is used.
- There are no bulging or leaking canned goods.   ☐   ☐   _____
- Food is protected from contamination.   ☐   ☐   _____
- All food surfaces are clean.   ☐   ☐   _____
- Chemicals are clearly labeled and stored away   ☐   ☐   _____
  from food and food-related supplies.
- There is a regular cleaning schedule for all food ☐   ☐   _____
  surfaces.
- Food is stored in original container or a food grade ☐   ☐   _____
  container.

Source: Institute of Child Nutrition. (2018). *Inventory management checklist*. Retrieved from https://theicn.org/
icn-resources-a-z/standard-operating-procedures/

Site Inventory Management and Tracking Checklist

The following checklist may be used along with SOPs for monitoring site processes affecting inventory. The site checklist should be used a minimum of once per month.

Task			Status
Menu Planning	**Yes**	**No**	**Corrective Action**
Menus are consistently followed. Pre-approved substitutions are made when necessary.			
Feedback is provided to menu planners about popularity of menus based on production and sales records.			
Any issues with menu quality or difficulty of preparation are reported to the menu planner.			
Forecasting and Ordering	**Yes**	**No**	**Corrective Action**
Order guides are used when placing orders			
Par values are used for applicable			
Production records from previous menu cycle are used for forecasting production.			
Only items needed to prepare menu selections are ordeded.			
Inventory is checked before placing orders.			
Receiving	**Yes**	**NO**	**Corrective Action**
Stie personnel follow the SOP for receiving.			
Only trained employees receive food and supplies.			
GTIN or product codes are checked and lot numbers recorded when products are received.			
Products sold by weight are weighed when received.			
Product substitutions are not accepted unless pre-approved.			
Storage and Issuing	**Yes**	**No**	**Corrective Action**
Storage areas are kept locked throughout the day, especially during meal service.			
An SOP is followed for kitchen visitors and customers access to storage and preparation areas.			
An SOP is followed for proper dry, refrigerated, and freezer storage.			

Inventory Control	Yes	No	Correction Action
Inventory level meets specified goals e.g., days of inventory on hand.			
Physical inventory is taken on the last day of each month.			
Two employees are assigned to take physical inventories.			
Product codes or GTIN, lot numbers, are storage location are recorded in inventory records (e.g., perpetual inventory cards, storeroom requisition).			
Storage areas are labeled with product codes and organized with highest volume products closest to the door.			
Products are kept in original cases and lot numbers are written on inner packages (or cut from case and kept) when removed from case.			
Heavy items are kept on lower shelves. Dollies, dunnage racks, and carts are used to store food.			
Chemicals are stored away from food and paper supplies.			
Production	**Yes**	**No**	**Corrective Action**
Production records are completed immediately after each meal.			
Production records are completed with product coder or GTIN and lot numbers			
Food is prepared by cooking small batched every 30 minutes or before each serving period.			
Stockout times are recorded on production records to improve future forecasts.			
An SOP is followed for disposal of leftovers.			
Service	**Yes**	**No**	**Corrective Action**
Specified portion sizes and serving utensils are used.			
Sales inventory records are used on each serving line, are least for a la carte items, to track sales of each item.			

Production Log

Instructions: School nutrition staff will record the date, product name, start and end time of production, the two temperature measurements taken, any corrective action taken, and the amount of food prepared on the Production Log. The school nutrition manager will verify that school nutrition staff are taking the required temperatures and following the proper preparation procedure by visually monitoring school nutrition staff during the shift and reviewing, initialing, and dating the log daily. Maintain this log as directed by your State agency.

Date	Start Time	Product Name	Temp #1	Temp #2	Amount Prepared	Corrective Actions	End Time	Employee Initials	Verified By/Date

Receiving Log

Instructions: Use this log for deliveries or receiving foods from a centralized kitchen. Record any temperatures and corrective action taken on the Receiving Log. The school nutrition manager will verify that school nutrition staff are receiving products using the proper procedure by visually monitoring school nutrition staff and receiving practices during the shift and reviewing the log daily. Maintain this log for a minimum of 1 year.

Date	Time	Vendor or School	Product Name	Temperature	Corrective Action Taken	Initials/Date	Manager Initials/Date

Source: Institute of Child Nutrition. (2018). *Receiving Log*. Retrieved from https://theicn.org/icn-resources-a-z/standard-operating-procedures/

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