Inventory and Cost of Goods Sold

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- This presentation contains information, in addition to the material prepared and provided by the professor, from the book <u>Financial Accounting, 4th. Ed., Spiceland</u> which is the textbook assigned for the course CONT 3105 – "Introducción a los Fundamentos de Contabilidad" at the University of Puerto Rico, Río Piedras Campus.

Topics

Topics

1.0   Types of Inventory

2.0   Cost of Goods Sold

3.0   Inventory Cost Methods

4.0   Recording Inventory Transactions

5.0   Lower of Cost and Net Realizable Value

Types of Inventory

Types of Inventory

1.1   <u>Inventory</u>

Types of Inventory

1.1   Inventory

- Inventory includes items a company intends for sale to customers.

- Inventory also includes items that are not yet finished products but items that will be used or consumed in the production of goods to be sold to customers.

Types of Inventory

1.2   <u>Reporting Inventory</u>

Types of Inventory

1.2 Reporting Inventory

- The inventory is reported as a <u>current asset</u> in the balance sheet.

- The inventory is an asset because it represents a valuable resource to the company.

- It is classified as <u>current</u> because the company expects to convert it to cash in the near term.

Types of Inventory

1.3   Classification

Types of Inventory

1.3 Classification

- The investment in inventories is frequently the largest current asset of **merchandising** (retail) and **manufacturing** businesses (**Kieso**)

Types of Inventory

1.3   Classification

1. **Merchandising companies**

   - Merchandising companies purchase inventories that are primarily in finished form for resale to customers.

   - These companies assemble, sort, repackage, redistribute, store, refrigerate, deliver, or install the inventory, but they do not manufacture it.

Types of Inventory

1.3   Classification

1. **Merchandising companies**

- The merchandising companies can broadly classify as wholesalers or retailers.

- Wholesalers resell inventory to retail companies or to professional users. **Ex**. V. Suárez & Co., B Fernández.

- Retailers purchase inventory from manufacturers or wholesalers and then sell this inventory to end users. **Ex**. Best Buy, Sears, Supermax, Gap, etc.

Types of Inventory

1.3   Classification

2. **Manufacturing companies**

- Manufacturing companies manufacture or produce the inventories they sell, rather than buying them in finished form from suppliers. **Ex**. Apple, Intel, Ford, Boeing.

Types of Inventory

1.3   Classification

2. Manufacturing companies

- We classify inventory for a manufacturer into three categories:

    a. Raw Material

    b. Work-in Process

    c. Finished Goods

Types of Inventory

1.3   Classification

2.   Manufacturing companies

> **Raw Material**
> Includes the cost of components that will become part of the finished product but have not yet been used in production.

Example: Eggs, flour, butter, salt, among others, to bake a cake.

Types of Inventory

1.3 <u>Classification</u>

2. Manufacturing companies

<u>Raw Material</u>
Includes the cost of components that will become part of the finished product but have not yet been used in production.

→

Example: Eggs, flour, butter, salt, among others, to bake a cake.

<u>Work-in Process</u>
Refers to the products that have been started in the production process but are not yet complete at the end of the period. The total costs include:
1. Raw material
2. Direct labor
3. Indirect manufacturing costs (Overhead)

Types of Inventory

1.3   Classification

2. Manufacturing companies

Raw Material
Includes the cost of components that will become part of the finished product but have not yet been used in production.

Example: Eggs, flour, butter, salt, among others, to bake a cake.

→

Work-in Process
Refers to the products that have been started in the production process but are not yet complete at the end of the period. The total costs include:
1. Raw material
2. Direct labor
3. Indirect manufacturing costs (Overhead)

→

Finished Goods
Inventory consists of items for which the manufacturing process is complete.

Example: The cake is already baked, packed and ready for sale.

Types of Inventory

1.4 <u>Comparing Inventories</u>

Types of Inventory

1.4   Comparing Inventories

- A manufacturing company total inventory is the sum of the raw material, work-in process and finished goods inventories:

Inventory Accounts	Manufacturing Company
Raw Materials	$100,000
Work-in Process	150,000
Finished Goods	75,000
Inventory	**$325,000**

Types of Inventory

1.4   Comparing Inventories

- However, a merchandising company reports as inventory the total items on hand available for sales to customers.

Inventory Account	Merchandising Company
Merchandising Inventory	$200,000

Types of Inventory

2.1   Cost of Goods Sold

Types of Inventory

2.1 Cost of Goods Sold

- Goods sold during an accounting period seldom correspond exactly to the goods bought during that period.

- As a result, inventories either increase or decrease during the period. Companies must then allocate the cost of all the goods available for sales between the goods that were sold and those that are still on hand. (**Kieso**)

Types of Inventory

2.1   Cost of Goods Sold

- The cost of goods available for sale is the sum of:
  1. The cost of the goods on hand at the beginning of the accounting period, and
  2. The cost of the goods acquired during the period.

- The cost of good sold is the difference between:
  1. The cost of goods available for sale during the period, and
  2. The cost of goods on hand at the end of the period. (**Kieso**)

Types of Inventory

2.1   Cost of Goods Sold

Example 1

- Luxury Furniture LLC (merchandising company) beginning inventory as of January 1, 2018 is $250,000. During 2018, the company purchased goods amounting $500,000. *What is the cost of goods available for sale*?

Types of Inventory

2.1 Cost of Goods Sold

Example 1

- Luxury Furniture LLC (merchandising company) beginning inventory as of January 1, 2018 is $250,000. During 2018, the company purchased goods amounting $500,000. *What is the cost of goods available for sale*?

Beginning Inventory	$250,000
+ Goods purchased	500,000
Cost of Goods Available for Sale	**$750,000**

Types of Inventory

2.1   Cost of Goods Sold

Example 2

- Luxury Furniture LLC ending inventory as of December 31, 2018 is $350,000. *What is the cost of goods sold of 2018*?

Types of Inventory

2.1 Cost of Goods Sold

Example 2

- Luxury Furniture LLC ending inventory as of December 31, 2018 is $350,000. *What is the cost of goods sold of 2018*?

Beginning Inventory, Jan. 1	$250,000
+ Goods purchased	500,000
Cost of Goods Available for Sale	$750,000
- Ending Inventory, Dec. 31	350,000
Cost of Goods Sold	**$400,000**

Types of Inventory

2.2   Multiple-Step Income Statements

Types of Inventory

2.2   Multiple-Step Income Statements

- A Multiple-step Income Statement is an income statement reporting multiple levels of income (or profit).

- The reason why companies choose the multiple-step format is to show the revenues and expenses that arise from different types of activities.

- By separating revenues and expenses into their different types, investors and creditors are better able to determine the source of a company's profitability.

Types of Inventory

2.2   Multiple-Step Income Statements

- The different levels of profitability include:
  1. Gross Profit
  2. Operating Income
  3. Income Before Income Taxes
  4. Net Income

Types of Inventory

2.2   Multiple-Step Income Statements

1. **Gross Profit**:
   - Gross profit is the first level of profit shown in the multiple-step income statement.
   - The gross profit is the net revenues minus cost of goods sold.
   - Gross profit provides a key measure of profitability of the company's primary business activity: <u>selling inventory</u>.
   - **See on next page an example** of the computation of gross profit in a multiple-step income statement. (Explained on **Presentation #1**)

Types of Inventory

Corporación Panadería del Pueblo

Income Statements

Years Ended December 31, 2016 and 2015

	2016	**2015**
Sales revenue	$1,050,000	$940,000
Cost of goods sold	625,000	590,000
Gross Profit	**425,000**	**350,000**

Types of Inventory

2.2   Multiple-Step Income Statements

2. **Operating Income**:

- ◦ After gross profit, the next items reported are <u>Selling, General, and Administrative Expenses,</u> often referred to as Operating Expenses.

- ◦ The operating expenses includes advertising, salaries, rent, utilities, supplies, depreciation, among others.

- ◦ Gross profit reduced by these operating expenses is referred to as Operating Income.

- ◦ **See on next page an example** of the computation of operating income.

Types of Inventory

Corporación Panadería del Pueblo
Income Statements
Years Ended December 31, 2016 and 2015

	2016	2015
Sales revenue	$1,050,000	$940,000
Cost of goods sold	625,000	590,000
Gross Profit	425,000	350,000
Operating Expenses		
Selling	75,000	60,000
General and administrative	200,000	180,000
Total operating expenses	275,000	240,000
Operating Income	**$ 150,000**	**$ 110,000**

Types of Inventory

2.2 Multiple-Step Income Statements

3. Income Before Income Taxes

- ◦ After Operating Income, a company reports nonoperating revenues and expenses, also referred to as Other Income (Expenses).

- ◦ Other income items are shown as positive amounts, and other expenses items are shown as negative amounts.

- ◦ Nonoperating revenues and expenses arise from activities that are **not** part of the company's primary operations.

Types of Inventory

2.2 Multiple-Step Income Statements

3. Income Before Income Taxes

- ◦ Nonoperating expenses commonly include: interest expense, gains or losses on the sale of investments or long-term assets, among others. The more distinctive characteristics of these items is the they often do not have long-term implications on the company's profitability.

- ◦ Combining operating income with nonoperating revenues and expenses yields Income Before Income Taxes.

- ◦ **See on next page an example** of the computation of Income Before Income Taxes.

Types of Inventory

Corporación Panadería del Pueblo
Income Statements
Years Ended December 31, 2016 and 2015

	2016	2015
Other income (expenses)		
Interest and dividend income	$ 5,000	$ 4,000
Gain on sale of investment	7,000	0
Interest expense	(14,000)	(16,000)
Total Other Income, net	(2,000)	(12,000)
Income before income taxes	**148,000**	**98,000**

Types of Inventory

2.2   Multiple-Step Income Statements

4. **Net Income**

◦ The last expense reported on the multiple-step income statement is the Income Tax Expense. The Income Tax Expense represents the income taxes of the company for the accounting period.

◦ This expense is reported separately because it represents a significant expense.

Types of Inventory

2.2　Multiple-Step Income Statements

4. **Net Income**

- ◦ Most major corporations (formally referred to as C Corporations) are tax-paying entities, while income taxes of sole proprietorship and partnership are paid at the individual owner level.

- ◦ A company subtracts income tax expense from the Income Before Income Taxes to find its bottom-line Net Income.

- ◦ **See on next page an example** of the computation of Net Income.

Types of Inventory

Corporación Panadería del Pueblo
Income Statements
Years Ended December 31, 2016 and 2015

	<u>2016</u>	<u>2015</u>
Other income (expenses)		
Interest and dividend income	$ 5,000	$ 4,000
Gain on sale of investment	7,000	0
Interest expense	<u>(14,000)</u>	<u>(16,000)</u>
Total Other Income, net	<u>(2,000)</u>	<u>(12,000)</u>
Income before income taxes	<u>148,000</u>	<u>98,000</u>
Income **tax** expense	<u>(29,600)</u>	<u>(19,600)</u>
Net Income	<u>**$ 118,400**</u>	<u>**$ 78,400**</u>

Inventory Cost Methods
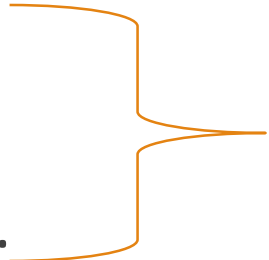
Inventory Cost Methods

3.1   Introduction

Inventory Cost Methods

3.1   Introduction

- During any given fiscal period, companies typically purchase merchandise at several different prices. If a company prices inventories at cost and it made numerous purchases at different unit costs, which cost price should it use? [**Kieso**]

Inventory Cost Methods

3.1 <u>Introduction</u>

- There are four methods for inventory costing:

    1. Specific Identification
    2. First-in, first out (FIFO)
    3. Last-in, first out (LIFO)   *Cost flow assumptions*
    4. Weighted-average cost.

- Although using a specific identification cost method seems optimal (as explained later), it has been proved to be expensive and impossible to achieve in most of the companies. [**Kieso**]

Inventory Cost Methods

3.1   Introduction

- Consequently, most companies use one of several systematic inventory cost flow assumptions. (*FIFO, LIFO, Weighted-average cost*)

- However, the <u>actual flow</u> of inventory does not need to match the **assumed** <u>cost flow</u> in order for the company to use a particular method.

- Let's see each costing method.

Inventory Cost Methods

3.2   Specific Identification

Inventory Cost Methods

3.2   Specific Identification

- Specific Identification Method identifies each unit of inventory with its actual cost.

- This method is practicable only by companies selling unique, expensive products, such as fine jewelry, pieces of art, or automobile with a unique serial number.

Inventory Cost Methods

3.2   Specific Identification

- Although bar codes and tags now make it possible to identify and track each unit of inventory, the costs of doing so outweigh the benefits for multiple, small inventory items.

- For that reason, the specific identification method is used primarily by companies with unique, expensive products with low sales volume.

Inventory Cost Methods

3.2 Specific Identification

Example 3

- Michael Angelo Gallery inventory as of January 1, 2018 follows:

Inventory of Paintings	Cost
Painting 1	$25,000
Painting 2	10,000
Painting 3	7,000
Painting 4	3,000
Total	**$45,000**

Inventory Cost Methods

3.2   Specific Identification

Example 3

- The Gallery has a unique and expensive inventory with low sales volume. This kind of business is suitable to use the specific identification method.

- Assume the Gallery sold the Painting #2 during January in $25,000. It was the only sale during that month.

- See on **next page**, the gross profit computation.

Inventory Cost Methods

3.2 Specific Identification

Example 3

Michael Angelo Gallery Income Statement (Partial) For the month ended January 31, 2018	
Sales Revenue	$25,000
Less: Cost of goods sold	10,000
Gross Profit	$15,000

Inventory Cost Methods

3.3   First-In, First-Out (FIFO)

Inventory Cost Methods

3.3   First-In, First-Out (FIFO)

- Using the FIFO method, we assume that the first units purchased (the first in) are the first ones sold (the first out).

- We assume the beginning inventory sells first, followed by the inventory from the first purchase during the year, followed by the inventory from the second purchased during the year, and so on.

Inventory Cost Methods

3.3   First-In, First-Out (FIFO)

- In order to explain the cost flow assumptions, we will use the inventory transactions for Central Supermarket during 2018.

Date	Inventory	Number of Units	Unit Cost	Total Cost
Jan. 1	Beginning Inventory	1,000	$9.50	$9,500
Mar. 15	Purchase	3,000	10.75	32,250
Oct. 23	Purchase	4,500	11.50	51,750
	Total goods available for sale	8,500		$93,500
2018	Sales	6,000		
Dec. 1	Ending Inventory	2,500		

Inventory Cost Methods

3.3   First-In, First-Out (FIFO)

Example 4

- Central Supermarket uses the **FIFO Method** to calculate the inventory cost.

- Calculate the ending inventory and cost of goods sold 2018.

Inventory Cost Methods

3.3   First-In, First-Out (FIFO)

Example 4

Date	Inventory	Number of Units	Unit Cost	Total Cost	Ending Inventory (Items)	Ending Inventory Valuation	Cost of Goods Sold (Items)	Cost of Goods Sold
Jan. 1	Beginning Inventory	1,000	$9.50	$9,500			1,000	$9,500
Mar. 15	Purchase	3,000	10.75	32,250			3,000	32,250
Oct. 23	Purchase	4,500	11.50	51,750	2,500	$28,750	2,000	23,000
	Total goods available for sale	8,500		$93,500	2,500	$28,750	6,000	$64,750
2018	Sales	6,000						
Dec. 1	Ending Inventory	2,500						

Inventory Cost Methods

3.4   Last-In, First-Out (LIFO)

Inventory Cost Methods

3.4   Last-In, First-Out (LIFO)

- Using the LIFO method, we assume that the last units purchased (the last in) are the first ones sold (the first out).

- Consequently, there is an assumption that company's ending inventory comprises mainly of the items included on beginning inventory and from the first purchase of the year, and so on.

Inventory Cost Methods

3.3 First-In, First-Out (FIFO)

Example 5

- Central Supermarket uses the **LIFO Method** to calculate the inventory cost.

- Calculate the ending inventory and cost of goods sold 2018.

Inventory Cost Methods

3.4   Last-In, First-Out (LIFO)

Example 5

Date	Inventory	Number of Units	Unit Cost	Total Cost	Ending Inventory (Items)	Ending Inventory Valuation	Cost of Goods Sold (Items)	Cost of Goods Sold
Jan. 1	Beginning Inventory	1,000	$9.50	$9,500	1,000	**$9,500**		
Mar. 15	Purchase	3,000	10.75	32,250	1,500	**16,125**	1,500	$16,125
Oct. 23	Purchase	4,500	11.50	51,750			4,500	51,750
	Total goods available for sale	8,500		**$93,500**	2,500	**$25,625**	6,000	$67,875
2018	Sales	6,000						
Dec. 1	Ending Inventory	2,500						

Inventory Cost Methods

3.5   Weighted-Average Cost

Inventory Cost Methods

3.5   Weighted-Average Cost

- Using the weighted-average cost method, we assume that both cost of goods sold and ending inventory consist of a random mixture of all the goods available for sale.

- We assume each unit of inventory has a cost equal to the weighted-average unit cost of all inventory items.

Inventory Cost Methods

3.5   Weighted-Average Cost

- We calculate that cost at the end of year as:

$$\text{Weighted-Average Unit Cost} = \frac{\text{Cost of Goods Available for Sale}}{\text{Number of Units Available for Sale}}$$

Inventory Cost Methods

3.5   Weighted-Average Cost

Example 6

- Central Supermarket uses the **Weighted-Average Cost** to calculate the inventory cost.

- Calculate the ending inventory and cost of goods sold 2018.

Inventory Cost Methods

3.5 Weighted-Average Cost

Example 6

Weighted-Average Unit Cost $11.00	=	Cost of Goods Available for Sale $93,500 / Number of Units Available for Sale 8,500

- **Cost of goods sold =**   **$66,000 (6,000 x $11.00)**
- **Inventory =**   **$27,500 (2,500 x $11.00)**

Cost of goods available for sale   **$93,500**

Inventory Cost Methods

3.6   <u>Comparing the Inventory Cost Methods</u>

Inventory Cost Methods

3.6   <u>Comparing the Inventory Cost Methods</u>

- See on the next page a summary of the answers in of the **Examples 4, 5 and 6** to compare the cost of goods sold and ending inventory using the three inventory cost methods.

Inventory Cost Methods

3.6   Comparing the Inventory Cost Methods

Description	FIFO	Weighted-Average Cost	LIFO
Cost of Goods Sold	$64,750	$66,000	$67,875
Ending Inventory	28,750	27,500	25,625
Cost of Goods Available for Sale	$93,500	$93,500	$93,500

Inventory Cost Methods

3.7   Effects of Inventory Cost Methods

Inventory Cost Methods

3.7   Effects of Inventory Cost Methods

- Companies are free to choose FIFO, LIFO, or Weighted-Average Cost to report inventory and cost of goods sold.

- Consequently, the amount for ending inventory and cost of goods sold will not be the same across inventory reporting methods.

- Let's see the main difference.

Inventory Cost Methods

3.7   Effects of Inventory Cost Methods

1. **FIFO**:

   ◦ When a company chooses FIFO, and the costs are rising, the company will report both higher inventory in the balance sheet and higher gross profit in the income statement, as compared with other cost methods.

   ◦ The <u>inventory balance is higher</u> because we are using recent cost (higher costs) to value the inventory.

Inventory Cost Methods

3.7   Effects of Inventory Cost Methods

1. **FIFO**:

   ◦ In the same way, the <u>gross profit is higher</u> because the cost of goods sold is lower.

   ◦ Accountants often call FIFO the *balance sheet approach* because the amount it reports for ending inventory better approximates the current cost of inventory.

Inventory Cost Methods

3.7   Effects of Inventory Cost Methods

2. LIFO:

- ◦ Under the same assumption (rising inventory costs), LIFO will produce the opposite effect. LIFO will report both the lowest inventory and the lowest gross profit, as compared with other cost methods.

- ◦ The inventory balance is lower because we are using old inventory cost (lower costs) to value the inventory.

Inventory Cost Methods

3.7   Effects of Inventory Cost Methods

2. LIFO:

- In the same way, the <u>gross profit is lower</u> because the cost of goods sold is higher.

- Accountants often call LIFO the *income statement approach* because the amount it reports for cost of goods sold more realistically matches the current costs of inventory needed to produce current revenues.

Inventory Cost Methods

3.7   Effects of Inventory Cost Methods

◦ Let's assume the Sales Revenues for the **Examples 4, 5 and 6** was $120,000.

◦ Let's see the comparison between FIFO and LIFO method on next page.

Inventory Cost Methods

3.6   Comparing the Inventory Cost Methods

	FIFO		LIFO	
Sales Revenues		$120,000		$120,000
Beginning Balance	$9,500		$9,500	
Plus: Purchases	84,000		84,000	
Cost of goods available for sales	93,500		93,500	
Less: Final Inventory	28,750		25,625	
Cost of goods sold		64,750		67,875
GROSS PROFIT		**$55,250**		**$52,125**

Inventory Cost Methods

3.7   Effects of Inventory Cost Methods

- The <u>weighted-average cost method</u> typically produces amounts that fall between the FIFO and LIFO amounts for both cost of goods sold an ending inventory.

- In conclusion, using **FIFO** the company will report higher gross profit and <u>higher net income</u>.

- On the other hand, a company using **LIFO** will report lower gross profit and <u>lower net income</u>.

Inventory Cost Methods

3.8   Reporting the LIFO Difference

Inventory Cost Methods

3.8   Reporting the LIFO Difference

◦ Because of the financial statement effects of different inventory methods, companies that choose LIFO must report the difference in the amount of inventory a company would report if it used FIFO instead of LIFO. This difference is sometimes referred to as the LIFO reserve.

Inventory Cost Methods

3.8   Reporting the LIFO Difference

◦ For some companies that have been using LIFO for a long time or for companies that have seen dramatic increases in inventory costs, the LIFO difference can be substantial.

◦ Consequently, once the company chooses a method, it is not allowed to frequently change to another one.

   ◦ **Example**: For tax purposes, the company cannot change back to LIFO until it has filed 5 tax returns using non-LIFO method.

Recording Inventory Transactions

Recording Inventory Transactions

4.1   Introduction

Recording Inventory Transactions

4.1 <u>Introduction</u>

◦ To maintain a record of inventory transactions, in practice nearly all companies use a perpetual inventory system.

◦ This system involves recording inventory purchases and sales on a perpetual (continual) basis.

◦ Because management needs to be making decisions on a daily basis, maintaining inventory records on a continual basis is necessary.

Recording Inventory Transactions

4.1   Introduction

- In contrast, a periodic inventory system does not continually record inventory amounts. Instead, it calculates the balance of inventory once per period, at the end, based on a physical count of inventory on hand.

- Because the periodic system does not provide a useful, continuing record of inventory, very few companies actually use the periodic inventory system in practice to record inventory transactions.

Recording Inventory Transactions

4.1   <u>Introduction</u>

◦ Consequently, we will focus on how to record transactions using the system most often used in practice, the perpetual inventory system.

◦ We will be using the inventory transactions of Central Supermarket, used in the previous examples, and shown on next page.

Recording Inventory Transactions

4.1   Introduction

Date	Inventory	Number of Units	Unit Cost	Total Cost	Selling Price	Total Revenue
Jan. 1	Beginning Inventory	1,000	$9.50	$9,500		
Mar. 15	Purchase	3,000	10.75	32,250		
Apr. 15	Sales	2,800			$20.00	$56,000
Oct. 23	Purchase	4,500	11.50	51,750		
Nov. 30	Sales	3,200			20.00	64,000
	Totals			**$93,500**		**$120,000**

Recording Inventory Transactions

4.2   Recording Inventory Purchase

Recording Inventory Transactions

4.2   Recording Inventory Purchase

◦ To record the purchase of new inventory, we debit Inventory (an asset) to show that the company's balance of this asset account has increased.

◦ At the same time, if the purchase was paid in cash, we credit cash. Or, if the purchase was on account, we credit Accounts Payable.

Recording Inventory Transactions

4.2   Recording Inventory Purchase

Example 7

◦ Central Supermarket purchased 3,000 unit, $10.75 each on March 15 cash. The journal entry to record this transaction follows:

GENERAL JOURNAL				J - __
Date	**Account Title**	**Ref.**	**Debit**	**Credit**
Mar. 15	Inventory		32,250	
	Cash			32,250
	(*Purchase inventory cash.*)			

Recording Inventory Transactions

4.2   Recording Inventory Purchase

Example 7

◦ After posting this journal entries to the general ledger, we have the following balances:

◦ 　　　　　Inventory
1/1	$ 9,500
3/15	32,250
	$41,750

Recording Inventory Transactions

4.3   Recording Sales of Inventory

Recording Inventory Transactions

4.3   Recording Sales of Inventory

◦ We make two entries to record the sales:

1. The first entry shows an increase to the asset account (cash or accounts receivable) and an increase to Sales Revenue.

2. The second entry reduces the Inventory account as it records cost of goods sold.

Recording Inventory Transactions

4.3 Recording Sales of Inventory

Example 8

◦ Central Supermarket sold 2,800 unit, $20.00 each on April 15 cash. The journal entries to record this transaction follows:

GENERAL JOURNAL				FIRST Journal Entry
Date	**Account Title**	**Ref.**	**Debit**	**Credit**
Apr. 15	Cash		56,000	
	Sales Revenue			56,000
	(*Sell 2,800 unit of inventory cash.*)			

Recording Inventory Transactions

4.3   Recording Sales of Inventory

Example 8

○ To calculate the cost of goods of the 2,800 sold using FIFO, we will use the cost of the first units purchased, which is 1,000 units of beginning inventory and 1,800 units of the first purchase.

	GENERAL JOURNAL			SECOND Journal Entry
Date	**Account Title**	**Ref.**	**Debit**	**Credit**
Apr. 15	Cost of Goods Sold		28,850	
	Inventory			28,850
	(*Record cost of 2,800 unit of inventory sold.*			
	$28,850 = 1,000 x \$9.50 + 1,800 x \$10.75$)			

Recording Inventory Transactions

4.3   Recording Sales of Inventory

Example 8

- After posting these two journal entries to the general ledger, we have the following balances:

	Inventory			Cost of Goods Sold	
1/1	$ 9,500	4/15	$28,850	4/15	$28,850
3/15	32,250				
	$12,900				

Recording Inventory Transactions

4.3   Recording Sales of Inventory

Example 9

◦ Central Supermarket purchased 4,500 unit, $11.50 each on October 23 on account. The journal entry to record this transaction follows:

GENERAL JOURNAL				J - __
Date	**Account Title**	**Ref.**	**Debit**	**Credit**
Oct. 23	Inventory		51,750	
	Accounts Payable			51,750
	(*Purchase inventory on account.*)			

Recording Inventory Transactions

4.3   Recording Sales of Inventory

Example 9

- After posting this journal entry to the general ledger, we have the following balances:

	Inventory				Cost of Goods Sold	
1/1	$ 9,500	4/15	$28,850	4/15	$28,850	
3/15	32,250					
10/23	51,750					
	$64,650					

Recording Inventory Transactions

4.3   Recording Sales of Inventory

Example 10

◦ Central Supermarket sold 3,200 unit, $20.00 each on November 30 on account. The journal entries to record this transaction follows:

GENERAL JOURNAL				FIRST Journal Entry
Date	Account Title	Ref.	Debit	Credit
Nov. 30	Accounts Receivable		64,000	
	Sales Revenue			64,000
	(*Sell 3,200 unit of inventory on account.*)			

Recording Inventory Transactions

4.3   Recording Sales of Inventory

Example 10

◦ To calculate the cost of goods sold of the 3,200 using FIFO, we use the cost of the remaining units of the purchase on March 15 (1,200 x $10.75) and 2,000 units of the second purchase (cost $11.50 each).

	GENERAL JOURNAL			SECOND Journal Entry
Date	**Account Title**	**Ref.**	**Debit**	**Credit**
Nov. 30	Cost of Goods Sold		35,900	
	Inventory			35,900
	(*Record cost of 3,200 unit of inventory sold.*			
	$35,900 = 1,200 x $10.75 + 2,000 x $11.50)			

Recording Inventory Transactions

4.3   Recording Sales of Inventory

Example 10

◦ After posting this journal entry to the general ledger, we have the following balances:

	Inventory				Cost of Goods Sold	
1/1	$ 9,500	4/15	$28,850	4/15	$28,850	
3/15	32,250	11/30	35,900	11/30	35,900	
10/23	51,750				$64,750	
	$28,750					

Recording Inventory Transactions

4.3 Recording Sales of Inventory

- After recording all purchases and sales of inventory for the year, we can determine the ending balance of Inventory by examining the postings to the account. See the Inventory account balance is the same as compared with the balance calculated before using the FIFO inventory cost method.

Description	FIFO	Weighted- Average Cost	LIFO
Cost of Goods Sold	$64,750	$66,000	$67,875
Ending Inventory	28,750	27,500	25,625
Cost of Goods Available for Sale	$93,500	$93,500	$93,500

Recording Inventory Transactions

4.4   <u>Freight Charges</u>

Recording Inventory Transactions

4.4   Freight Charges

◦ A significant cost associated with inventory for most merchandising companies includes freight (also called shipping or delivery) charges.

◦ This includes the cost of shipping of inventory from suppliers, as well as the cost of shipments to customers.

◦ When goods are shipped, they are shipped with terms FOB shipping point or FOB Destination.

Recording Inventory Transactions

4.4   Freight Charges

◦ **FOB** stands for "free on board" and indicates when title (ownership) passes from the seller to the buyer.

◦ **FOB shipping point** means title passes when the seller ships the inventory, not when the buyer receives it.

◦ In contrast, if the seller ships the inventory **FOB destination**, then title transfers to the buyer when the inventory reaches its destination.

Recording Inventory Transactions

4.4　Freight Charges

- Freight charges on incoming shipments from suppliers are commonly referred to as freight-in.

- We add the cost of freight-in to the balance of Inventory.

- Later, when that inventory is sold, those freight charges become part of the cost of goods sold.

Recording Inventory Transactions

4.4   Freight Charges

Example 11

◦ Assume Central Supermarket paid $500 in freight charges associated with the last purchase of October 23. Those charges would be recorded as part of the inventory cost.

GENERAL JOURNAL				JE #
Date	**Account Title**	**Ref.**	**Debit**	**Credit**
Oct. 23	Inventory		500	
	Cash			500
	(*Pay freight-in charges.*)			

Recording Inventory Transactions

4.4   Freight Charges

- The cost of freight on shipments to customers is called freight-out.

- Shipping charges for outgoing inventory are reported in the income statement either as part of cost of goods sold or as an operating expense, usually among selling expenses.

Recording Inventory Transactions

4.5   Purchase Discount and Return

Recording Inventory Transactions

4.5   Purchase Discount and Return

- **Purchase Discounts**: Just as freight charges add to the cost of inventory and therefore increase the cost of goods sold once those items are sold, purchase discounts subtract from the cost of inventory and therefore reduce cost of goods sold once those items are sold.

Recording Inventory Transactions

4.5   Purchase Discount and Return

Example 12

◦ Assume Central Supermarket paid the last purchase of October 23 of $51,750 on time (October 30) receiving a 2% discount. The journal entry follows:

GENERAL JOURNAL				JE #
Date	**Account Title**	**Ref.**	**Debit**	**Credit**
Oct. 30	Accounts Payable		51,750	
	Inventory			1,035
	Cash			50,715
	(*Pay on account with 2% purchase discount of $1,035 ($51,750 x 2%) .*)			

Recording Inventory Transactions

4.5 Purchase Discount and Return

◦ **Purchase Returns**: Occasionally, a company will find inventory items to be unacceptable for some reason. In those cases, the company returns the items to the supplier and records the purchase return as a reduction in both Inventory and Accounts Payable or Cash.

Lower of Cost or Net Realizable Value

Lower of Cost or Net Realizable Value

5.1   Introduction

Lower of Cost or Net Realizable Value

5.1 Introduction

- When the value of inventory falls below its original cost, companies are required to report inventory at the lower net realizable value of that inventory.

- Net realizable value is the estimated selling price of the inventory in the ordinary course of business less any costs of completion, disposal, and transportation.

Lower of Cost or Net Realizable Value

5.1   Introduction

- ◦ Once a company has determined both the cost and the net realizable value of inventory, it reports ending inventory in the balance sheet at the lower of the two amounts.

- ◦ This method of recording inventory is lower of cost and net realizable value.

Lower of Cost or Net Realizable Value

5.2   Analysis at Year End

Lower of Cost or Net Realizable Value

5.2   Analysis at Year End

◦ During the year the company record inventory purchases at cost (FIFO, LIFO, Weighted-average cost).

◦ However, at the end of the year the company has to determine the net realizable value of the unsold inventory.

◦ If the **cost of the inventory is lower than net realizable value**, no year-end adjustment is necessary.

Lower of Cost or Net Realizable Value

5.2   Analysis at Year End

◦ However, if the **net realizable value is lower than cost** of inventory, an adjusting entry is necessary to reduce inventory balance from cost to net realizable value.

Lower of Cost or Net Realizable Value

5.2   Analysis at Year End

Example 13

◦ Assume the net realizable value of 500 units out of Central Supermarket ending inventory of 2,500 is lower than their cost. The net realizable value is $9.00 when the cost is $11.50. We adjust the inventory as follows:

GENERAL JOURNAL				JE #
Date	**Account Title**	**Ref.**	**Debit**	**Credit**
Dec. 31	Cost of Goods Sold		1,250	
	Inventory			1,250
	(*Adjust inventory down to net realizable value by $1,250. ($1,250 = 500 x $2.50 ($11.50 - $9.00)*).			

Lower of Cost or Net Realizable Value

END