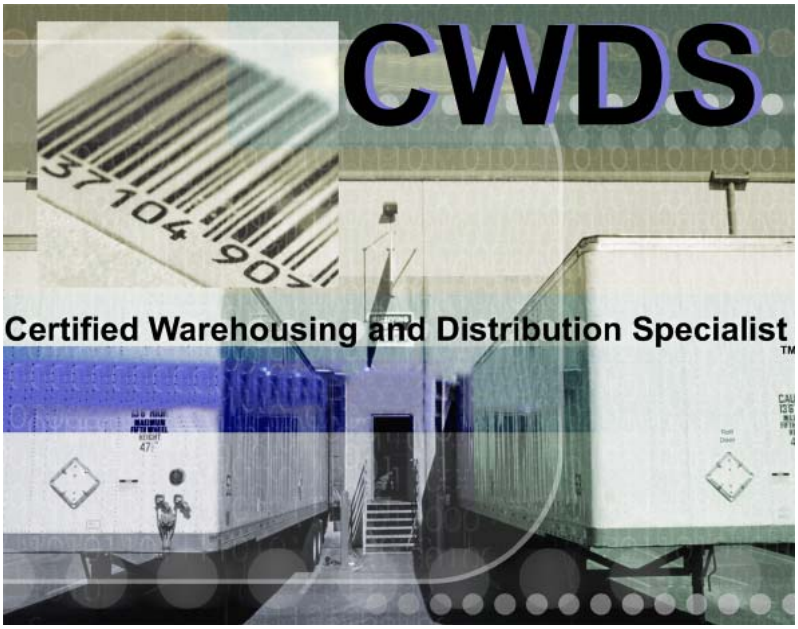

Instructor Guide

Scanners and Data Entry

QUICKSTART®
TECHNICAL COLLEGE SYSTEM OF GEORGIA

Published August 2002
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Unit Description

Overview

This guide is designed to familiarize the participant with scanners, scanning systems and bar codes.

The guide contains descriptions of basic scanners, explanations of where and how they are used, and a glossary of terms. The participants can take notes in their guides.

Working individually and in teams, the participants will be given practice exercises and activities to reinforce their understanding of scanners. The participants can refer to their guides and to their notes.

Note to Instructor: No unit assessment is intended for the "Scanner and Data Entry" unit. The materials presented in this unit show the general use and functionality of scanners used in warehousing and distribution. They do not lend themselves well to individual assessment. Each student, however, should perform all of the practice exercises in the unit.

Objectives

When the participants have completed this material, they will be able to:

1. Describe the function of scanners used in the warehousing and distribution process.
2. Correctly retrieve data from some basic warehouse documents.
3. Accurately respond to some basic warehouse situations, using the scanner information given you.
4. Scan a bar code and identify errors.

Materials

Participant Guides

Instructor Guide

Projection System

Computer Equipment

1. Windows-based Computer (CPU, Monitor, & Keyboard)
2. CWDS scanner computer based training program (CBT)
3. Symbol LS-1006 "Spark" Scanner or equivalent
4. Y-Cable (supplied with scanner)
5. Microsoft Excel software or equivalent

PowerPoint Slide

1. Scanners and Data Entry
2. Objectives
3. Process Flow
4. An RF Scanner
5. The Scanner
6. Location Label
7. Material Requisition
8. Product ID Label
9. Material Requisition
10. Breakout Order
11. Intra-Company Transfer Label

Agenda

Introduction and Welcome	10 minutes
Using the Scanner	30 minutes
Retrieving Data from Documents	20 minutes
Practice Exercises	120 minutes
Total	**3 hours**

Introduction

Overview

DISPLAY the slide titled "Scanners and Data Entry."

WELCOME participants to the unit and introduce yourself.

DIRECT the participants to the "Introduction" in their Participant Guide.

STATE: "This workbook is designed to familiarize you with scanners and bar codes used in warehouse and distribution systems."

EXPLAIN that the workbook contains descriptions of basic scanners, explanations of where and how they are used, and a glossary of terms. You can take notes in your workbook.

CONTINUE BY SAYING that working in teams, you will be given practice exercises to reinforce your understanding of scanners. You can refer to the workbook and to your notes.

EXPLAIN these points:

They will practice some basic scanner transactions.

They will practice finding key data on documentation.

They will not become scanner experts from this course.

Objectives

DISPLAY the slide titled "Objectives" and review the objectives.

STATE: "Upon completion of this material, the participants will be able to:

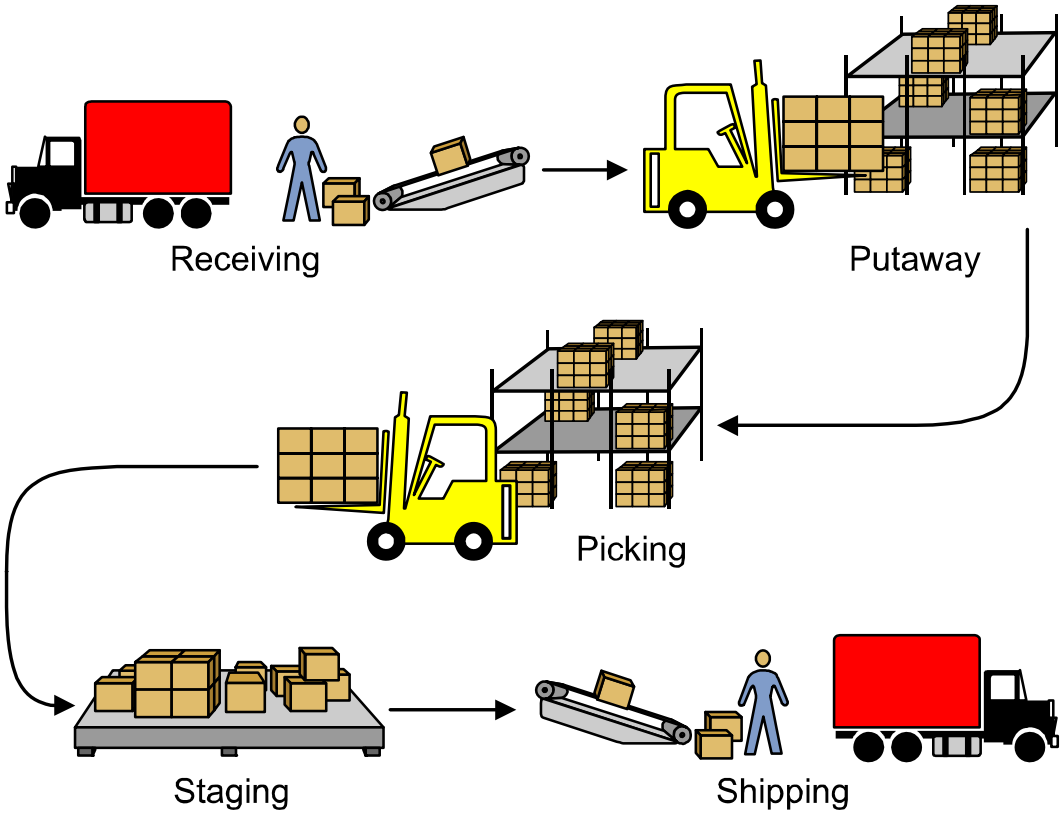
1. Describe the function of scanners used in the warehousing and distribution process.
2. Correctly retrieve data from some basic warehouse documents.
3. Accurately respond to some basic warehouse situations, using scanner information given you.

Process Flow

DIRECT the participants to the "Process Flow" in their Participant Guide.

NOTE: Since there are many kinds of scanners and every warehouse's system is different, there is no Progress Check in this unit. The practice exercises will allow the participants to reinforce what they have learned, and will give them confidence that they know what scanners do and why.

DISPLAY the slide titled "Process Flow" and briefly review these.

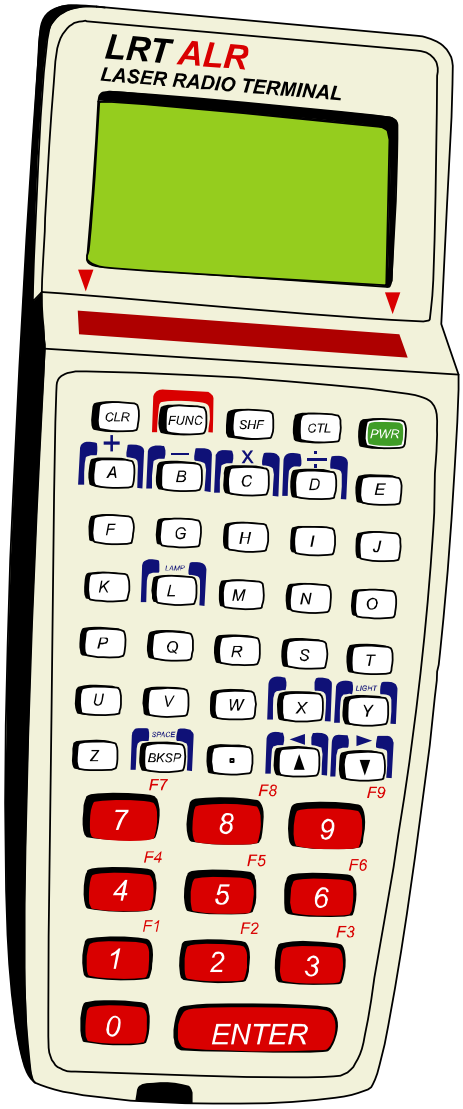


Process Flow

STATE: "The process flow of a warehouse includes Receiving, Putaway or Locating, Picking, Staging, and Shipping. The emphasis placed on each activity varies with the size and type of the operation.

STATE that scanners may be used throughout the warehouse to communicate with inventory control. Inventory control is responsible for knowing where every item in the warehouse is, at any given time. Any authorized operator can input information or perform transactions with a scanner. These transactions are critical to the functioning of the warehouse."

DISPLAY the slide titled "An RF Scanner."



An RF Scanner

NOTE: This overview highlights the key warehouse activities, and is not intended to cover everything that happens in every warehouse. Be sure to cover these points:

- The basic receiving function
- Identifying the contents with labels
- Locating, crossdocking, and consolidating
- Staging/wrapping/packing
- Shipping

Warehouse Overview

PARTICIPANT GUIDE

DIRECT the participants to the "Warehouse Overview" in their Participant Guide.

EXPLAIN that here is an overview of what might happen in an average warehouse: When a truck arrives at the receiving dock, receiving personnel compare the Packing List to the Bill of Lading (BOL), both of which the trucker brings. These documents are compared to the Advanced Shipping Notice (ASN), and finally to the actual merchandise. If the documents match the merchandise, the merchandise is received and inventory control is notified.

OLD DOMINION FREIGHT LINE, INC. (ODFL)
P.O. BOX 6908 - CHARLOTTE, N.C. 28260
(336-889-5000)

		Shipper B/L Number	Purchase Ord No	Type	Copy		
FLO	MCN		4200000189			4/27/00	RP

O Car Cd	O Car Rev	ODFL Rev	O Car W/B No	Bill to Cd	Trl No	W/B Date	Maybill Number
				6813	651187	4/25/00	03100817513

WACCAMAW DISTRIBUTION CENTER
550 GEORGE J BISHIOP PARKWAY
MYRTLE BEACH SC 29578

Dest I/L Car

SHIPPER

ALMOR PLASTICS
350 WINSTON DRIVE
MACON GA 30445

Page No 1 1
Sec 7

D Car Cd	D Car Rev	ODFL Rev	Ack No

BILL TO

HADABABYITSABOY
C/O WALKER AUDIT
PO BOX 25964
CHARLOTTE NC 28229

P/C C
C/O/G
B/C AC
R/C DC

Haybill Number	O/Agt	B/Agt	Master Bill No
03100817513			

		Description	Weight	AS Weight	Rate	Prepaid	Collect
40		HANDLING UNITS: 40 UNITS OF TYPE CTNS CTNS GLASSWARE	670				95.22

Ttl Pag	Consign Cd	Shipper	Tariff	Due ODFL	Ttl Weight	Ttl AS Wgt			
40	3102243		8080	95.22	670			C.O.D.	
									95.22

RECEIVED IN GOOD CONDITION EXCEPT AS NOTED
By:
Company:
Date:
Seal (if Apple)

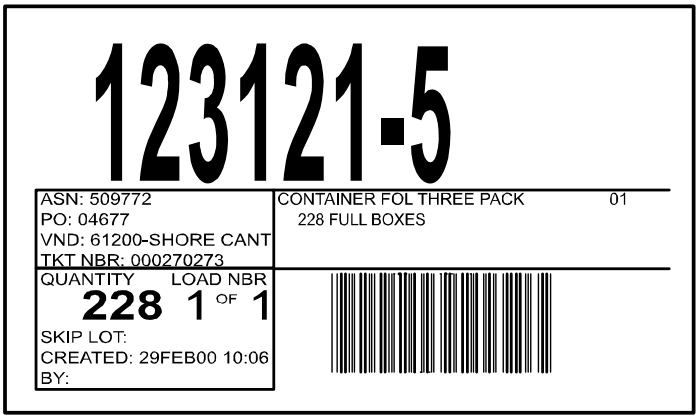
Exceptions:
Driver:

Total Prepaid | Total Collec
CASH ☐ CHK ☐ CHG ☐
Pcs. Del'd
Date Del'd

DELIVERY RECEIPT

Receiving Document

CONTINUE BY SAYING that product identification labels are generated and attached to the product as the truck is unloaded. Inspection for damage is conducted and quantities are checked. The merchandise may be sorted according to whether it is to be crossdocked, putaway, sent to breakout for repacking, or, if a manufacturing facility is attached, sent to manufacturing. The merchandise will receive a different label according to its destination. A material handler will move the merchandise to its designated location.

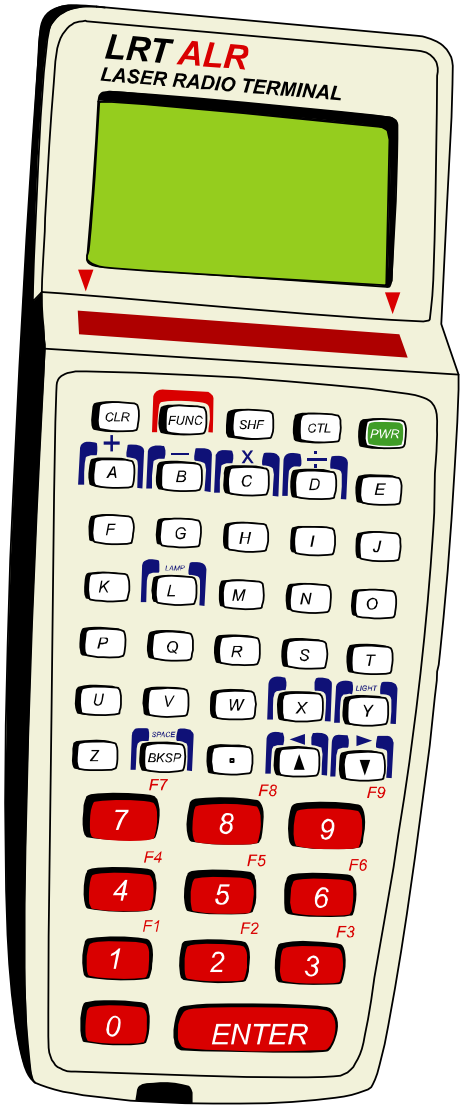


Locating Label

EXPLAIN that if the merchandise is to be putaway, the warehouse's WMS (Warehouse Management System) may tell the material handler where to put it (it will display this information on the scanner screen), an inventory control associate may direct the material handler where to put it, or the material handler may decide where to put it. In any case, where scanners are used, the identifying label is scanned and the location label is scanned. This transaction tells inventory control where the merchandise has been located. If bar coding is not available, the scanner operator will need to key in the needed information. Please note that keying in information greatly increases the rate of errors; scan whenever you can.

Locating ID

CONTINUE BY SAYING that when a customer order comes in, merchandise is picked from its location to be sent to that customer. The system may tell the material handler where to pick and how much to pick, displaying it on the scanner screen. Or the material handler may be given a Pick List from which to work. In either case, the location is scanned and the label on the merchandise is scanned to update inventory. If bar coding is not available, the scanner operator will need to key in the needed information.



Scanner Keypad

EXPLAIN that the process is similar with crossdocked, consolidated, or flow-through material.

CONTINUE BY SAYING that in staging, sometimes called packing, the merchandise is made ready for shipment. If it is palletized, it may be stretch-wrapped or banded. If it is containerized, packing materials may be added. Inventory control is notified and labels are generated and attached. The labels are scanned as the merchandise is loaded on the truck to tell inventory control that the customer's order has been filled.

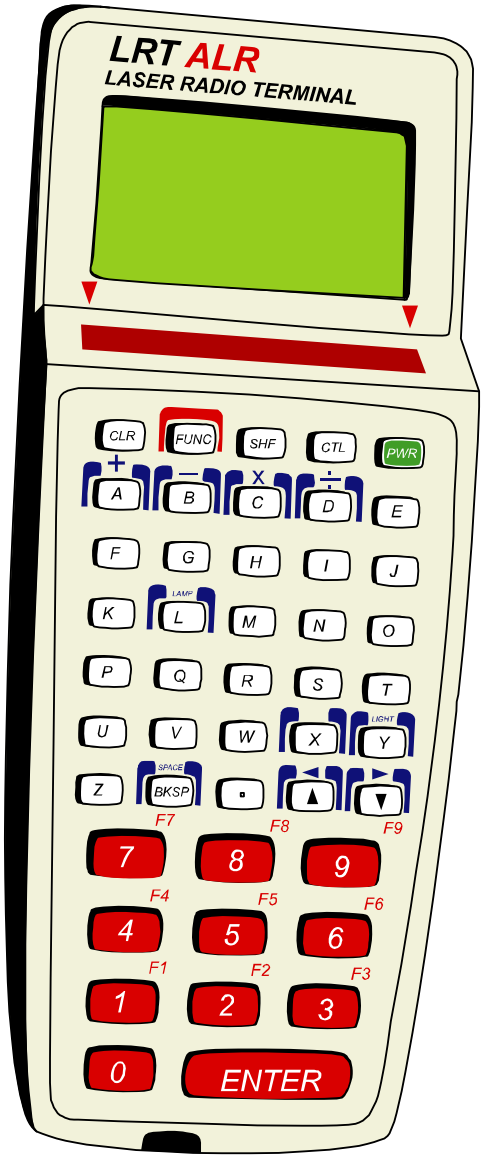
STATE: "To summarize, whenever product is moved, the change in inventory must be recorded with inventory control. The scanner communicates with the inventory control computer by way of radio signals (RF: Radio Frequency) or by downloading via cable. The communication may be initiated by scanning a bar code or by keying in the pertinent information. These communications are crucial. It does not matter if we have the product that the customer wants, if we can't find it."

Using the Scanner

DIRECT the participants to the "Using the Scanner" in their Participant Guide.

DISPLAY slide titled "The Scanner."

STATE that using scanners is commonplace in inventory control systems.



The Scanner

EXPLAIN that inventory control must know where every item is located at all times in the warehouse. If we have it, and the customer wants it, we must be able to find it – now.

ASK: What experience have you had in warehousing or distribution centers, especially using scanners? Find out where their experience can add to yours, and thus to the value of the class. If they say "no experience," ask them if they've ever bought anything at

- Home Depot (which has hand-held scanners)
- A grocery store, with or without a self-scanning system
- Wal-Mart, Kmart, etc.

If they have, then they have had experience with a scanner – though perhaps not the hand-held type.

Safety

STATE: "Scanner operators must:

- Never look into the beam of a "laser" scanner.
- Never point the laser beam scanner at another person.

Quality

STATE: "Scanner operators must:

- Use extra care when keying in information.
- Double check all information, especially if it has been manually keyed.
- Make sure documents that should match, do match."

ASK participants for examples from their experience. Has anyone been hurt by looking into a laser scanner, or know one who has? Has anyone been involved in a quality situation resulting from carelessness in data entry? (Add your own questions.)

Receiving

Note to Instructor:

The following exercises are designed to demonstrate the basic fundamentals involved in using a handheld scanner. This material is taught with the aid of a computer based training (CBT) module developed specifically for this purpose. Although a real scanner is not utilized, the students will be able to simulate scanning or manually enter the appropriate information. And see the result. A computer lab is recommended in order for all students to be able to access the software individually.

REMIND participants what happens in receiving and explain that the scanner is the interface between the operator and inventory control.

POINT to the keys on the scanner as you go over the steps in the receiving process.

TELL participants that they will be using this information for the following functions.

STATE: "To receive product into the warehouse, do the following."

Barcode SKU21235

Putaway Staging Area Barcode P.001

1. From the Main Menu select **"1"** for Receive.
2. Scan the SKU barcode or manually enter the SKU using the keypad.
3. If entering manually, press **ENTER**.
4. Enter received quantity using the keypad. Press **ENTER**.
5. Scan Putaway Staging Area barcode or enter location **(P.001)** using keypad. If entering manually, press **ENTER**.
6. Verify SKU, Quantity, and Location. If correct, enter a "Y" and then press **ENTER**. If not correct, key a "N", press **ENTER** and re-key data.

Locating/Putaway

REMIND participants what happens in locating.

STATE: "To place product into a location in the warehouse, do the following."

Barcode SKU21235

Location Barcode R.045.002.B

1. From the Main Menu select **"2"** for Locate.
2. Scan the SKU barcode or manually enter the SKU using the keypad.
3. If entering manually, press **ENTER**.
4. Enter quantity using the keypad. Press **ENTER.**
5. Select a location.
6. Scan location barcode or enter location using keypad. If entering manually, press **ENTER.**
7. Verify SKU, Quantity, and Location. If correct, enter a "Y" and then press **ENTER**. If not correct, key a "N", press **ENTER** and re-key data.

Picking

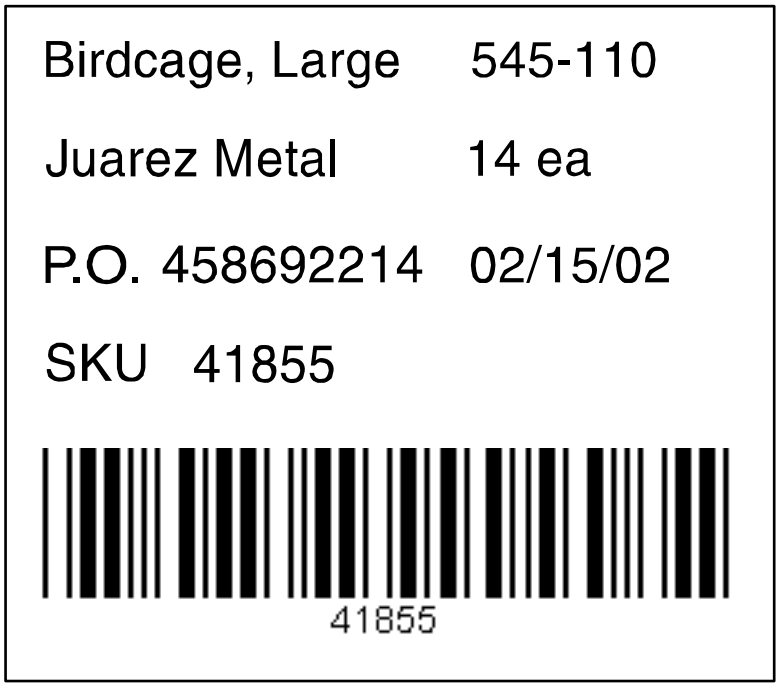
REMIND participants what happens in picking.

Pick List

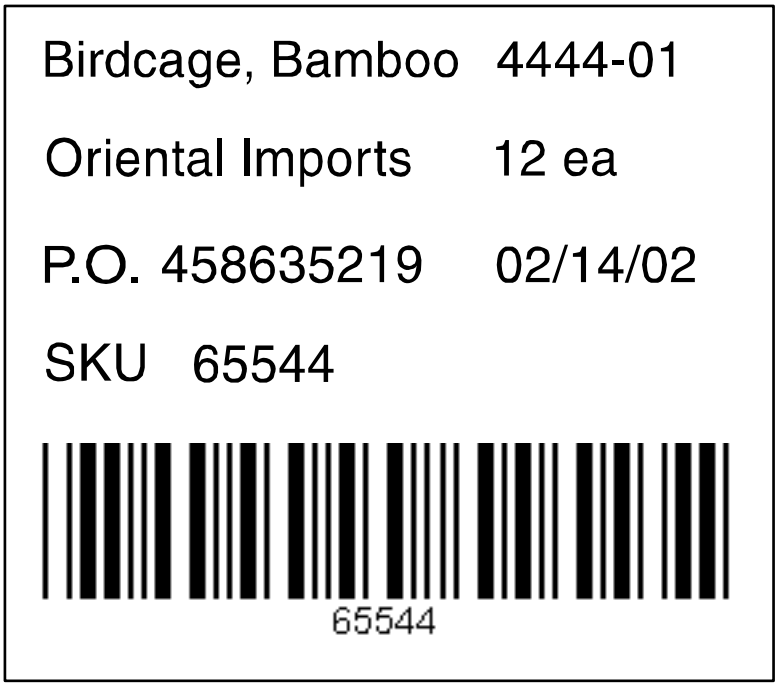
SKU	Description	Quantity	Order #
21235	Birdseed Wild	50 Each	AABS00235
21652	Seed, Songbird	30 Each	AABS00240
41855	Birdcage, Large	14 Each	AABS00238
65544	Birdcage, Bamboo	12 Each	AABS00217
56433	CD, Birdcalls SE	20 Each	AABS00236

Barcode SKU 21235

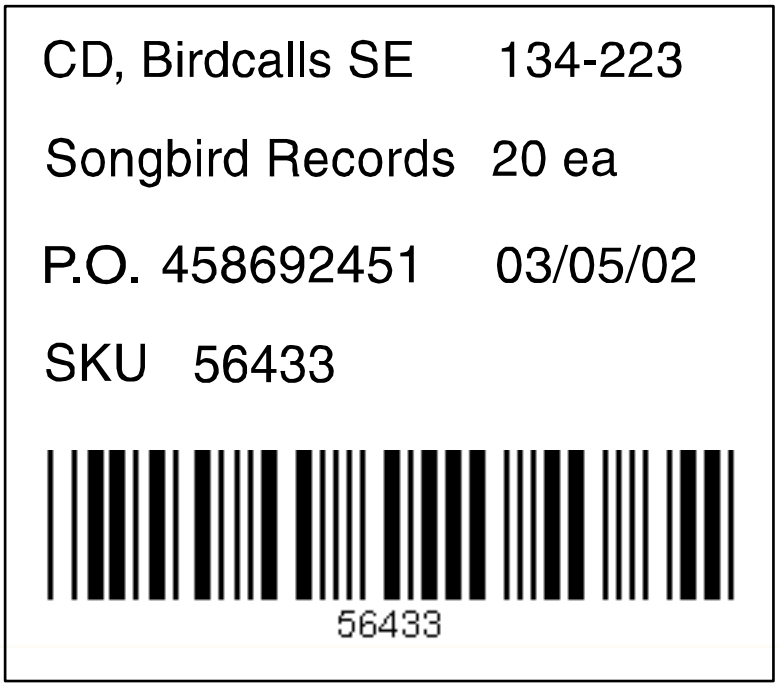
Barcode SKU 21652



Barcode SKU 41855



Barcode SKU 65544



Barcode SKU 56433

STATE: "To pick product to fill an order, do the following."

1. From the Main Menu select **"4"** for Pick.
2. Using the pick list, manually enter the first order number. Press **ENTER**.
3. Scan the SKU barcode or manually enter the SKU using the keypad.
4. If entering manually, press **ENTER**.
5. Enter quantity using the keypad. Press **ENTER.**
6. Verify SKU, Quantity, and Order number. If correct, enter a "Y" and then press **ENTER**. If not correct, key a "N", press **ENTER** and re-key data.
7. **Pick List Complete? Y/N.** Select **"N"**
8. Repeat steps **2-7** until Pick List is complete.
9. **Pick List Complete? Y/N.** Select **"Y"**

Transfer

STATE: "To move boxes from an existing location to a different location, same SKU.

Barcode SKU21235

Current Location Barcode R.045.002.B

New Location Barcode R.026.016.A

1. From the Main Menu select **"3"** for Transfer.
2. Scan the SKU barcode or manually enter the SKU using the keypad.
3. If entering manually, press **ENTER**.
4. Screen displays **"From What Location?"**
5. Scan current location barcode or enter current location using keypad. If entering manually, press **ENTER.**
6. Enter quantity using the keypad. Press **ENTER.**
7. Screen displays **"To What Location?"**
8. Select new location.
9. Scan new location barcode or enter new location using keypad. If entering manually, press **ENTER.**
10. Verify SKU, quantity, old Location, and new Location. If correct, enter a "Y" and then press **ENTER**. If not correct, key a "N", press **ENTER** and re-key data.

Inquiries

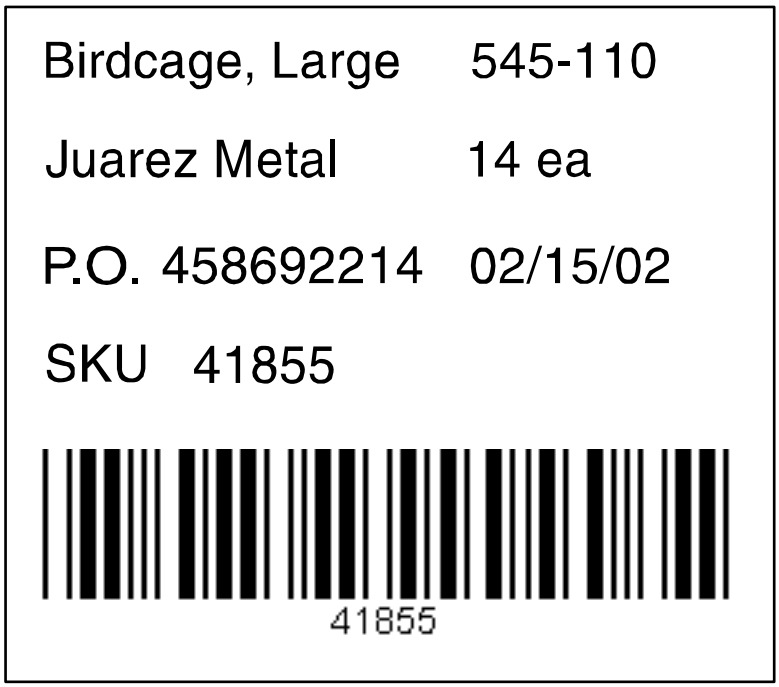
STATE: "If you find an empty bin that should contain product do the following."

Location Barcode R.045.002.A

Location Inquiry

1. From the Main Menu select **"5"** for Inquiry.
2. Select **"L"** for Location Inquiry
3. Scan the Location barcode or manually enter the Location using the keypad. Press **ENTER.**
4. Screen Displays SKU and Quantity in that Location.
5. Screen Displays **Another Inquiry? Y/N.** Select **"N"**

SKU Inquiry

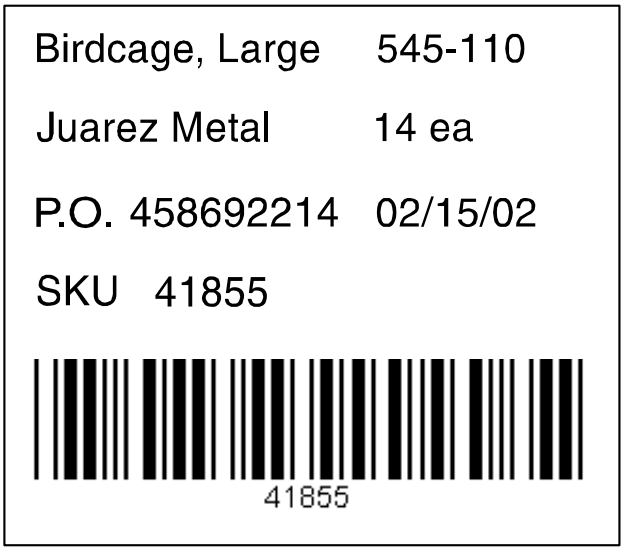


Barcode SKU41855

1. From the Main Menu select **"5"** for Inquiry.
2. Select **"S"** for SKU Inquiry
3. Scan the SKU barcode or manually enter the SKU using the keypad. Press **ENTER.**
4. Screen Displays Location and Quantity of the SKU.
5. Screen Displays **Another Inquiry? Y/N**. Select **"N"**

Cycle Count

STATE: "To perform a Manual Cycle Count, do the following."



Barcode SKU41855

Location Barcode R.045.002.A

1. From the Main Menu select **"6"** for Cycle Count.
2. Scan the Location barcode or manually enter the Location using the keypad. Press **ENTER.**
3. Screen displays SKU Number.
4. Physically count the quantity of items for that SKU.
5. Enter Quantity using keypad. Press **ENTER.**
6. If quantity entered matches the quantity in the system, Screen **Displays "Count Correct"**. If quantity entered does not match quantity in system, notify supervisor.
7. Screen Displays **"Continue Cycle Count" Y/N**. Select **"N"**

Retrieving Data from Documents

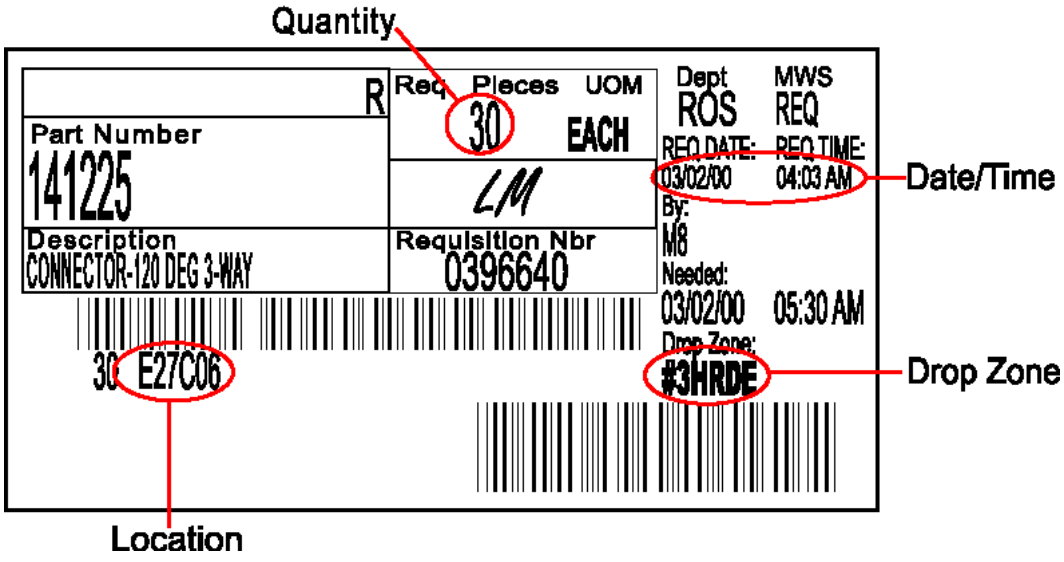
DIRECT participant to illustrations titled "Location Label", "Material Requisition" and "Product ID Label" in their participant guide.

DISPLAY slides titled "Location Label", "Material Requisition", "Product ID Label."

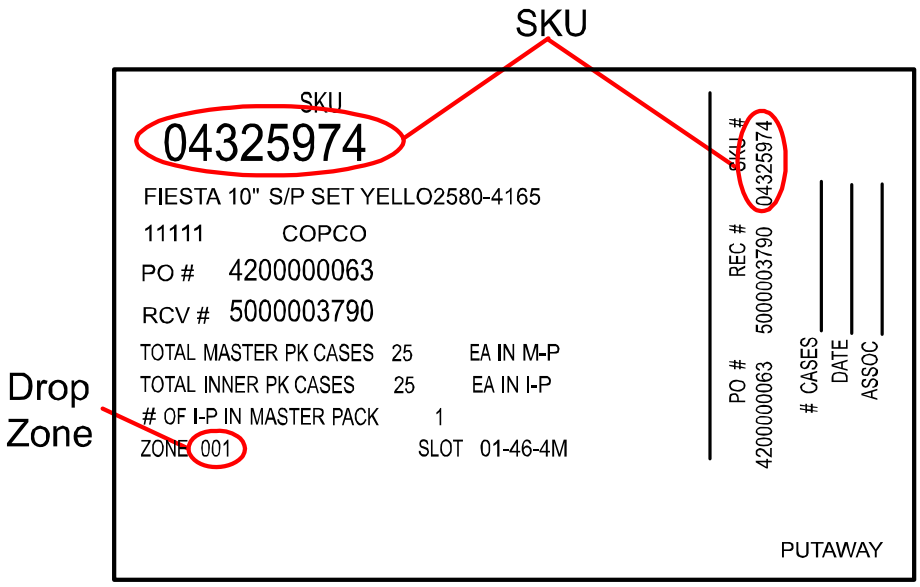
POINT OUT the critical pieces of information (quantity, location, ticket number, drop zones, SKU, and time/date).

EXPLAIN why this information is important (we need to know where an item is at all times); add examples from your own experience.

Location Label



Material Requisition



Product ID Label

Hands-on Activities

Equipment Preparation for Activities

1. In accordance with the instructions supplied with the scanner, connect the scanner to the computer using the Y-cable.
2. Ensure Microsoft Excel (or equivalent) is loaded on the PC.
3. Close or minimize all other programs.
4. With Microsoft Excel (or equivalent) operating, test the scanner by scanning any UPC available. A successful scan is indicated by a "beep" from the scanner.
5. When properly scanned, the UPC will appear in the first cell of the Excel spreadsheet. Additional scans will appear immediately below the previous scan.

Notes to Instructor:

1. Since scanned data is entered as keystrokes, no software changes to the host system are necessary.
2. The item labels used in these activities have barcodes that are imbedded with the item SKU # and item description. Scanning one of the item labels will cause the SKU # and description to appear together in the same cell on the Excel spreadsheet. This eliminates the need for any additional software (i.e. inventory tracking database).
3. The labels used in these activities were developed using Wasp Bar Code Labeler (Professional Edition) software. This software is not required during the classroom activities.

Activities

STATE: "This section of the Participant Guide provides hands-on usage of a laser scanner. The scanner will be connected to a Windows-based computer. Barcode labels will be scanned and the data input into a Microsoft Excel spreadsheet."

EXPLAIN that initially, you will gain experience using the device by scanning UPCs from common items in the classroom.

CONTINUE BY SAYING that working individually, you will complete each of the activities by scanning the barcodes on the labels and determining the types of errors. The types of errors include:

Will not scan.

Garbled information.

Wrong item received.

Wrong quantity received.

EXPLAIN that in some cases, you will be given enough information to determine the cause of the error.

CONTINUE BY SAYING that finally, you will have to "putaway" several items by scanning the labels on the items then scanning the labels on the locations.

STATE: "Caution: These scanners emit laser light. Scanner operators must:

- Never look into the laser beam.
- Never point the laser beam at another person."

DIRECT the participants to the section titled "Hands-on Activities" in their Participant Guide.

ALLOW them enough time to complete the activities and then review the answers.

Activity #1

Locate and scan at least five UPCs on common items found in the classroom. Record the UPCs and descriptions in the space below.

Activity #2

Scan the four labels. Compare the information on the labels to the information scanned. Identify any errors and their causes in the space below.

No errors should be found.

Birdcage,Bamboo 4444-01

Oriental Imports 120 ea

P.O. 458635219 02/04/02

SKU 65544

Cage Liner 51-21-44

Southeast Paper 1000 yds

P.O. 458612127 01/06/02

SKU 52227

Birdseed, Wild 2651478

American Seed 6000 lbs

P.O. 458642584 01/29/02

SKU 21235

Mirror 4486

China Glass 720 ea

P.O. 458671111 02/07/02

SKU 36521

Activity #3

Scan the four labels. Compare the information on the labels to the information scanned. Identify any errors and their causes in the space below.

One label will generate garbled information.

One label will not scan (one line of the barcode has been removed).

Suet 2651899

American Seed 600 lbs

P.O. 458621235 12/29/01

SKU 25697

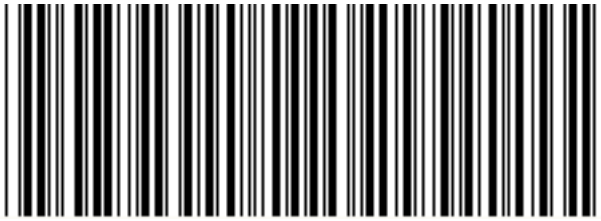
Cage Hangers 545-1268

Juarez Metal 75 ea

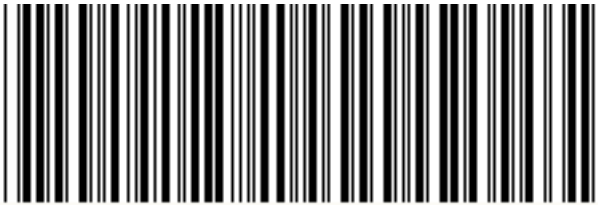
P.O. 458692214 02/15/02

SKU 41853

Cage Stand	545-1275
Juarez Metal	75 ea
P.O. 458692214	02/15/02
SKU 41854	



Liner, Rod	51-21-69
Juarez Metal	144 ea
P.O. 458612127	01/06/02
SKU 52236	

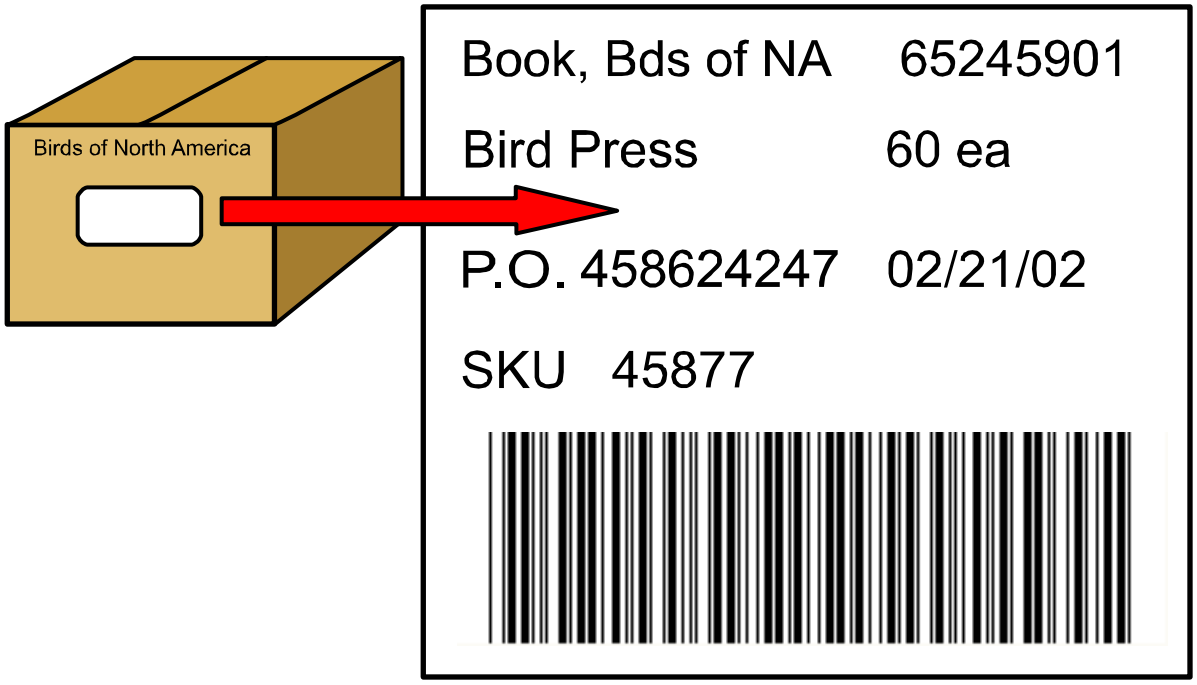


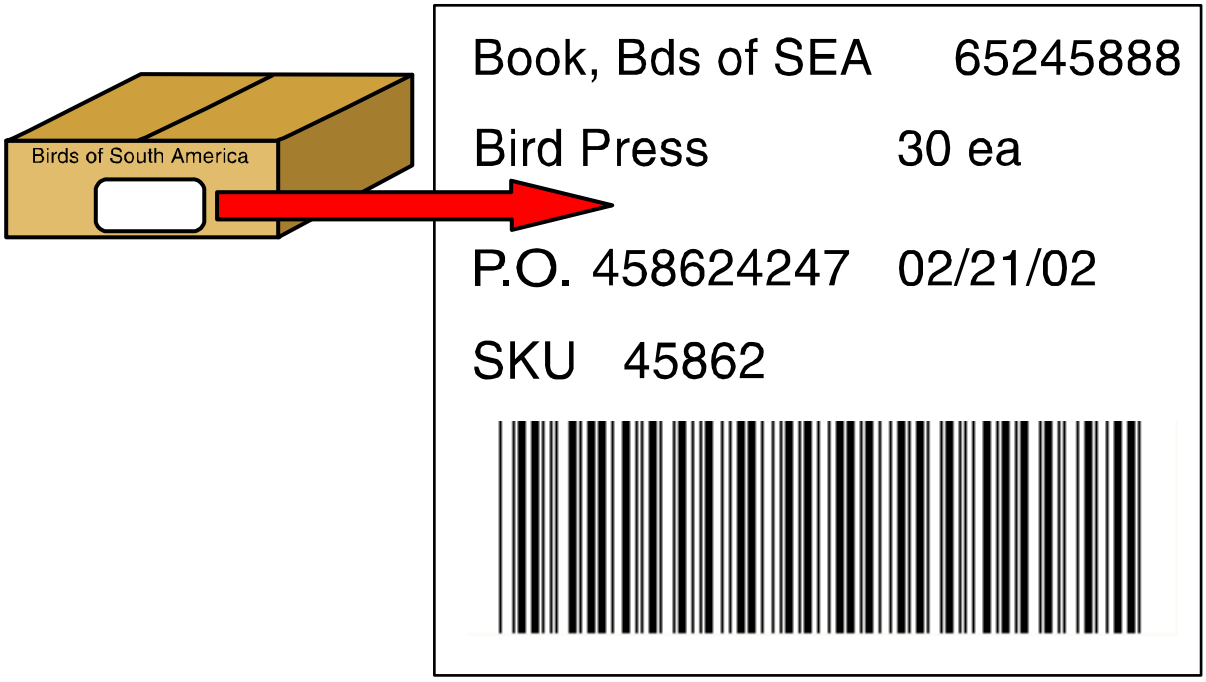
Activity #4

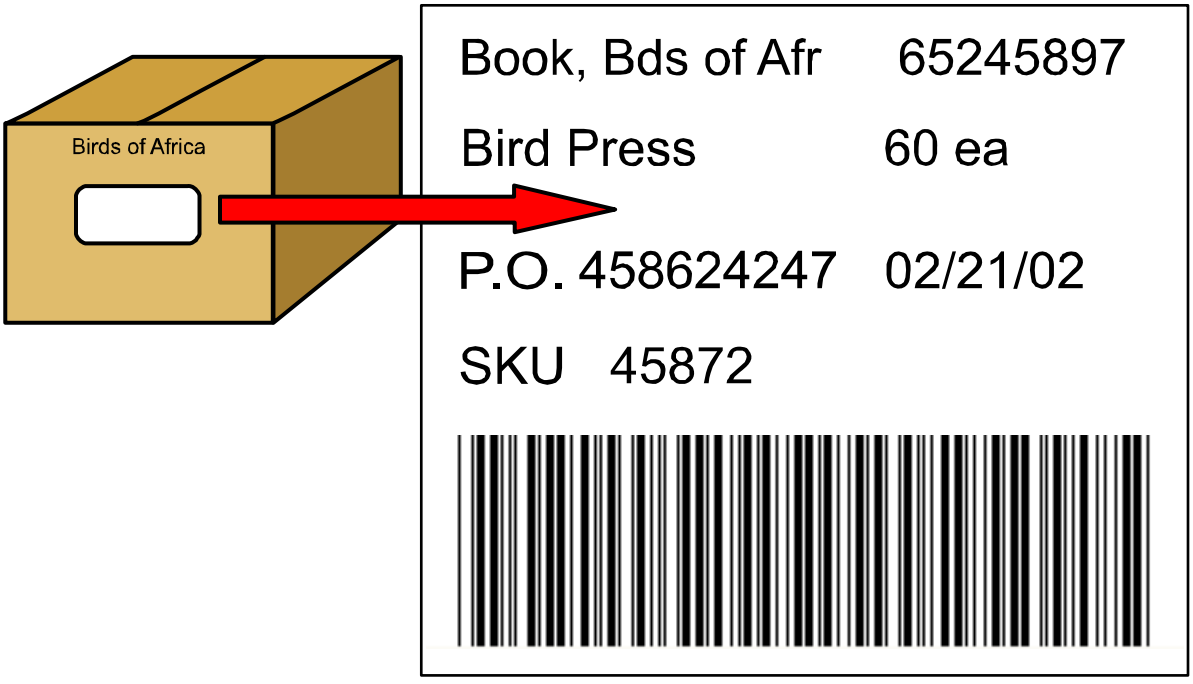
Scan the four labels. Compare the information on the labels to the information scanned. Identify any errors and their causes in the space below.

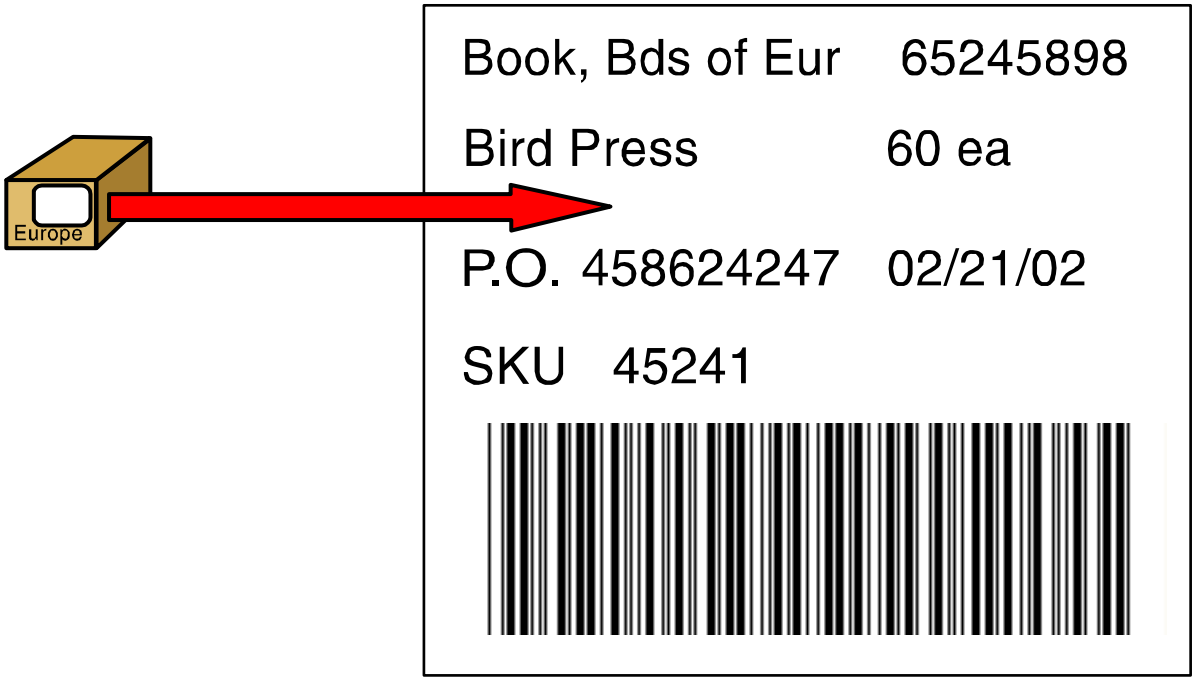
Incorrect item was received. (Book, Birds of South America was received instead of Book, Birds of Southeast Asia.)

Judging from the size of the cartons, there is a strong likelihood that an incorrect quantity was received. The carton for Book, Birds of Africa (Qty = 60) is much smaller than the other cartons containing 60 books. This would, at least, require further investigation.




Birds of South America
Book, Bds of SEA 65245888
Bird Press 30 ea
P.O. 458624247 02/21/02
SKU 45862


Birds of Africa
Book, Bds of Afr 65245897
Bird Press 60 ea
P.O. 458624247 02/21/02
SKU 45872


Europe
Book, Bds of Eur 65245898
Bird Press 60 ea
P.O. 458624247 02/21/02
SKU 45241

Activity #5

Scan the four labels. Compare the information on the labels to the information scanned. Identify any errors and their causes in the space below.

No errors found.

Nectar, Hummin 2651559

American Seed 600 gal

P.O. 458642584 01/29/02

SKU 21897

Seed, Songbird 2651441

American Seed 2000 lbs

P.O. 458642584 01/29/02

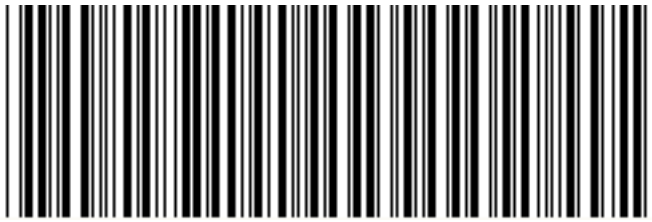
SKU 21652

Squirrel Screen 4264-01

Oriental Imports 200 ea

P.O. 458635219 02/04/02

SKU 64765

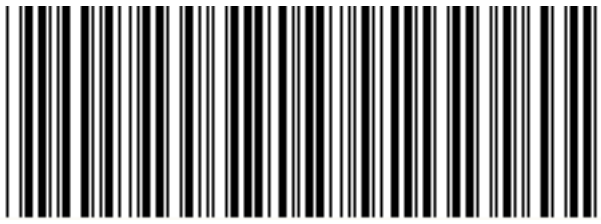


Clock, Songbird 221

Canadian Novelty 288 ea

P.O. 458674742 11/02/01

SKU 61875



Activity #6

Scan the four labels. Compare the information on the labels to the information scanned. Identify any errors and their causes in the space below.

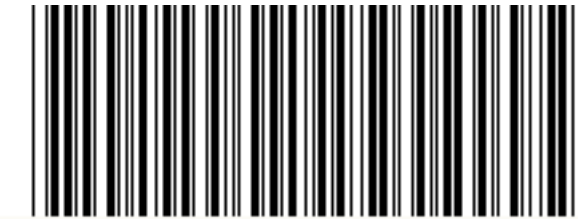
One label will not scan. It is wrinkled/damaged.

Birdbath 48-444-02

Montana Ceramic 80 ea

P.O. 458674741 02/02/02

SKU 59842



Birdcage, Large 545-1110

Juarez Metal 75 ea

P.O. 458692214 02/15/02

SKU 41855

Birdcage, Small 545-1111

Juarez Metal 75 ea

P.O. 458692214 02/15/02

SKU 41856

Vitamins, Canary 2647881

American Seed 200 Btls

P.O. 458692215 02/15/02

SKU 45996

Activity #7

Scan the four labels. Compare the information on the labels to the information scanned. Identify any errors and their causes in the space below.

Incorrect item received. CD, Bird Calls of the Southwest was received instead of CD, Bird Calls of the Midwest.

CD, Birdscalls NE 134-221

Songbird Records 144 ea

P.O. 458692451 03/05/02

SKU 56441

CD, Birdscalls NW 134-222

Songbird Records 144 ea

P.O. 458692451 03/05/02

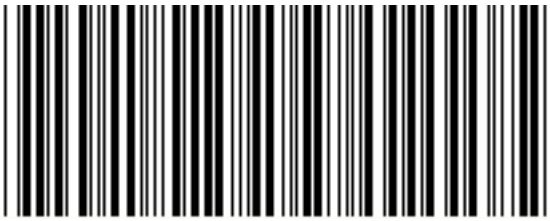
SKU 56342

CD, Birdscalls SE 134-223

Songbird Records 144 ea

P.O. 458692451 03/05/02

SKU 56433

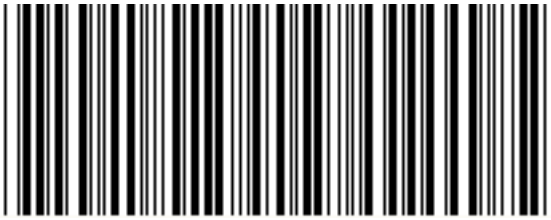


CD, Birdscalls MW 134-224

Songbird Records 144 ea

P.O. 458621235 02/04/02

SKU 56434



Activity #8

Scan the four labels. Compare the information on the labels to the information scanned. Identify any errors and their causes in the space below.

Wrong item received. Pan cleaner was received instead of a large cage cover.

Handbook, Parake 45235911

Bird Press 120 ea

P.O. 458624247 02/21/02

SKU 35892

Handbook, Canary 45234852

Bird Press 120 ea

P.O. 458624247 02/21/02

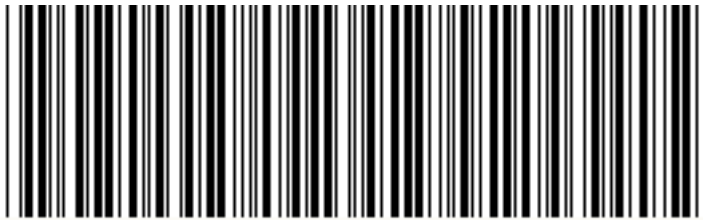
SKU 35893

Cage Cover, Larg 4-468-08

Montrell Inc. 360 ea

P.O. 458674259 01/25/02

SKU 45831

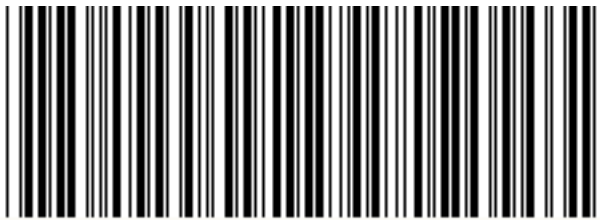


Cage Cover, Small 4-468-05

Montrell Inc 360 ea

P.O. 458674259 01/25/02

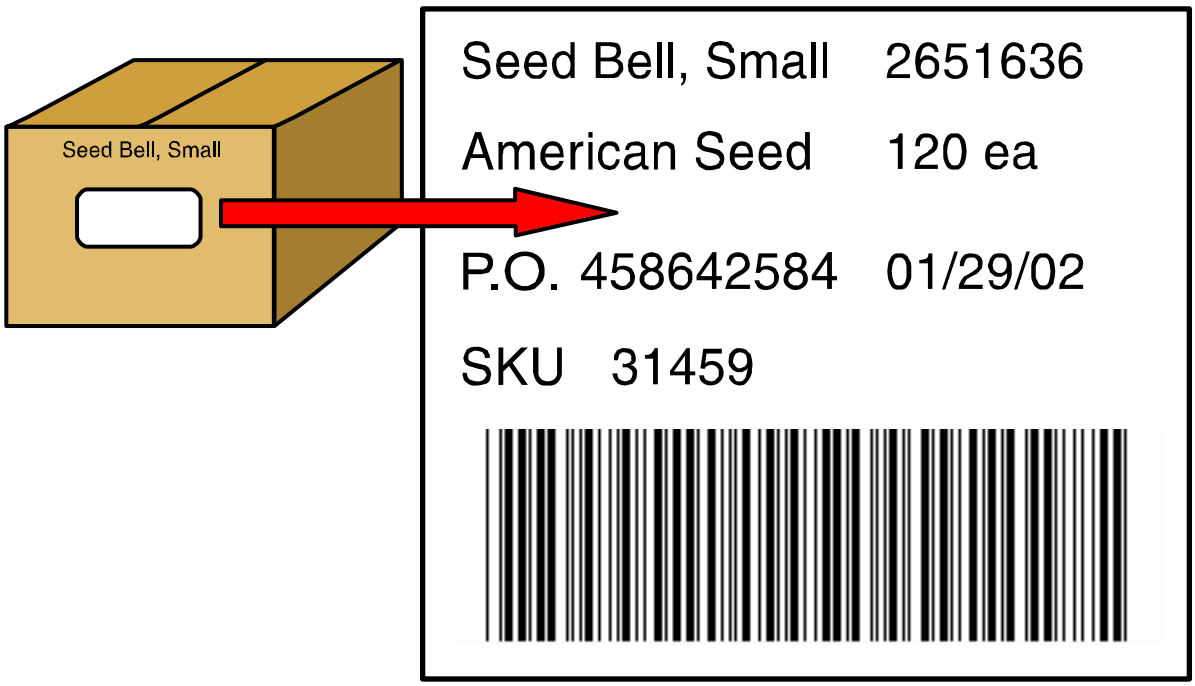
SKU 39840

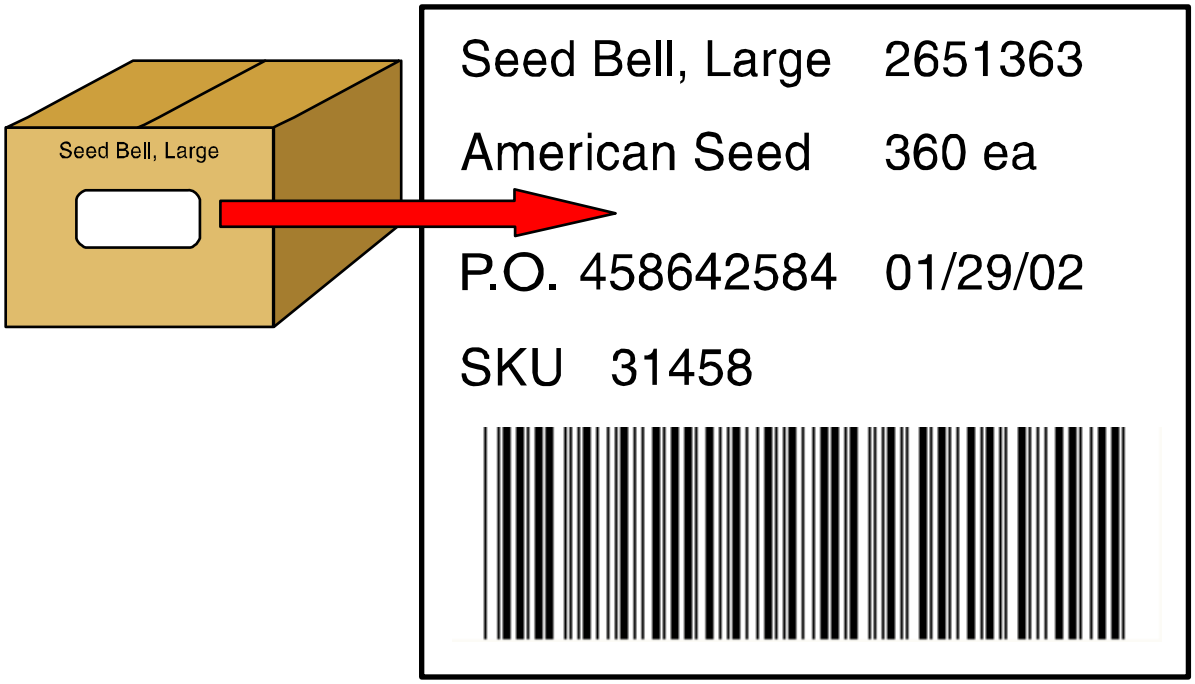


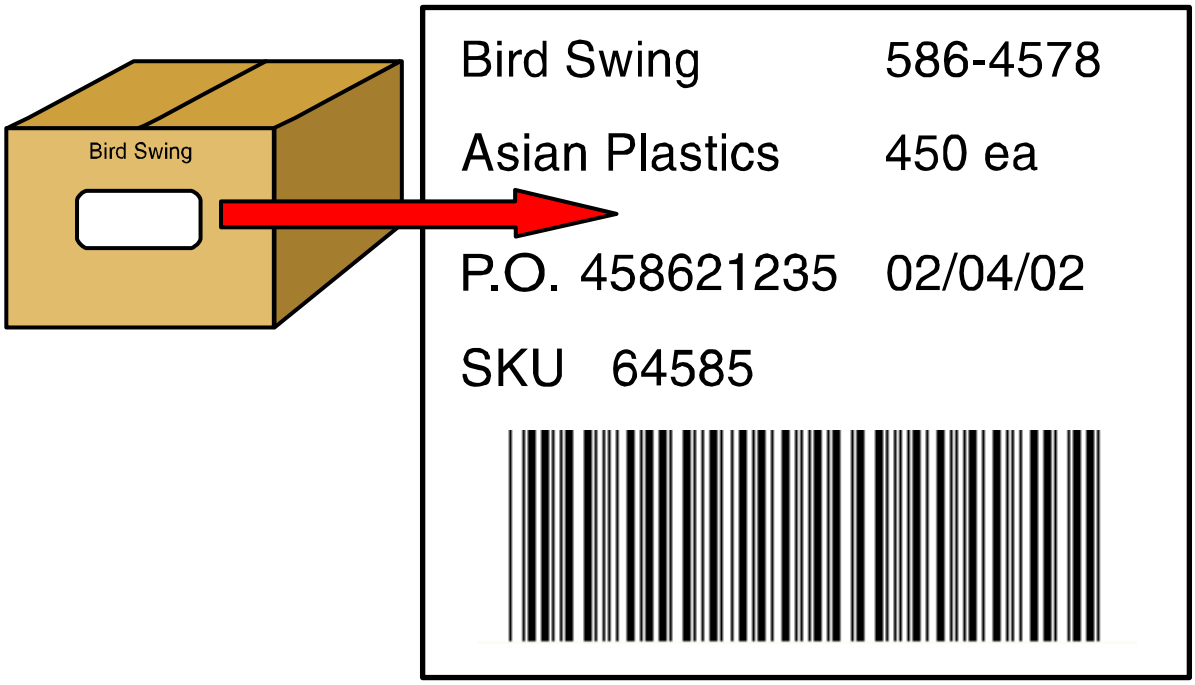
Activity #9

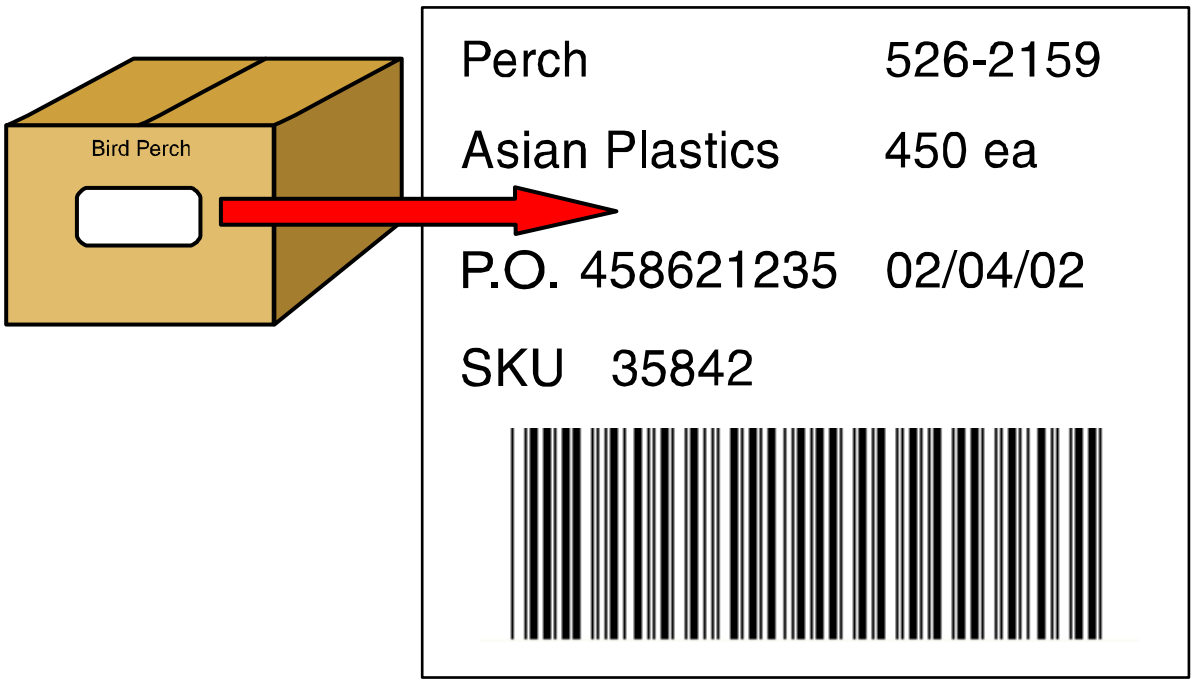
Scan the four labels. Compare the information on the labels to the information scanned. Identify any errors and their causes in the space below.

Judging from the size of the cartons, there is a strong likelihood that an incorrect quantity was received. The carton for the small seed bells (Qty = 120) is the same size as the carton containing 360 large seed bells. It may be that the quantities are mixed. This would, at least, require further investigation.




Seed Bell, Large
Seed Bell, Large 2651363
American Seed 360 ea
P.O. 458642584 01/29/02
SKU 31458


Bird Swing
Bird Swing 586-4578
Asian Plastics 450 ea
P.O. 458621235 02/04/02
SKU 64585


Bird Perch
Perch
526-2159
Asian Plastics
450 ea
P.O. 458621235
02/04/02
SKU 35842

Activity #10

Put the following items into the designated racks by scanning the item label then scanning the location label. You will find the item labels in the previous activities. Notify the instructor immediately if you make an error.

SKU#	Description	Location
35842	Bird Perch	R.006.006.B
56433	CD, Bird Calls of the Northwest	R.021.014.C
24652	Songbird Seed	R.001.010.B
45877	Book, Birds of North America	R.037.005.C
39840	Cage Cover, Small	R.045.002.B
41853	Cage Hanger	R.001.001.A
52227	Cage Liner	R.007.006.D
41856	Birdcage, Small	R.033.002.D
56441	CD, Bird Calls of the Northeast	R.021.014.B
61875	Songbird Clock	R.007.007.C


R.033.020.D


R.033.002.D


R.021.014.B


R.021.014.C


R.001.001.A


R.001.010.B


R.006.007.D


R.007.006.D


R.006.006.B


R.007.007.C


R.016.016.A


R.026.016.A


R.037.005.C


R.031.005.C

Summary

When you have debriefed the last activity,
ASK "What questions do you have?"

DISCUSS their questions and concerns.

DIRECT the participants to the "Summary" in their Participant Guide.

STATE: "Hand-held scanners may be used throughout the warehouse to receive, locate, pick, stage, and ship merchandise. They may be used to track every movement of every item. Usually, bar codes are used to identify the items and locations. If bar coding is not available, the required information must be keyed into the scanner. The scanner communicates with the inventory control computer by way of radio signals (RF: Radio Frequency) or via download by a cable. These communications are crucial; whenever product is moved, the change in inventory must be recorded with inventory control."

ASK questions to bring out the key points in the summary, such as,
Where and how is the scanner used?
Why it is important to scan (if possible) rather than typing in information?

EMPHASIZE again the importance of communicating correctly with inventory control.

CONCLUDE the class with the feedback forms. Thank the participants for their participation.

Glossary

AGV's	Automated Guidance Vehicles.
Backhauling	Hauling goods back from the destination to the warehouse on a trailer that would otherwise return empty.
Bar Code	A series of thick and thin lines that translate into an identifying number.
Breakout	Unpacking a pallet and repacking the goods into smaller units.
Consolidation	Combining smaller shipments into one larger shipment.
Continuous Movement	A unit of goods (usually a pallet) is picked off a truck and transported directly over to an outbound truck. The product literally never touches the floor.
Conveyors	Moving belts that transport goods, materials, boxes, etc.
Crossdocking	Receiving a shipment and shipping it to its destination without putaway.
Cube	Volume. The "cube" of a pallet is its volume (how much space it takes up).
Cycle Counting	The process of counting inventory items throughout the year on a schedule so that all items are counted at least once a year.

Distribution Center	A warehouse that moves goods quickly in and out with little or no storage time.
ERP (Enterprise Resource Planning)	Extremely sophisticated software that ties all aspects of a business together.
Expediter	A worker whose specific task is to rush an order, a shipment, a requisition, or a problem resolution.
Flow-through	Product is received, has a value-added service performed (such as labeling, special packaging, pricing), and is shipped; crossdocking with value added.
Inventory Management	The process of tracking the location of every pallet, carton, or item in the warehouse.
Inventory	All the items in the warehouse.
JIT	Just-In-Time delivery; assumes no storage; goods go direct from supplier to customer, arriving exactly when they are needed.
Kan Ban	A system of cards used to notify workers when stock needs replenishing.
License Plate	A bar code placed on a pallet or shipment to give it an identity.
Lift Truck	LP gas- or battery-powered vehicle that is capable of lifting very heavy loads (if outdoors, may use propane gas or diesel fuel).

Locating/Putaway/ Slotting	Placing an item in a specific location, from which it can later be retrieved.
Logistics	Planning and achieving the flow and storage of goods, services and information to meet customer needs.
LTL	Less-Than-Truckload.
Material Handling	A term used for any activity that has to do with moving materials or goods.
OEM	Original Equipment Manufacturer.
OS&D's	Overstocks, Shortages, and Damage
Pick-to-Light	A system in which lights and LED displays show operators where to pick product.
Picking	Taking requested items out of their locations.
Pipeline	Refers to the entire supply chain - supplier to customer.
Put-to-Light	Lights and LED displays show operators where to store product.
Putaway/Locating/ Slotting	Placing an item in a specific location from which it can later be retrieved.
QA	Quality Assurance; makes sure the received items are exactly as ordered (or the to-be-shipped items are exactly as ordered).

Radio Frequency Scanner A scanner that communicates with the inventory control computer or system via radio signals.

Receiving The process of unloading a shipment, making sure the items are correct and undamaged and that all the paperwork is correct, and logging the shipment into the inventory control system; the area where these activities take place.

Replenishment Replacing materials that have been picked out of locations.

Scanners Devices that use a laser to read identifying bar codes.

Shipping The process of packing, loading, and transporting a shipment of goods to meet customer requirements; the area where the staging and loading take place.

SKU Stock-Keeping Unit; an item.

Sorting/Sortation The process of moving items into different areas according to what they are or where they are going Sortation often uses conveyors and high-speed scanning devices.

Staging Placing items that belong together in one area (for example: all items to be shipped to one customer).

TI/HI Gives the number of cartons per layer, and the number of layers to be stacked on a pallet.

UPC Universal Product Code.

Warehouse	Usually refers to areas or buildings where goods will be stored for a period of time, until they are needed.
Wave Picking	Picking all of one item at one time, even though the item may be distributed to different destinations; a kind of batch picking.
WIP	Work In Process.
WMS	Warehouse Management System; software to manage the activities of the warehouse.