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INTRODUCTION TO FINANCIAL ACCOUNTING

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ADAPTED BY T. JENSEN & M. MORPURGO

VERSION
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INTRODUCTION TO FINANCIAL ACCOUNTING

by Henry Dauderis & David Annand
Adapted by T. Jensen & M. Morpurgo

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Introduction to Financial Accounting

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2024 A	• Minor content fixes throughout.
2023 A	• Minor content fixes throughout. • Refresh of years used in dates throughout in examples, exercises, and problems. • Problem 2-6 revised.
2021 A	• Front matter has been updated including cover, Vretta-Lyryx with Open Texts, copyright, and revision pages. Attribution page has been added.
2019 B	• Minor content fixes throughout.
2019 A	• Content added on direct method cash flows. • Links to videos have been added throughout the chapters.
2018 A	• Minor content fixes throughout.
2017 C	• Content added on book values with multiple share classes (Section 10.6).
2017 B	• Content added on special journals and subledgers in Section 2.4.
2017 A	• Additional exercises added throughout the text. • Content added on detailed income statements with continuing and discontinued operations and EPS calculations (Section 11.4). • Content added on bond retirement and interest accrual when bonds issued between interest payment dates (Appendix to Chapter 9). • Content added on share retirement to Section 10.2.

Table of Contents

Chapter 1

Introduction to Financial Accounting

Accounting involves a process of collecting, recording, and reporting a business's economic activities to users. It is often called the language of business because it uses a unique vocabulary to communicate information to decision makers. To understand accounting, we first look at the basic forms of business organizations. The concepts and principles that provide the foundation for financial accounting are then discussed. With an emphasis on the corporate form of business organization, we will examine how we communicate to users of financial information using financial statements. Finally, we will review how financial transactions are analyzed and then reported on financial statements.

Chapter 1 Learning Objectives Watch video

LO1 – Define accounting.

LO2 – Identify and describe the forms of business organization.

LO3 – Identify and explain the Generally Accepted Accounting Principles (GAAP).

LO4 – Identify, explain, and prepare the financial statements.

LO5 – Analyze transactions by using the accounting equation.

Concept Self-Check

Use the following as a self-check while working through Chapter 1.

1. What is accounting?
2. What is the difference between internal and external users of accounting information?
3. What is the difference between managerial and financial accounting?
4. What is the difference between a business organization and a non-business organization?
5. What are the three types of business organizations?
6. What is a PAE? A PE?

7. What does the term *limited liability* mean?
8. Explain how ethics are involved in the practice of accounting.
9. Describe what GAAP refers to.
10. Identify and explain the six qualitative characteristics of GAAP.
11. Identify and explain at least five of the nine principles that support the GAAP qualitative characteristics.
12. How is financial information communicated to external users?
13. What are the four financial statements?
14. Which financial statement measures financial performance? Financial position?
15. What information is provided in the statement of cash flows?
16. Explain how retained earnings and dividends are related.
17. What are the three primary components of the balance sheet?
18. Equity consists of what two components?
19. How are assets financed?
20. Identify and explain the three types of activities a business engages in.
21. What are *notes to the financial statements*?
22. What is the accounting equation?
23. What are the distinctions among calendar, interim, and fiscal year ends?

NOTE: The purpose of these questions is to prepare you for the concepts introduced in the chapter. Your goal should be to answer each of these questions as you read through the chapter. If, when you complete the chapter, you are unable to answer one or more the Concept Self-Check questions, go back through the content to find the answer(s). Solutions are not provided to these questions.

1.1 Accounting Defined Watch video

LO1 – Define accounting.

Accounting is the process of identifying, measuring, recording, and communicating an organization's economic activities to users. Users need information for decision making. **Internal users** of accounting information work for the organization and are responsible for planning, organizing, and operating the entity. The area of accounting known as **managerial accounting** serves the decision-making needs of internal users. External users do not work for the organization and include investors, creditors, labour unions, and customers. **Financial accounting** is the area of accounting that focuses on external reporting and meeting the needs of external users. This book addresses financial accounting. Managerial accounting is covered in other books.

1.2 Business Organizations Watch video

LO2 – Identify and describe the forms of business organization.

An **organization** is a group of individuals who come together to pursue a common set of goals and objectives. There are two types of business organizations: *business* and *non-business*. A **business organization** sells products and/or services for profit. A **non-business organization**, such as a charity or hospital, exists to meet various societal needs and does not have profit as a goal. All businesses, regardless of type, record, report, and, most importantly, *use* accounting information for making decisions.

This book focuses on business organizations. There are three common forms of business organizations — a *proprietorship*, a *partnership*, and a *corporation*.

Proprietorship

A **proprietorship** is a business owned by one person. It is not a separate legal entity, which means that the business and the owner are considered to be the same entity. This means, for example, that from an income tax perspective, the profits of a proprietorship are taxed as part of the owner's personal income tax return. **Unlimited liability** is another characteristic of a sole proprietorship meaning that if the business could not pay its debts, the owner would be responsible even if the business's debts were greater than the owner's personal resources.

Partnership

A **partnership** is a business owned by two or more individuals. Like the proprietorship, it is not a separate legal entity and its owners are typically subject to unlimited liability.

Corporation

A **corporation** is a business owned by one or more owners. The owners are known as *shareholders*. A **shareholder** owns shares of the corporation. **Shares**[1] are units of ownership in a corporation. For example, if a corporation has 1,000 shares, there may be three shareholders where one has 700 shares, another has 200 shares, and the third has 100 shares. The number of shares held by a shareholder represents how much of the corporation they own. A corporation can have different types of shares; this topic is discussed in a later chapter. When there is only one type of share, it is usually called **common shares**.

A corporation's shares can be privately held or available for public sale. A corporation that holds its shares privately and does not sell them publicly is known as a **private enterprise (PE)**. A corporation that sells its shares publicly, typically on a stock exchange, is called a **publicly accountable enterprise (PAE)**.

Unlike the proprietorship and partnership, a corporation is a separate legal entity. This means, for example, that from an income tax perspective, a corporation files its own tax return. The owners or shareholders of a corporation are not responsible for the corporation's debts so have **limited liability** meaning that the most they can lose is what they invested in the corporation.

In larger corporations, there can be many shareholders. In these cases, shareholders do not manage a corporation but participate indirectly through the election of a **Board of Directors**. The Board of Directors does not participate in the day-to-day management of the corporation but delegates this responsibility to the officers of the corporation. An example of this delegation of responsibility is illustrated in Figure 1.1.

[1] Shares are also called **stock**.

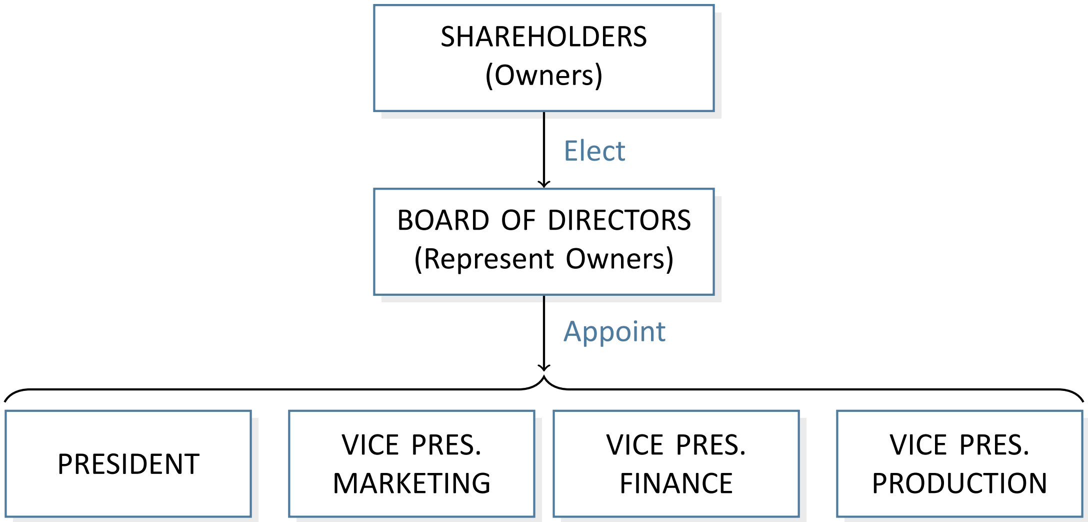
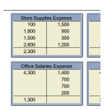


Figure 1.1: Generalized Form of a Corporate Organization

Shareholders usually meet annually to elect a Board of Directors. The Board of Directors meets regularly to review the corporation's operations and to set policies for future operations. Unlike shareholders, directors can be held personally liable if a company fails.

The focus of these chapters will be on the corporate form of business organization. The proprietorship and partnership organizations will be discussed in more detail in Chapter 13.



An exploration is available on the Lyryx site. Log into your Lyryx course to run Forms of Organization.

1.3 Generally Accepted Accounting Principles (GAAP) Watch video

LO3 – Identify and explain the Generally Accepted Accounting Principles (GAAP).

The goal of accounting is to ensure information provided to decision makers is useful. To be useful, information must be relevant and faithfully represent a business's economic activities. This requires **ethics**, beliefs that help us differentiate right from wrong, in the application of underlying accounting concepts or principles. These underlying accounting concepts or principles are known as **Generally Accepted Accounting Principles (GAAP)**.

GAAP in Canada, as well as in many other countries, is based on International Financial Reporting Standards (IFRS) for publicly accountable enterprises (PAE). IFRS are issued by the **International Accounting Standards Board (IASB)**. The IASB's mandate is to promote the adoption of a single set of global accounting standards through a process of open and transparent discussions among corporations, financial institutions, and accounting firms around the world. Private enterprises (PE) in Canada are permitted to follow either IFRS or **Accounting Standards for Private Enterprises (ASPE)**, a set of less onerous GAAP-based standards developed by the Canadian Accounting Standards Board (AcSB). The **AcSB** is the body that governs accounting standards in Canada. ***The focus in this book will be on IFRS for PAEs***[2].

Accounting practices are guided by GAAP which are comprised of qualitative characteristics and principles. As already stated, relevance and faithful representation are the primary qualitative characteristics. Comparability, verifiability, timeliness, and understandability are additional qualitative characteristics.

Information that possesses the quality of:

- **relevance** has the ability to make a difference in the decision-making process.
- **faithful representation** is complete, neutral, and free from error.
- **comparability** tells users of the information that businesses utilize similar accounting practices.
- **verifiability** means that others are able to confirm that the information faithfully represents the economic activities of the business.
- **timeliness** is available to decision makers in time to be useful.
- **understandability** is clear and concise.

Table 1.1 lists the nine principles that support these qualitative characteristics.

[2] It should be noted, however, that at the introductory level, there are no significant differences in how IFRS and ASPE are applied.

Accounting Principle	**Explanation/Example**
Business entity	Requires that each economic entity maintain separate records. Example: A business owner keeps separate accounting records for business transactions and for personal transactions.
Consistency	Requires that a business use the same accounting policies and procedures from period to period. Example: A business uses a particular inventory costing method. It cannot change to a different inventory costing method in the next accounting period.
Cost	Requires that each economic transaction be based on the actual original cost (also known as historical cost principle). Example: The business purchases a delivery truck advertised for $75,000 and pays $70,000. The truck must be recorded at the cost of $70,000, the amount actually paid.
Full disclosure	Requires that accounting information communicate sufficient information to allow users to make knowledgeable decisions. Example: A business is applying to the bank for a $1,000,000 loan. The business is being sued for $20,000,000 and it is certain that it will lose. The business must tell the bank about the lawsuit even though the lawsuit has not yet been finalized.
Going concern	Assumes that a business will continue for the foreseeable future. Example: All indications are that Business X will continue so it is reported to be a ‘going concern’. Business Z is being sued for $20,000,000 and it is certain that it will lose. The $20,000,000 loss will force the business to close. Business Z must not only disclose the lawsuit but it must also indicate that there is a ‘going concern’ issue.
Matching	Requires that financial transactions be reported in the period in which they occurred/were realized. Example: Supplies were purchased March 15 for $700. They will be recorded as an asset on March 15 and then expensed as they are used.

Accounting Principle	Explanation/Example
Materiality	Requires a business to apply proper accounting only for items that would affect decisions made by users. Example: The business purchases a stapler for $5 today. Technically, the stapler will last several years so should be recorded as an asset. However, the business will record the $5 as an expense instead because depreciating a $5 item will not impact the decisions of financial information.
Monetary unit	Requires that financial information be communicated in stable units of money. Example: Land was purchased in 1940 for $5,000 Canadian. It is maintained in the accounting records at $5,000 Canadian and is not adjusted.
Recognition	Requires that revenues be recorded when earned and expenses be recorded when incurred, which is not necessarily when cash is received (in the case of revenues) or paid (in the case of expenses). Example: A sale occurred on March 5. The customer received the product on March 5 but will pay for it on April 5. The business records the sale on March 5 when the sale occurred even though the cash is not received until April 5.

Table 1.1: Accounting Principles

Note: Some of the principles discussed above may be challenging to understand because related concepts have not yet been introduced. Therefore, most of these principles will be discussed again in more detail in a later chapter.

1.4 Financial Statements Watch video

LO4 – Identify, explain, and prepare the financial statements.

Recall that financial accounting focuses on communicating information to external users. That information is communicated using ***financial statements***. There are four financial statements: the income statement, statement of changes in equity, balance sheet, and statement of cash flows. Each of these is introduced in the following sections using an example based on a fictitious corporate organization called Big Dog Carworks Corp.

The Income Statement

An **income statement** communicates information about a business's financial performance by summarizing **revenues** less **expenses** over a period of time. Revenues are created when a business provides products or services to a customer in exchange for assets. Assets are resources resulting from past events and from which future economic benefits are expected to result. Examples of assets include cash, equipment, and supplies. Assets will be discussed in more detail later in this chapter. Expenses are the assets that have been used up or the obligations incurred in the course of earning revenues. When revenues are greater than expenses, the difference is called **net income** or **profit**. When expenses are greater than revenue, a **net loss** results.

Consider the following income statement of Big Dog Carworks Corp. (BDCC). This business was started on January 1, 2023 by Bob "Big Dog" Baldwin in order to repair automobiles. All the shares of the corporation are owned by Bob.

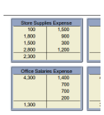
At January 31, the income statement shows total revenues of $10,000 and various expenses totaling $7,800. Net income, the difference between $10,000 of revenues and $7,800 of expenses, equals $2,200.

Big Dog Carworks Corp.
Income Statement
For the Month Ended January 31, 2023

The heading shows the name of the entity, the type of financial statement, and the period-in-time date.

Revenues		
Repair revenues		$10,000
Expenses		
Rent expense	$1,600	
Salaries expense	3,500	
Supplies expense	2,000	
Fuel expense	700	
Total expenses		7,800
Net income		$2,200

The net income is transferred to the statement of changes in equity.



An exploration is available on the Lyryx site. Log into your Lyryx course to run Income Statement.

The Statement of Changes in Equity

The **statement of changes in equity** provides information about how the balances in Share capital and Retained earnings changed during the period. **Share capital** is a heading in the shareholders' equity section of the balance sheet and represents how much shareholders have invested. When shareholders buy shares, they are investing in the business. The number of shares they purchase will determine how much of the corporation they own. The type of ownership unit purchased by Big Dog's shareholders is known as common shares. Other types of shares will be discussed in a later chapter. When a corporation sells its shares to shareholders, the corporation is said to be **issuing shares** to shareholders.

In the statement of changes in equity shown below, Share capital and Retained earnings balances at January 1 are zero because the corporation started the business on that date. During January, Share capital of $10,000 was issued to shareholders so the January 31 balance is $10,000.

Retained earnings is the sum of all net incomes earned by a corporation over its life, less any distributions of these net incomes to shareholders. Distributions of net income to shareholders are called **dividends**. Shareholders generally have the right to share in dividends according to the percentage of their ownership interest. To demonstrate the concept of retained earnings, recall that Big Dog has been in business for one month in which $2,200 of net income was reported. Additionally, $200 of dividends were distributed, so these are subtracted from retained earnings. Big Dog's retained earnings were therefore $2,000 at January 31, 2023 as shown in the statement of changes in equity below.

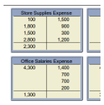
Big Dog Carworks Corp.
Statement of Changes in Equity
For the Month Ended January 31, 2023

The heading shows the name of the entity, the type of financial statement, and the period-in-time date.

	Share Capital	*Retained Earnings*	*Total Equity*
Opening balance	$ -0-	$ -0-	$ -0-
Shares issued	10,000		10,000
Net income		2,200	2,200
Dividends		(200)	(200)
Ending balance	$10,000	$2,000	$12,000

These totals are transferred to the balance sheet at January 31, 2023.

To demonstrate how retained earnings would appear in the next accounting period, let's assume that Big Dog reported a net income of $5,000 for February, 2023 and dividends of $1,000 were given to the shareholder. Based on this information, retained earnings at the end of February would be $6,000, calculated as the $2,000 January 31 balance plus the $5,000 February net income less the $1,000 February dividend. The balance in retained earnings continues to change over time because of additional net incomes/losses and dividends.



An exploration is available on the Lyryx site. Log into your Lyryx course to run Statement of Changes in Equity.

The Balance Sheet

The **balance sheet**, or **statement of financial position**, shows a business's assets, liabilities, and equity at a point in time. The balance sheet of Big Dog Carworks Corp. at January 31, 2023 is shown below.

Big Dog Carworks Corp.
Balance Sheet
At January 31, 2023

The heading shows the name of the entity, the type of financial statement, and the point-in-time date.

Assets		*Liabilities*		
Cash	$ 3,700	Bank Loan	$ 6,000	
Accounts receivable	2,000	Accounts payable	700	
Prepaid insurance	2,400	Unearned revenue	400	
Equipment	3,000	Total liabilities		$ 7,100
Truck	8,000			
		Equity		
		Share capital	$10,000	
		Retained earnings	2,000	
		Total equity		12,000
Total assets	$19,100	Total liabilities and equity		$19,100

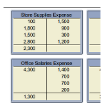
Total assets ($19,100 here) always equal Total liabilities ($7,100) plus Equity ($12,000).

What Is an Asset?

Assets are economic resources that provide future benefits to the business. Examples include cash, accounts receivable, prepaid expenses, equipment, and trucks. **Cash** is coins and currency, usually held in a bank account, and is a financial resource with future benefit because of its purchasing power. **Accounts receivable** represent amounts to be collected in cash in the future for goods sold or services provided to customers on credit. **Prepaid expenses** are assets that are paid in cash in advance and have benefits that apply over future periods. For example, a one-year insurance policy purchased for cash on January 1, 2023 will provide a benefit until December 31, 2023 so is a prepaid asset. The equipment and truck were purchased on January 1, 2023 and will provide benefits for 2023 and beyond so are assets.

What Is a Liability?

A **liability** is an obligation to pay an asset in the future. For example, Big Dog's bank loan represents an obligation to repay cash in the future to the bank. **Accounts payable** are obligations to pay a creditor for goods purchased or services rendered. A **creditor** owns the right to receive payment from an individual or business. **Unearned revenue** represents an advance payment of cash from a customer for Big Dog's services or products to be provided in the future. For example, Big Dog collected cash from a customer in advance for a repair to be done in the future.

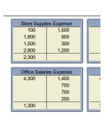


An exploration is available on the Lyryx site. Log into your Lyryx course to run Balance Sheet.

What Is Equity?

Equity represents the net assets owned by the owners (the shareholders). **Net assets** are assets minus liabilities. For example, in Big Dog's January 31 balance sheet, net assets are $12,000, calculated as total assets of $19,100 minus total liabilities of $7,100. This means that although there are $19,100 of assets, only $12,000 are owned by the shareholders and the balance, $7,100, are financed by debt. Notice that net assets and total equity are the same value; both are $12,000. Equity consists of share capital and retained earnings. Share capital represents how much the shareholders have invested in the business. Retained earnings is the sum of all net incomes earned by a corporation over its life, less any dividends distributed to shareholders.

In summary, the balance sheet is represented by the equation: Assets = Liabilities + Equity. Assets are the investments held by a business. The liabilities and equity explain how the assets have been financed, or funded. Assets can be financed through liabilities, also known as **debt**, or equity. Equity represents amounts that are owned by the owners, the shareholders, and consists of share capital and retained earnings. Investments made by shareholders, namely share capital, are used to finance assets and/or pay down liabilities. Additionally, retained earnings, comprised of net income less any dividends, also represent a source of financing.



An exploration is available on the Lyryx site. Log into your Lyryx course to run Account Types.

The Statement of Cash Flows (SCF)

Cash is an asset reported on the balance sheet. Ensuring there is sufficient cash to pay expenses and liabilities as they come due is a critical business activity. The **statement of cash flows (SCF)** explains how the balance in cash changed over a period of time by detailing the sources (inflows) and uses (outflows) of cash by type of activity: operating, investing, and financing, as these are the three types of activities a business engages in. **Operating activities** are the day-to-day processes involved in selling products and/or services to generate net income. Examples of operating activities include the purchase and use of supplies, paying employees, fuelling equipment, and renting space for the business. **Investing activities** are the buying of assets needed to generate revenues. For example, when an airline purchases airplanes, it is investing in assets required to help it generate revenue. **Financing activities** are the raising of money needed to invest in assets. Financing can involve issuing share capital (getting money from the owners known as shareholders) or borrowing. Figure 1.2 summarizes the interrelationships among the three types of business activities.

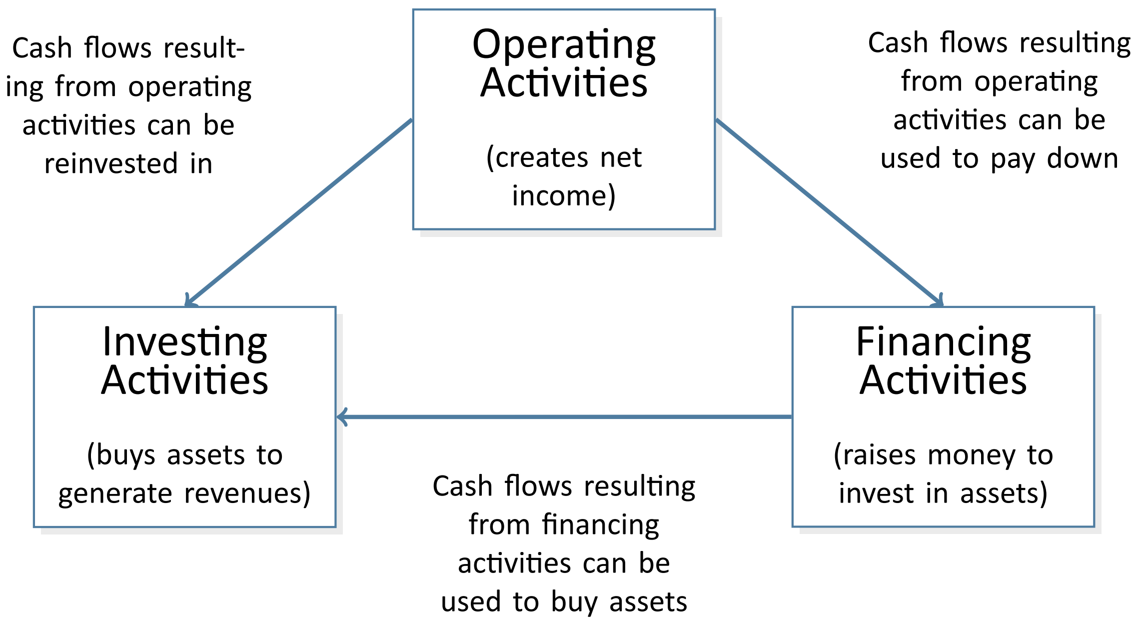


Figure 1.2: Relationships Among the Three Types of Business Activities

The statement of cash flows for Big Dog is shown below.

Big Dog Carworks Corp.
Statement of Cash Flows
For the Month Ended January 31, 2023

The heading shows the name of the entity, the type of financial statement, and the period-in-time date.

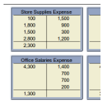
Operating activities:		
Net income	$ 2,200	
Adjustments:		
Increase in unearned revenues	400	
Increase in accounts payable	700	
Increase in prepaid insurance	(2,400)	
Increase in accounts receivable	(2,000)	
Net cash used by operating activities		$(1,100)
Investing activities:		
Purchase of equipment	$(3,000)	
Purchase of truck	(3,000)	
Net cash used by investing activities		(6,000)
Financing activities:		
Issued shares	$10,000	
Borrowed from bank	3,000	
Payment on bank loan	(2,000)	
Paid dividends	(200)	
Net cash provided by financing activities		10,800
Net increase in cash		3,700
Cash balance, January 1		-0-
Cash balance, January 31		$3,700

This agrees with the Cash amount shown on the Balance Sheet at January 31, 2023.

The statement of cash flows is useful because cash is one of the most important assets of a corporation. Information about expected future cash flows are therefore important for decision makers. For instance, Big Dog's bank manager needs to determine whether the remaining $6,000 loan can be repaid, and also whether or not to grant a new loan to the corporation if requested. The statement of cash flows helps inform those who make these decisions.

Notes to the Financial Statements

An essential part of financial statements are the notes that accompany them. These notes are generally located at the end of a set of financial statements. The notes provide greater detail about various amounts shown in the financial statements, or provide non-quantitative information that is useful to users. For example, a note may indicate the estimated useful lives of long-lived assets, or loan repayment terms. Examples of note disclosures will be provided later.



An exploration is available on the Lyryx site. Log into your Lyryx course to run Communicating Through Financial Statements.

1.5 Transaction Analysis and Double-entry Accounting Watch video

LO5 – Analyze transactions by using the accounting equation.

The **accounting equation** is foundational to accounting. It shows that the total assets of a business must always equal the total claims against those assets by creditors and owners. The equation is expressed as:

ASSETS	=	LIABILITIES	+	EQUITY
(economic resources owned by an entity)		(creditors' claims on assets)		(owners' claims on assets)

When financial transactions are recorded, combined effects on assets, liabilities, and equity are always exactly offsetting. This is the reason that the balance sheet always balances.

Each economic exchange is referred to as a **financial transaction** — for example, when an organization exchanges cash for land and buildings. Incurring a liability in return for an asset is also a financial transaction. Instead of paying cash for land and buildings, an organization may borrow money from a financial institution. The company must repay this with cash payments in the future. The accounting equation provides a system for processing and summarizing these sorts of transactions.

Accountants view financial transactions as economic events that change components within the accounting equation. These changes are usually triggered by information contained in **source documents** (such as sales invoices and bills from creditors) that can be verified for accuracy.

The accounting equation can be expanded to include all the items listed on the Balance Sheet of Big Dog at January 31, 2023, as follows:

ASSETS					=	LIABILITIES			+	EQUITY	
Cash +	Accounts Receivable +	Prepaid Insurance	+ Equipment	+ Truck	=	Bank Loan	+ Accounts Payable	+ Unearned Revenue	+	Share Capital	+ Retained Earnings

If one item within the accounting equation is changed, then another item must also be changed to balance it. In this way, the equality of the equation is maintained. For example, if there is an increase in an asset account, then there must be a decrease in another asset or a corresponding increase in a liability or equity account. This equality is the essence of *double-entry accounting*. The equation itself always remains in balance after each transaction. The operation of double-entry accounting is illustrated in the following section, which shows 10 transactions of Big Dog Carworks Corp. for January 2023.

			Effect on the Accounting Equation				
Transaction Number	Date	Description of Transaction	ASSETS	=	LIABILITIES	+	EQUITY
1	Jan.1	Big Dog Carworks Corp. issued 1,000 shares to Bob Baldwin, the owner or shareholder, for $10,000 cash. The asset Cash is increased while the equity item Share Capital is also increased. The impact on the equation is:					
		CASH	+10,000				
		SHARE CAPITAL					+10,000
2	Jan.2	Big Dog Carworks Corp. borrowed $3,000 from the bank and deposited the cash into the business's bank account. The asset Cash is increased and the liability Bank Loan is also increased. The impact on the equation is:					
		CASH	+3,000				
		BANK LOAN			+3,000		
3	Jan.2	The corporation purchased $3,000 of equipment for cash. There is an increase of the asset Equipment and a decrease to another asset, Cash. The impact on the equation is:					
		EQUIPMENT	+3,000				
		CASH	-3,000				
4	Jan.2	The corporation purchased a tow truck for $8,000, paying $3,000 cash and incurring an additional bank loan for the balance. The asset Cash is decreased while the asset Truck is increased and the liability Bank Loan is also increased. The impact on the equation is:					
		CASH	-3,000				
		TRUCK	+8,000				
		BANK LOAN			+5,000		

Transaction Number	Date	Description of Transaction	ASSETS	=	LIABILITIES	+	EQUITY
5	Jan.5	Big Dog Carworks Corp. paid $2,400 for a one-year insurance policy, effective January 1. Here the asset Prepaid Insurance is increased and the asset Cash is decreased. The impact on the equation is:					
		PREPAID INSURANCE →	+2,400				
		CASH →	-2,400				
		Since the one-year period will not be fully used at January 31 when financial statements are prepared, the insurance cost is considered to be an asset at the payment date. The transaction does not affect liabilities or equity.					
6	Jan.10	The corporation paid $2,000 cash to the bank to reduce the loan outstanding. The asset Cash is decreased and there is a decrease in the liability Bank Loan. The impact on the equation is:					
		BANK LOAN →			-2,000		
		CASH →	-2,000				
7	Jan.15	The corporation received $400 as an advance payment from a customer for services to be performed in the future. The asset Cash is increased by $400 and a liability, Unearned Revenue, is also increased since the revenue has not been earned as of January 15. It will be earned when the work is performed in the future. At January 31, these amounts are repayable to customers if the work is not done (and thus a liability). The impact on the equation is:					
		CASH →	+400				
		UNEARNED REVENUE →			+400		

			Effect on the Accounting Equation		
Transaction Number	Date	Description of Transaction	ASSETS =	LIABILITIES +	EQUITY
8	Jan.20	Automobile repairs of $10,000 were made for a customer; $8,000 of repairs were paid in cash and $2,000 of repairs will be paid in the future.			
		Cash and Accounts Receivable assets of the corporation increase. The repairs are a revenue; revenue causes an increase in net income and an increase in net income causes an increase in equity. The impact on the equation is:			
		CASH	+8,000		
		ACCOUNTS RECEIVABLE	+2,000		
		REPAIR REVENUE			+10,000
		This activity increases assets and net income.			
9	Jan.31	The corporation paid operating expenses for the month as follows: $1,600 for rent; $3,500 for salaries; and $2,000 for supplies expense. The $700 for truck operating expenses (e.g., oil, gas) was on credit.			
		There is a decrease in the asset Cash. Expenses cause net income to decrease and a decrease in net income causes equity to decrease. There is an increase in the liability Accounts Payable. The impact on the equation is:			
		RENT EXPENSE			-1,600
		SALARIES EXPENSE			-3,500
		SUPPLIES EXPENSE			-2,000
		TRUCK OPERATING EXPENSE			-700
		CASH	-7,100		
		ACCOUNTS PAYABLE		+700	
10	Jan.31	Dividends of $200 were paid in cash to the only shareholder, Bob Baldwin.			
		Dividends cause retained earnings to decrease. A decrease in retained earnings will decrease equity. The impact on the equation is:			
		DIVIDENDS			-200
		CASH	-200		

These various transactions can be recorded in the expanded accounting equation as shown below:

	ASSETS					= LIABILITIES			+ EQUITY	
Trans.	Cash +	Acc. Rec. +	Prepaid Insur. +	Equip. +	Truck =	Bank Loan +	Acc. Pay. +	Unearned Revenue +	Share Capital +	Retained Earnings
1.	+10,000								+10,000	
2.	+3,000					+3,000				
3.	-3,000			+3,000						
4.	-3,000				+8,000	+5,000				
5.	-2,400		+2,400							
6.	-2,000					-2,000				
7.	+400							+400		
8.	+8,000	+2,000								+10,000
9.	-7,100						+700			-1,600
										-3,500
										-2,000
										-700
10.	-200									-200
	3,700 +	2,000 +	2,400 +	3,000 +	8,000 =	6,000 +	700 +	400 +	10,000 +	2,000

These numbers are used to prepare the Income Statement.

Figure 1.3: Transactions Worksheet for January 31, 2023

Transactions in these columns are used to prepare the Statement of Changes in Equity.

Column totals are used to prepare the Balance Sheet.

ASSETS = $19,100

LIABILITIES + EQUITY = $19,100

Transactions summary:

1. Issued share capital for $10,000 cash.
2. Received a bank loan for $3,000.
3. Purchased equipment for $3,000 cash.
4. Purchased a truck for $8,000; paid $3,000 cash and incurred a bank loan for the balance.
5. Paid $2,400 for a comprehensive one-year insurance policy effective January 1.
6. Paid $2,000 cash to reduce the bank loan.
7. Received $400 as an advance payment for repair services to be provided over the next two months as follows: $300 for January, $100 for February.
8. Performed repairs for $8,000 cash and $2,000 on credit.
9. Paid a total of $7,100 for operating expenses incurred during the month; also incurred an expense on account for $700.
10. Dividends of $200 were paid in cash to the only shareholder, Bob Baldwin.

The transactions summarized in Figure 1.3 were used to prepare the financial statements described earlier, and reproduced in Figure 1.4 below.

Big Dog Carworks Corp.
Balance Sheet
At January 31, 2023

Assets		
Cash	$ 3,700	
Accounts receivable	2,000	
Prepaid insurance	2,400	
Equipment	3,000	
Truck	8,000	
		$19,100
Liabilities		
Bank loan	$ 6,000	
Accounts payable	700	
Unearned revenue	400	7,100
Equity		
Share capital	$10,000	
Retained earnings	2,000	
		12,000
		$19,100

Big Dog Carworks Corp.
Income Statement
For the Month Ended January 31, 2023

Revenue		
Repairs		$10,000
Expenses		
Rent	$ 1,600	
Salaries	3,500	
Supplies	2,000	
Truck operation	700	
Total expenses		7,800
Net income		$2,200

The components of equity are shown on the Balance Sheet.

Net Income becomes part of Retained Earnings.

Big Dog Carworks Corp.
Statement of Changes in Equity
For the Month Ended January 31, 2023

	Share Capital	*Retained Earnings*	*Total Equity*
Opening balance	$ -0-	$ -0-	$ -0-
Shares issued	10,000		10,000
Net income		2,200	2,200
Dividends		(200)	(200)
Ending balance	$10,000	$2,000	$12,000

Figure 1.4: Financial Statements of Big Dog Carworks Corp.

Accounting Time Periods

Financial statements are prepared at regular intervals — usually monthly or quarterly — and at the end of each 12-month period. This 12-month period is called the **fiscal year**. The timing of the financial statements is determined by the needs of management and other users of the financial statements. For instance, financial statements may also be required by outside parties, such as bankers and shareholders. However, accounting information must possess the qualitative characteristic of timeliness — it must be available to decision makers in time to be useful — which is typically a minimum of once every 12 months.

Accounting reports, called the *annual financial statements*, are prepared at the end of each 12-month period, which is known as the **year-end** of the entity. Some companies' year-ends do not follow the calendar year (year ending December 31). This may be done so that the fiscal year coincides with their *natural year*. A **natural year** ends when business operations are at a low point. For example, a ski resort may have a fiscal year ending in late spring or early summer when business operations have ceased for the season.

Corporations listed on **stock exchanges** are generally required to prepare **interim financial statements**, usually every three months, primarily for the use of shareholders or creditors. Because these types of corporations are large and usually have many owners, users require more up-to-date financial information.

The relationship of the interim and year-end financial statements is illustrated in Figure 1.5.

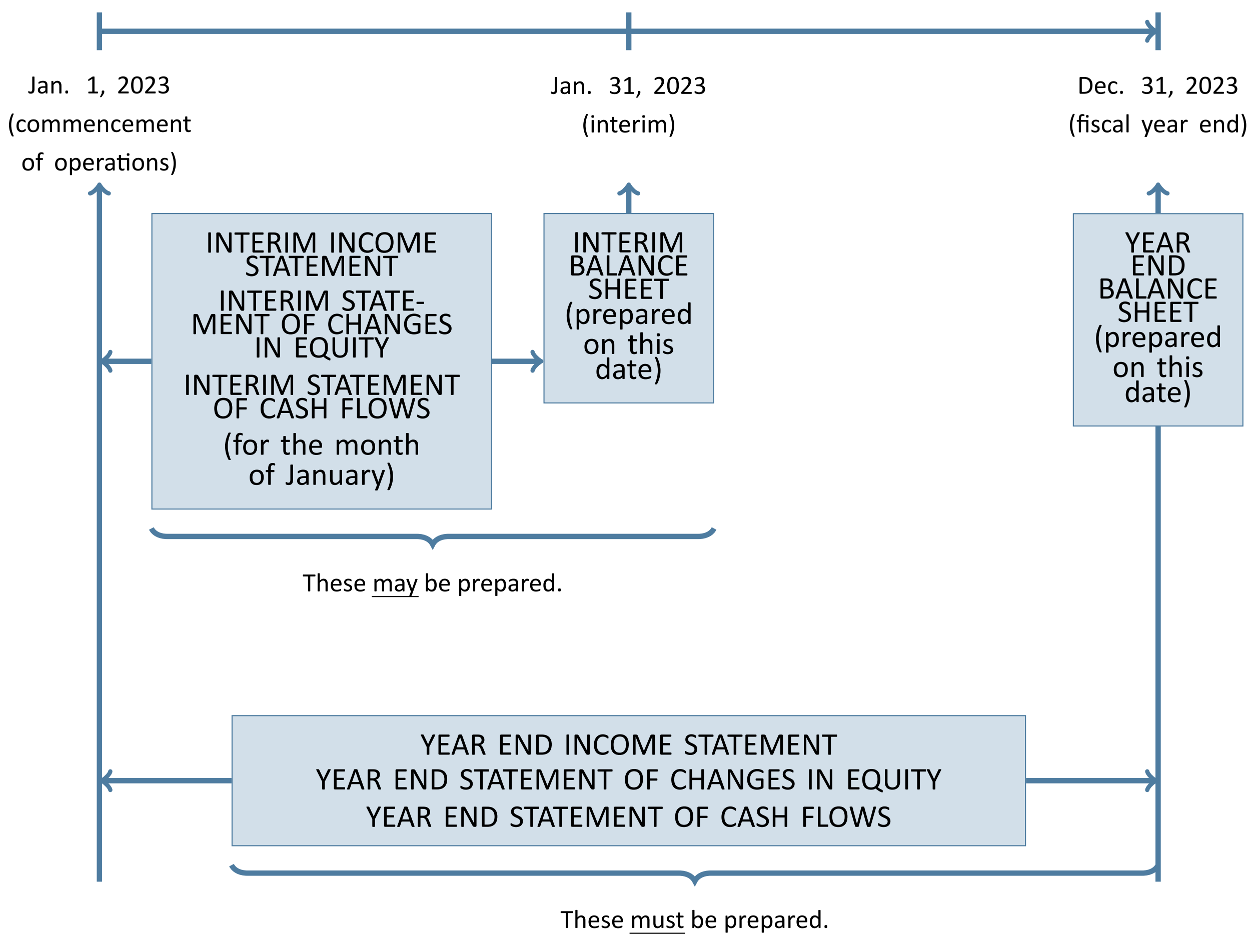
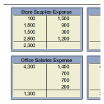


Figure 1.5: Relationship of Interim and Year-end Financial Statements



An exploration is available on the Lyryx site. Log into your Lyryx course to run Accounting Equation.

Summary of Chapter 1 Learning Objectives

LO1 – Define accounting.

Accounting is the process of identifying, measuring, recording, and communicating an organization's economic activities to users for decision making. Internal users work for the organization while external users do not. Managerial accounting serves the decision-making needs of internal users. Financial accounting focuses on external reporting to meet the needs of external users.

LO2 – Identify and describe the forms of business organization.

The three forms of business organizations are a proprietorship, partnership, and corporation.

The following chart summarizes the key characteristics of each form of business organization.

Characteristic	Proprietorship	Partnership	Corporation
Separate legal entity	No	No	Yes
Business income is taxed as part of the business	No[3]	No[4]	Yes
Unlimited liability	Yes	Yes	No
One owner permitted	Yes	No	Yes[5]
Board of Directors	No	No	Yes

LO3 – Identify and explain the Generally Accepted Accounting Principles (GAAP).

GAAP followed in Canada by PAEs (Publicly Accountable Enterprises) are based on IFRS (International Financial Reporting Standards). PEs (Private Enterprises) follow GAAP based on ASPE (Accounting Standards for Private Enterprises), a less onerous set of GAAP maintained by the AcSB (Accounting Standards Board). GAAP have qualitative characteristics (relevance, faithful representation, comparability, verifiability, timeliness, and understandability) and principles (business entity, consistency, cost, full disclosure, going concern, matching, materiality, monetary unit, and recognition).

[3] Business income is added to the owner's personal income and the owner pays tax on the sum of the two.
[4] Business income is added to the owner's personal income and the owner pays tax on the sum of the two.
[5] A corporation can have one or more owners.

LO4 – Identify, explain, and prepare the financial statements.

The four financial statements are: income statement, statement of changes in equity, balance sheet, and statement of cash flows. The income statement reports financial performance by detailing revenues less expenses to arrive at net income/loss for the period. The statement of changes in equity shows the changes during the period to each of the components of equity: share capital and retained earnings. The balance sheet identifies financial position at a point in time by listing assets, liabilities, and equity. Finally, the statement of cash flows details the sources and uses of cash during the period based on the three business activities: operating, investing, and financing.

LO5 – Analyze transactions by using the accounting equation.

The accounting equation, A = L + E, describes the asset investments (the left side of the equation) and the liabilities and equity that financed the assets (the right side of the equation). The accounting equation provides a system for processing and summarizing financial transactions resulting from a business's activities. A financial transaction is an economic exchange between two parties that impacts the accounting equation. The equation must always balance.

Chapter 2

The Accounting Process

Chapter 2 looks more closely at asset, liability, and equity accounts and how they are affected by double-entry accounting, namely, debits and credits. The transactions introduced in Chapter 1 for Big Dog Carworks Corp. are used to explain debit and credit analysis. The preparation of a trial balance will be introduced. Additionally, this chapter will demonstrate how transactions are recorded in a general journal and posted to a general ledger. Finally, the concept of the accounting cycle is presented.

Chapter 2 Learning Objectives Watch video

LO1 – Describe asset, liability, and equity accounts, identifying the effect of debits and credits on each.

LO2 – Analyze transactions using double-entry accounting.

LO3 – Prepare a trial balance and explain its use.

LO4 – Record transactions in a general journal and post in a general ledger.

LO5 – Define the accounting cycle.

Concept Self-Check

Use the following as a self-check while working through Chapter 2.

1. What is an asset?
2. What is a liability?
3. What are the different types of equity accounts?
4. What is retained earnings?
5. How are retained earnings and revenues related?
6. Why are T-accounts used in accounting?

7. How do debits and credits impact the T-account?
8. What is a chart of accounts?
9. Are increases in equity recorded as a debit or credit?
10. Are decreases in equity recorded as a debit or credit?
11. Does issuing shares and revenues cause equity to increase or decrease?
12. Are increases in the share capital account recorded as a debit or credit?
13. Are increases in revenue accounts recorded as debits or credits?
14. Do dividends and expenses cause equity to increase or decrease?
15. Are increases in the dividend account recorded as a debit or credit?
16. Are increases in expense accounts recorded as debits or credits?
17. How is a trial balance useful?
18. What is the difference between a general journal and a general ledger?
19. Explain the posting process.
20. What is the accounting cycle?

NOTE: The purpose of these questions is to prepare you for the concepts introduced in the chapter. Your goal should be to answer each of these questions as you read through the chapter. If, when you complete the chapter, you are unable to answer one or more the Concept Self-Check questions, go back through the content to find the answer(s). Solutions are not provided to these questions.

2.1 Accounts Watch video

LO1 – Describe asset, liability, and equity accounts, identifying the effect of debits and credits on each.

Chapter 1 reviewed the analysis of financial transactions and the resulting impact on the accounting equation. We now expand that discussion by introducing the way transaction is recorded in an *account*. An **account** accumulates detailed information regarding the increases and decreases in a specific asset, liability, or equity item. Accounts are maintained in a **ledger** also referred to as the **books**. We now review and expand our understanding of asset, liability, and equity accounts.

Asset Accounts

Recall that assets are resources that have future economic benefits for the business. The primary purpose of assets is that they be used in day-to-day operating activities in order to generate revenue either directly or indirectly. A separate account is established for each asset. Examples of asset accounts are reviewed below.

- **Cash** has future purchasing power. Coins, currency, cheques, and bank account balances are examples of cash.
- **Accounts receivable** occur when products or services are sold on account or on credit. When a sale occurs on account or on credit, the customer has not paid cash but promises to pay in the future.
- **Notes receivable** are a promise to pay an amount on a specific future date plus a predetermined amount of interest.
- **Office supplies** are supplies to be used in the future. If the supplies are used before the end of the accounting period, they are an expense instead of an asset.
- **Merchandise inventory** are items to be sold in the future.
- **Prepaid insurance** represents an amount paid in advance for insurance. The prepaid insurance will be used in the future.
- **Prepaid rent** represents an amount paid in advance for rent. The prepaid rent will be used in the future.
- **Land** cost must be in a separate account from any building that might be on the land. Land is used over future periods.
- **Buildings** indirectly help a business generate revenue over future accounting periods since they provide space for day-to-day operating activities.

Liability Accounts

As explained in Chapter 1, a liability is an obligation to pay for an asset in the future. The primary purpose of liabilities is to finance investing activities that include the purchase of assets like land, buildings, and equipment. Liabilities are also used to finance operating activities involving, for example, accounts payable, unearned revenues, and wages payable. A separate account is created for each liability. Examples of liability accounts are reviewed below.

- **Accounts payable** are debts owed to creditors for goods purchased or services received as a result of day-to-day operating activities. An example of a service received on credit might be a plumber billing the business for a repair.

- **Wages payable** are wages owed to employees for work performed.
- **Short-term notes payable** are a debt owed to a bank or other creditor that is normally paid within one year. Notes payable are different than accounts payable in that notes involve interest.
- **Long-term notes payable** are a debt owed to a bank or other creditor that is normally paid beyond one year. Like short-term notes, long-term notes involve interest.
- **Unearned revenues** are payments received in advance of the product or service being provided. In other words, the business owes a customer the product/service.

Equity Accounts

Chapter 1 explained that equity represents the net assets owned by the owners of a business. In a corporation, the owners are called shareholders. Equity is traditionally one of the more challenging concepts to understand in introductory financial accounting. The difficulty stems from there being different types of equity accounts: share capital, retained earnings, dividends, revenues, and expenses. Share capital represents the investments made by owners into the business and causes equity to increase. Retained earnings is the sum of all net incomes earned over the life of the corporation to date, less any dividends distributed to shareholders over the same time period. Therefore, the Retained Earnings account includes revenues, which cause equity to increase, along with expenses and dividends, which cause equity to decrease. Figure 2.1 summarizes equity accounts.

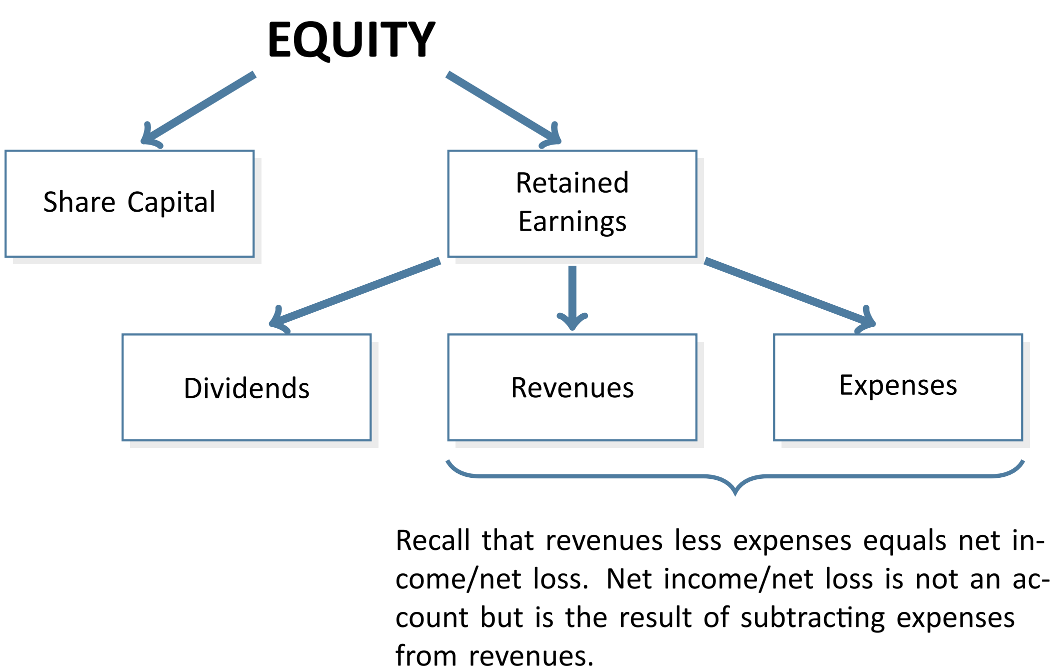


Figure 2.1: Composition of Equity Accounts

T-accounts

A simplified account, called a **T-account**, is often used as a teaching/learning tool to show increases and decreases in an account. It is called a T-account because it resembles the letter *T*. As shown in the T-account below, the left side records **debit** entries and the right side records **credit** entries.

Account Name	
Debit (always on left)	Credit (always on right)

The *type* of account determines whether an increase or a decrease in a particular transaction is represented by a debit or credit. For financial transactions that affect *assets*, *dividends*, and *expenses*, increases are recorded by debits and decreases by credits. This guideline is shown in the following T-account.

Assets, Dividends, Expenses	
Debits are always increases	Credits are always decreases

For financial transactions that affect *liabilities, share capital*, and *revenues*, increases are recorded by credits and decreases by debits, as follows:

Liabilities, Revenues, Share Capital	
Debits are always decreases	Credits are always increases

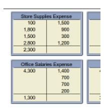
Another way to illustrate the debit and credit rules is based on the accounting equation. Remember that dividends, expenses, revenues, and share capital are equity accounts.

	Assets	=	Liabilities	+	Equity
Increases are recorded as:	Debits		Credits		Credits[1]
Decreases are recorded as:	Credits		Debits		Debits[2]

The following summary shows how debits and credits are used to record increases and decreases in various types of accounts.

ASSETS DIVIDENDS EXPENSES	LIABILITIES SHARE CAPITAL REVENUE
Increases are DEBITED. Decreases are CREDITED.	Increases are CREDITED. Decreases are DEBITED.

This summary will be used in a later section to illustrate the recording of debits and credits regarding the transactions of Big Dog Carworks Corp. introduced in Chapter 1.



An exploration is available on the Lyryx site. Log into your Lyryx course to run Account Types.

The **account balance** is determined by adding and subtracting the increases and decreases in an account. Two assumed examples are presented below.

Cash

	10,000	3,000
	3,000	3,000
	400	2,400
	8,000	2,000
		7,100
		200
Balance	3,700	

Accounts Payable

700	5,000	
	4,300	Balance

The $3,700 debit balance in the Cash account was calculated by adding all the debits and subtracting the sum of the credits. The $3,700 is recorded on the debit side of the T-account because the debits are greater than the credits. In Accounts Payable, the balance is a $4,300 credit calculated by subtracting the debits from the credits.

Notice that Cash shows a debit balance while Accounts Payable shows a credit balance. The Cash account is an asset so its *normal balance* is a debit. A **normal balance** is the side on which increases

[1] Revenues and the issuance of Share Capital are equity accounts. They cause equity to increase so increases in these account types are recorded as credits.

[2] Expenses, and Dividends are equity accounts. They cause equity to decrease. Decreases in equity are always recorded as debits so as expenses and dividends are realized, they are debited.

occur. Accounts Payable is a liability and because liabilities increase with credits, the normal balance in Accounts Payable is a credit as shown in the T-account above.

An exploration is available on the Lyryx site. Log into your Lyryx course to run Account Balances.

An exploration is available on the Lyryx site. Log into your Lyryx course to run Normal Balance.

Chart of Accounts

A business will create a list of accounts called a **chart of accounts** where each account is assigned both a name and a number. A common practice is to have the accounts arranged in a manner that is compatible with the order of their use in financial statements. For instance, Asset accounts begin with the digit '1', Liability accounts with the digit '2'. Each business will have a unique chart of accounts that corresponds to its specific needs. Big Dog Carworks Corp. uses the following numbering system for its accounts:

100-199	Asset accounts
200-299	Liability accounts
300-399	Share capital, retained earnings, and dividend accounts
400-499	Revenue accounts
500-599	Cost of goods sold accounts
600-699	Expense accounts

An exploration is available on the Lyryx site. Log into your Lyryx course to run Account Numbers.

2.2 Transaction Analysis Using Accounts Watch video

LO2 – Analyze transactions using double-entry accounting.

In Chapter 1, transactions for Big Dog Carworks Corp. were analyzed to determine the change in each item of the accounting equation. In this next section, these same transactions will be used to demonstrate double-entry accounting. **Double-entry accounting** means each transaction is recorded in at least two accounts where the total debits ALWAYS equal the total credits. As a result of double-entry accounting, the sum of all the debit balance accounts in the ledger must equal the sum of all the credit balance accounts. The rule that debits = credits is rooted in the accounting equation:

	ASSETS	=	**LIABILITIES**	+	**EQUITY**[3]
Increases are:	Debits		Credits		Credits
Decreases are:	Credits		Debits		Debits

Illustrative Problem—Double-Entry Accounting and the Use of Accounts

In this section, the following debit and credit summary will be used to record the transactions of Big Dog Carworks Corp. into T-accounts.

ASSETS DIVIDENDS EXPENSES	LIABILITIES SHARE CAPITAL REVENUE
Increases are DEBITED. Decreases are CREDITED.	Increases are CREDITED. Decreases are DEBITED.

Transaction 1

Jan. 1 – Big Dog Carworks Corp. issued 1,000 shares to Bob Baldwin, a shareholder, for a total of $10,000 cash.

Analysis:

Debit: An asset account, Cash, is increased resulting in a debit. → Cash: 10,000 (debit)

Credit: Share Capital, an equity account, is increased resulting in a credit.* → Share Capital: 10,000 (credit)

**Note: An alternate analysis would be that the issuance of shares causes equity to increase and increases in equity are always recorded as a credit.*

Transaction 2

Jan. 2 – Borrowed $3,000 from the bank.

[3]The issuance of share capital and revenues cause equity to increase; as indicated above, increases in equity are recorded as credits. Dividends and expenses cause equity to decrease; decreases in equity are recorded as debits.

Analysis:

Debit: An asset account, Cash, is increased resulting in a debit.

Cash	
3,000	

Credit: A liability account, Bank Loan, is increased resulting in a credit.

Bank Loan	
	3,000

Transaction 3

Jan. 3 – Equipment is purchased for $3,000 cash.

Analysis:

Debit: One asset is acquired in exchange for another asset. An asset account, Equipment, is increased resulting in a debit.

Equipment	
3,000	

Credit: The account, Cash, also an asset, is decreased resulting in a credit.

Cash	
	3,000

Transaction 4

Jan. 3 – A truck was purchased for $8,000; Big Dog paid $3,000 cash and incurred a $5,000 bank loan for the balance.

Analysis:

Debit: An asset account, Truck, is increased resulting in a debit.

Truck	
8,000	

Credit: An asset account, Cash, is decreased resulting in a credit.

Cash	
	3,000

Credit: A liability account, Bank Loan, is increased resulting in a credit.

Bank Loan	
	5,000

Note: Transaction 4 involves one debit and two credits. Notice that the total debit of $8,000 equals the total credits of $8,000 which satisfies the double-entry accounting rule requiring that debits ALWAYS equal credits.

Transaction 5

Jan. 5 – Big Dog Carworks Corp. paid $2,400 cash for a one-year insurance policy, effective January 1.

Analysis:

201

Debit: An asset account, Prepaid Insurance, is increased resulting in a debit. Because the insurance provides future benefit, it is recorded as an asset until it is used.

Prepaid Insurance	
2,400	

Credit: Payment of the insurance results in a decrease in the asset account, Cash, resulting in a credit.

Cash	
	2,400

Transaction 6

Jan. 10 – The corporation paid $2,000 cash to reduce the bank loan.

Analysis:

Debit: This payment decreases the liability, Bank Loan, resulting in a debit.

Bank Loan	
2,000	

Credit: The payment also decreases the asset, Cash, resulting in a credit.

Cash	
	2,000

Transaction 7

Jan. 15 – The corporation received an advance payment of $400 for repair services to be performed as follows: $300 in February and $100 in March.

Analysis:

Debit: An asset, Cash, is increased at the time the cash is received resulting in a debit.

Cash	
400	

Credit: Since the revenue relating to this cash receipt is not earned as of this date, a liability account, Unearned Repair Revenue, is credited because Big Dog ‘owes’ the customer $400 of work.

Unearned Repair Revenue	
	400

Transaction 8

Jan. 31 – A total of $10,000 of automotive repair services is performed for a customer who paid $8,000 cash. The remaining $2,000 will be paid in 30 days.

Analysis:

Debit: An asset, Cash, is increased resulting in a debit. →

Cash	
8,000	

Debit: An asset, Accounts Receivable, is increased resulting in a debit. →

Accounts Receivable	
2,000	

Credit: An equity, Repair Revenue, is increased resulting in a credit. →

Repair Revenue	
	10,000

Transaction 9

Jan. 31 – Operating expenses of $7,100 were paid in cash: Rent expense, $1,600; salaries expense, $3,500; and supplies expense of $2,000. $700 for truck operating expenses (e.g., oil, gas) were incurred on credit.

Analysis:

Debit: This transaction increases four expense accounts resulting in a debit to each. →

Rent Expense	
1,600	

Salaries Expense	
3,500	

Supplies Expense	
2,000	

Truck Operating Expense	
700	

Note: Each expense is recorded in an individual account.

Cash

Credit: An asset, Cash, is decreased resulting in a credit. 7,100

Accounts Payable

Credit: A liability, Accounts Payable, is increased resulting in a credit. 700

Transaction 10

Jan. 31 – Dividends of $200 were paid in cash to the only shareholder, Bob Baldwin.

Analysis:

Dividends

Debit: Dividends, an equity account, is increased resulting in a debit. 200

Note: An alternate analysis would be that dividends cause equity to decrease and that decreases in equity are always recorded as a debit.

Cash

Credit: An asset, Cash is decreased resulting in a credit. 200

After the January transactions of Big Dog Carworks Corp. have been recorded in the T-accounts, each account is totalled and the difference between the debit balance and the credit balance is calculated, as shown in the following diagram. The numbers in parentheses refer to the transaction numbers used in the preceding section. To prove that the accounting equation is in balance, the account balances for each of assets, liabilities, and equity are added. Notice that total assets of $19,100 equal the sum of total liabilities of $7,100 plus equity of $12,000.

ASSETS

Cash

Debit		Credit	
(1)	10,000	(3)	3,000
(2)	3,000	(4)	3,000
(7)	400	(5)	2,400
(8)	8,000	(6)	2,000
		(9)	7,100
		(10)	200
Bal.	3,700		

Accounts Receivable

Debit		Credit	
(8)	2,000		

Prepaid Insurance

Debit		Credit	
(5)	2,400		

Equipment

Debit		Credit	
(3)	3,000		

Truck

Debit		Credit	
(4)	8,000		

LIABILITIES

Bank Loan

Debit		Credit	
(6)	2,000	(2)	3,000
		(4)	5,000
		Bal.	6,000

Accounts Payable

Debit		Credit	
		(9)	700

Unearned Repair Revenue

Debit		Credit	
		(7)	400

EQUITY

Share Capital

Debit		Credit	
		(1)	10,000

Dividends

Debit		Credit	
(10)	200		

Repair Revenue

Debit		Credit	
		(8)	10,000

Rent Expense

Debit		Credit	
(9)	1,600		

Salaries Expense

Debit		Credit	
(9)	3,500		

Supplies Expense

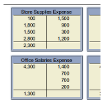
Debit		Credit	
(9)	2,000		

Truck Operation Expense

Debit		Credit	
(9)	700		

19,100[1] **=** **7,100**[2] **+** **12,000**[3]

1. 3,700 + 2,000 + 2,400 + 3,000 + 8,000 = 19,100
2. 6,000 + 700 + 400 = 7,100
3. 10,000 - 200 + 10,000 - 1,600 - 3,500 - 2,000 - 700 = 12,000



An exploration is available on the Lyryx site. Log into your Lyryx course to run Analyzing Transactions.

2.3 The Trial Balance Watch video

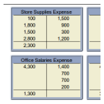
LO3 – Prepare a trial balance and explain its use.

To help prove that the accounting equation is in balance, a trial balance is normally prepared instead of the T-account listing shown in the previous section. A **trial balance** is an internal document that lists all the account balances at a point in time. The total debits must equal total credits on the trial balance. The form and content of a trial balance is illustrated below, using the account numbers, account names, and account balances of Big Dog Carworks Corp. at January 31, 2023. Assume that the account numbers are those assigned by the business.

Big Dog Carworks Corp.
Trial Balance
At January 31, 2023

Acct. No.	*Account*	*Debit*	*Credit*
101	Cash	$3,700	
110	Accounts receivable	2,000	
161	Prepaid insurance	2,400	
183	Equipment	3,000	
184	Truck	8,000	
201	Bank loan		$6,000
210	Accounts payable		700
247	Unearned revenue		400
320	Share capital		10,000
330	Dividends	200	
450	Repair revenue		10,000
654	Rent expense	1,600	
656	Salaries expense	3,500	
668	Supplies expense	2,000	
670	Truck operation expense	700	
		$27,100	$27,100

Double-entry accounting requires that debits equal credits. The trial balance establishes that this equality exists for Big Dog but it does not ensure that each item has been recorded in the proper account. Neither does the trial balance ensure that all items that should have been entered have been entered. In addition, a transaction may be recorded twice. Any or all of these errors could occur and the trial balance would still balance. Nevertheless, a trial balance provides a useful mathematical check before preparing financial statements.



An exploration is available on the Lyryx site. Log into your Lyryx course to run Trial Balance.

Preparation of Financial Statements

Financial statements for the one-month period ended January 31, 2023 can now be prepared from the trial balance figures. First, an income statement is prepared.

Big Dog Carworks Corp.
Trial Balance
At January 31, 2023

Acct. No.	*Account*	*Debit*	*Credit*
101	Cash	$ 3,700	
110	Accounts receivable	2,000	
161	Prepaid insurance	2,400	
183	Equipment	3,000	
184	Truck	8,000	
201	Bank loan		$ 6,000
210	Accounts payable		700
247	Unearned revenue		400
320	Share capital		10,000
330	Dividends	200	
450	Repair revenue		10,000
654	Rent expense	1,600	
656	Salaries expense	3,500	
668	Supplies expense	2,000	
670	Truck operation expense	700	
		$27,100	$27,100

Big Dog Carworks Corp.
Income Statement
For the Month Ended January 31, 2023

Revenues		
Repair revenue		$10,000
Expenses		
Salaries expense	$ 3,500	
Supplies expense	2,000	
Rent expense	1,600	
Truck operation expense	700	
Total expenses		7,800
Net income		$ 2,200

Share Capital and Dividends are transferred to the Statement of Changes in Equity. Dividends is part of Retained Earnings because it is a distribution of net income.

Net Income is transferred to the Statement of Changes in Equity as part of Retained Earnings.

Big Dog Carworks Corp.
Statement of Changes in Equity
For the Month Ended January 31, 2023

	Share Capital	*Retained Earnings*	*Total Equity*
Balance at beginning of period	$ -0-	$ -0-	$ -0-
Shares issued	10,000		10,000
Net income		2,200	2,200
Dividends		(200)	(200)
Ending balance	$10,000	$2,000	$12,000

The asset and liability accounts from the trial balance and the ending balances for share capital and retained earnings on the statement of changes in equity are used to prepare the balance sheet.

Big Dog Carworks Corp.
Trial Balance
At January 31, 2023

Acct. No.	*Account*	*Debit*	*Credit*
101	Cash	$ 3,700	
110	Accounts receivable	2,000	
161	Prepaid insurance	2,400	
183	Equipment	3,000	
184	Truck	8,000	
201	Bank loan		$ 6,000
210	Accounts payable		700
247	Unearned revenue		400
320	Share capital		10,000
330	Dividends	200	
450	Repair revenue		10,000
654	Rent expense	1,600	
656	Salaries expense	3,500	
668	Supplies expense	2,000	
670	Truck operation expense	700	
		$27,100	$27,100

These accounts are used to prepare the Balance Sheet.

Big Dog Carworks Corp.
Balance Sheet
At January 31, 2023

Assets		
Cash	$ 3,700	
Accounts receivable	2,000	
Prepaid insurance	2,400	
Equipment	3,000	
Truck	8,000	
Total assets		$19,100
Liabilities		
Bank loan	$ 6,000	
Accounts payable	700	
Unearned repair revenue	400	
Total liabilities		$ 7,100
Equity		
Share capital	$10,000	
Retained earnings	2,000	
Total equity		12,000
Total liabilities and equity		$19,100

The Share Capital and Retained Earnings balances are transferred to the Balance Sheet from the Statement of Changes in Equity

NOTE: Pay attention to the links between financial statements.

The income statement is linked to the statement of changes in equity: Revenues and expenses are reported on the income statement to show the details of net income. Because net income causes equity to change, it is then reported on the statement of changes in equity.

The statement of changes in equity is linked to the balance sheet: The statement of changes in equity shows the details of how equity changed during the accounting period. The balances for share capital and retained earnings that appear on the statement of changes in equity are transferred to the equity section of the balance sheet.

The balance sheet SUMMARIZES equity by showing only account balances for share capital and retained earnings. To obtain the details regarding these equity accounts, we must look at the income statement and the statement of changes in equity.

2.4 Using Formal Accounting Records Watch video

LO4 – Record transactions in a general journal and post in a general ledger.

The preceding analysis of financial transactions used T-accounts to record debits and credits. T-accounts will continue to be used for illustrative purposes throughout this book. In actual practice, financial transactions are recorded in a general journal.

A **general journal**, or just **journal**, is a document that is used to chronologically record a business's debit and credit transactions (see Figure 2.2). It is often referred to as the *book of original entry*. **Journalizing** is the process of recording a financial transaction in the journal. The resulting debit and credit entry recorded in the journal is called a **journal entry**.

A **general ledger**, or just **ledger**, is a record that contains all of a business's accounts. **Posting** is the process of transferring amounts from the journal to the matching ledger accounts. Because amounts recorded in the journal eventually end up in a ledger account, the ledger is sometimes referred to as a *book of final entry*.

Recording Transactions in the General Journal

Each transaction is first recorded in the journal. The January transactions of Big Dog Carworks Corp. are recorded in its journal as shown in Figure 2.2. The journalizing procedure follows these steps (refer to Figure 2.2 for corresponding numbers):

1. The year is recorded at the top and the month is entered on the first line of page 1. This information is repeated only on each new journal page used to record transactions.
2. The date of the first transaction is entered in the second column, on the first line. The day of each transaction is always recorded in this second column.
3. The name of the account to be debited is entered in the description column on the first line. By convention, accounts to be debited are usually recorded before accounts to be credited. The column titled 'F' (for Folio) indicates the number given to the account in the General Ledger. For example, the account number for Cash is 101. The amount of the debit is recorded in the debit column. A dash is often used by accountants in place of .00.
4. The name of the account to be credited is on the second line of the description column and is indented about one centimetre into the column. Accounts to be credited are always indented in this way in the journal. The amount of the credit is recorded in the credit column. Again, a dash may be used in place of .00.

5. An explanation of the transaction is entered in the description column on the next line. It is not indented.

6. A line is usually skipped after each journal entry to separate individual journal entries and the date of the next entry recorded. It is unnecessary to repeat the month if it is unchanged from that recorded at the top of the page.

This entry tells us to:

- Post $10,000 to the debit side of the Cash account (increasing Cash by $10,000), and

- Post $10,000 to the credit side of the Share Capital account (increasing this account by $10,000).

GENERAL JOURNAL — Page 1

	Date		Description	F	Debit	Credit
1	2023					
	Jan.	1	Cash	101	10000 -	
			Share Capital	320		10000 -
2			To record the issuance of share capital.			
3		2	Cash	101	3000 -	
4			Bank Loan	201		3000 -
5			To record receipt of a bank loan.			
6						
		2	Equipment	183	3000 -	
			Cash	101		3000 -
			To record the purchase of equipment for cash.			
		3	Truck	184	8000 -	
			Bank Loan	201		5000 -
			Cash	101		3000 -
			To record the purchase of a tow truck; paid			
			cash and incurred additional bank loan.			
		5	Prepaid Insurance	161	2400 -	
			Cash	101		2400 -
			To record payment for a one-year insurance policy.			
		10	Bank Loan	201	2000 -	
			Cash	101		2000 -
			To record payment on bank loan.			
		15	Cash	101	400 -	
			Unearned Repair Revenue	247		400 -
			To record receipt of payment for services not performed:			
			$300 for February, $100 for March.			
		31	Cash	101	8000 -	
			Accounts Receivable	110	2000 -	
			Repair Revenue	450		10000 -
			To record repaid revenue earned in January.			
		31	Rent Expense	654	1600 -	
			Salaries Expense	656	3500 -	
			Supplies Expense	668	2000 -	
			Truck Operation Expense	670	700 -	
			Cash	101		7100 -
			Accounts Payable	210		700 -
			To record cash payment of expenses for the month.			
		31	Dividends	330	200 -	
			Cash	101		200 -
			To record distribution of dividends.			

Figure 2.2: General Journal Transactions for BDCC in January

Most of Big Dog's entries have one debit and credit. An entry can also have more than one debit or credit, in which case it is referred to as a **compound entry**. The entry dated January 3 is an example of a compound entry.

Posting Transactions to the General Ledger

The **ledger account** is a formal variation of the T-account. The ledger accounts shown in Figure 2.3 are similar to what is used in electronic/digital accounting programs. Ledger accounts are kept in the general ledger. Debits and credits recorded in the journal are posted to appropriate ledger accounts so that the details and balance for each account can be found easily. Figure 2.3 uses the first transaction of Big Dog Carworks Corp. to illustrate how to post amounts and record other information.

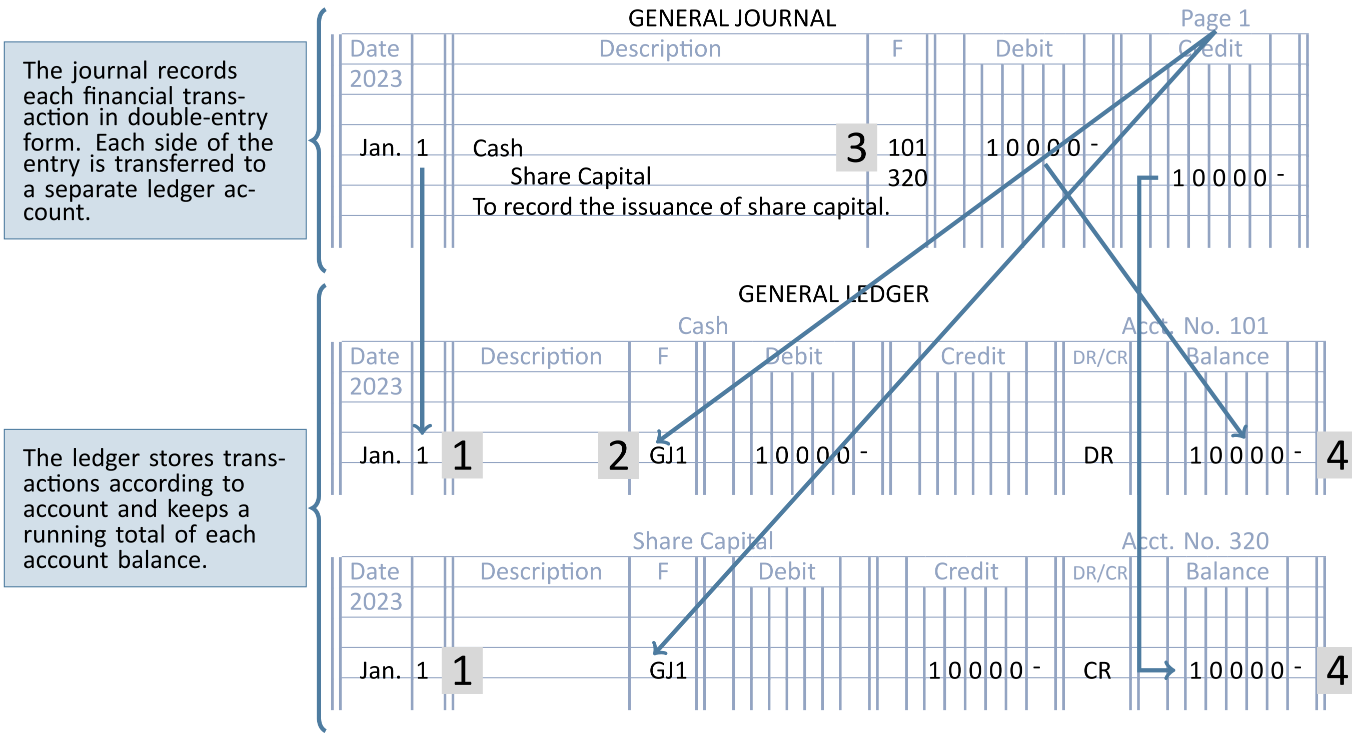


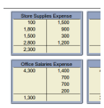
Figure 2.3: Illustration of a Transaction Posted to Two Accounts in the General Ledger

1. The date and amount are posted to the appropriate ledger account. Here the entry debiting Cash is posted from the journal to the Cash ledger account. The entry crediting Share Capital is then posted from the journal to the Share Capital ledger account.
2. The journal page number is recorded in the folio (F) column of each ledger account as a cross reference. In this case, the posting has been made from general journal page 1; the reference is recorded as GJ1.
3. The appropriate ledger account number is recorded in the folio (F) column of the journal to indicate the posting has been made to that particular account. Here the entry debiting Cash

has been posted to Account No. 101. The entry crediting Share Capital has been posted to Account No. 320.

4. After posting the entry, a balance is calculated in the Balance column. A notation is recorded in the column to the left of the Balance column indicating whether the balance is a debit or credit. A brief description can be entered in the Description column but this is generally not necessary since the journal includes a detailed description for each journal entry.

This manual process of recording, posting, summarizing, and preparing financial statements is cumbersome and time-consuming. In virtually all businesses, the use of accounting software automates much of the process. In this and subsequent chapters, either the T-account or the ledger account can be used in working through exercises and problems. Both formats are used to explain and illustrate concepts in subsequent chapters.



An exploration is available on the Lyryx site. Log into your Lyryx course to run Journalizing Transactions.

Special Journals and Subledgers

The general journal and the general ledger each act as a single all-purpose document where all the company's transactions are recorded and posted over the life of the company.

As was shown in Figure 2.2, various transactions are recorded to a general journal chronologically by date as they occurred. When companies engage in certain same-type, high-frequency transactions such as credit purchases and sales on account, special journals are often created in order to separately track information about these types of transactions. Typical special journals that companies often use are a sales journal, cash receipts journal, purchases journal and a cash disbursements journal. There can be others, depending on the business a company is involved in. The general journal continues to be used to record any transactions not posted to any of the special journals, such as:

- correcting entries
- adjusting entries
- closing entries

An example of a special journal for credit sales is shown below.

			Credit Sales Journal					S1
Date	**Billing #**	**Customer**	**Ref**	**Accounts Receivable**	**Hardware Sales**	**Lighting Sales**	**Plumbing Sales**	**GST Payable**
				Debit	Credit	Credit	Credit	Credit
2025								
Sept 1	17001	Hardy	AR5	$ 25,000	$ 1,500		$ 22,250	$ 1,250
Sept 5	17002	Smith	AR1	2,260		$ 2,147		113
Sept 6	17003	Bergeron	AR4	8,000	5,000	1,000	1,600	400
Sept 7	17004	Douglas	AR3	16,000			15,200	800
Sept 8	17005	Hardy	AR5	115,000	16,000	45,000	48,250	5,750
Sept 11	17006	White	AR2	10,000		5,000	4,500	500
Totals				$ 176,260	$ 22,500	$53,147	$ 91,800	$ 8,813
GL account				110	410	414	418	280

Posted monthly to the general ledger

Figure 2.4: Sales Journal – records credit sales

For simplicity, the cost of goods sold is excluded from this sales journal and will be covered in chapter five of this course. The sales journal provides a quick overview of the total credit sales for the month as well as various sub-groupings of credit sales such as by product sold, GST, and customers.

The sales journal can also be expanded to include credit sales returns, and the purchases journal to include purchases returns and allowances for each accounting month. Note that purchase discounts would be recorded in the cash disbursements journal because the discount is usually claimed at the time of the cash payment to the supplier/creditor. This is also the case with sales discounts from customers which would be recorded in the cash receipts journal at the time the cash, net of the sales discount, is received. Any cash sales returns would be recorded in the cash disbursements journal.

Recall from Figure 2.3 that with accounting records that comprise only a general journal and general ledger, each transaction recorded in the general journal was posted to the general ledger. With special journals, such as the sales journal, their *monthly* totals are posted to the general ledger instead. For larger companies, these journals can be summarized and posted more frequently, such as weekly or daily, if needed.

Below are examples of other typical special journals such as a purchases journal, cash receipts journal, cash disbursements journal and the general journal. Note the different sub-groupings in each one and consider how these would be useful for managing the company's business.

Credit Purchases Journal								P1
Date	Invoice #	Creditor	Ref	Accounts Payable	Hardware Purchases	Lighting Purchases	Plumbing Purchases	GST Recv
				Credit	Debit	Debit	Debit	Debit
2025								
Sept 1	B253	Better and Sons	AP6	$ 60,000			$ 57,000	$ 3,000
Sept 5	2008	Northward Suppliers	AP2	160,000	$ 152,000			8,000
Sept 6	15043	Lighting Always	AP4	18,000		$ 17,100		900
Sept 7	RC18	VeriSure Mfg	AP1	24,000			22,800	1,200
Sept 8	1102	Pearl Lighting	AP3	5,000	2,000	2,750		250
Sept 11	EF-1603	Arnold Consolidated	AP5	1,600			1,520	80
Totals				$268,600	$ 154,000	$ 19,850	$ 81,320	$13,430
GL account				210	510	514	518	180

Figure 2.5: Purchases Journal – records credit purchases

Cash Receipts Journal								CR1
Date	Billing #	Customer	Ref	Cash	Sales Discount	Accounts Receivable	Cash Sales	GST Payable
				Debit	Debit	Credit	Credit	Credit
2025								
Sept 1	17001	Hardy	AR5	$12,000	$ 120	$ 12,120		
Sept 6	CS1	Cash sale	CS1	1,500			$1,425	$ 75
Sept 8	17003	Bergeron	AR4	2,000		2,000		
Sept 11	17004	Douglas	AR3	20,000		20,000		
Sept 12	17005	Cash sale	CS2	3,250			3,088	163
Sept 13	17006	White	AR2	5,000		5,000		
Totals				$43,750	$ 120	$ 39,120	$4,513	$ 238
GL account				102	402	110	410	280

Figure 2.6: Cash Receipts Journal – records all cash receipts

Cash Disbursements Journal								CD1
Date	Chq #	Payee	Ref	Cash	Purchase Discount (Inventory)	Accounts Payable	Other Disb...	Desc
				Credit	Credit	Debit	Debit	
2025								
Sept 1	101	General Lighting Ltd.	AP22	$14,775	$ 225	$ 15,000		
Sept 2	102	John Bremner	SAL1	1,600			$ 1,600	Salary exp.
Sept 11	103	Lighting Always	AP4	4,200		4,200		
Sept 12	104	VeriSure Mfg	AP1	22,500	225	22,725		
Sept 13	105	Receiver General	AP 14	14,000			14,000	GST Aug
Sept 14	106	City of Edmonton	AP18	5,500			5,500	Property Tax
Totals				$62,575	$ 450	$ 41,925	$ 21,100	
GL account				102	104	210	various	

Figure 2.7: Cash Disbursements Journal – records all cash disbursements

General Journal				GJ1
Date	Account/Explanation	PR	Debit	Credit
Sept 30, 2025	Bank service charges expense	520	25	
	Cash	102		25
	Bank reconciliation for August			
Sept 30, 2025	Depreciation expense	530	3,500	
	Accumulated depreciation	118		3,500
	Depreciation for September			
Totals			3,525	3,525

Figure 2.8: General Journal – records all other entries including adjustments, corrections, and closing entries

Each account that exists in the general journal must be represented by a corresponding account in the general ledger. As previously stated, each entry from the general journal is posted directly to the general ledger, if no other special journals or subledgers exist. If there are several hundreds or thousands of accounts receivable transactions for many different customers during a month, this detail cannot be easily summarized in meaningful ways. This may be fine for very small companies, but most companies need certain types of transactions sub-groupings, such as for accounts receivable, accounts payable and inventory. For this reason, subsidiary ledgers or subledgers are used to accomplish this. Subledgers typically include accounts receivable sub-grouped by customer, accounts payable by supplier, and inventory by inventory item. Monthly totals from the special journals continue to be posted to the general ledger, which now acts as a **control account** to its related subledger. **It is critical that the subledgers always balance to their respective general ledger control account, hence the name *control account*.**

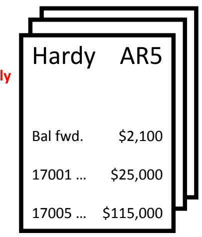
Below is an example of how a special journal, such as a sales journal is posted to the subledgers and general ledger.

SUBLEDGERS
Accounts Receivable
by Customer

Sales Journal – records credit sales

Credit Sales Journal								S1
Date	Billing #	Customer	Ref	Accounts Receivable	Hardware Sales	Lighting Sales	Plumbing Sales	GST Payable
				Debit	Credit	Credit	Credit	Credit
2025								
Sept 1	17001	Hardy	AR5	$ 25,000	$ 1,500		$ 22,250	$ 1,250
Sept 5	17002	Smith	AR1	2,260		$ 2,147		113
Sept 6	17003	Bergeron	AR4	8,000	5,000	1,000	1,600	400
Sept 7	17004	Douglas	AR3	16,000			15,200	800
Sept 8	17005	Hardy	AR5	115,000	16,000	45,000	48,250	5,750
Sept 11	17006	White	AR2	10,000		5,000	4,500	500
Totals				$ 176,260	$ 22,500	$53,147	$ 91,800	$ 8,813
GL account				110	410	414	418	280

Posted Daily



Posted Monthly

The sum of all the records within each subledger must be equal to the ending balance of its respective control account in the general ledger.

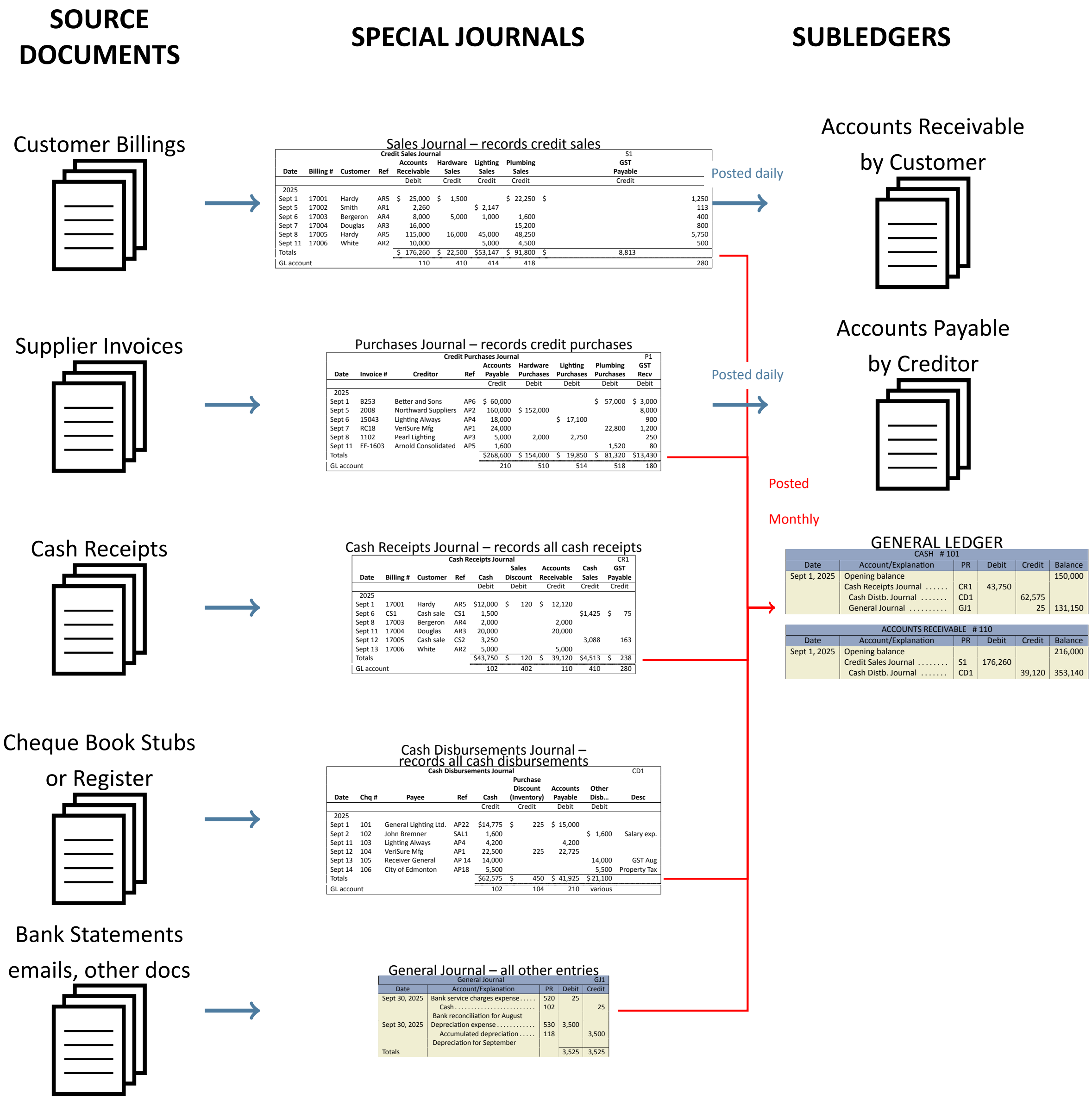
GENERAL JOURNAL

Accounts Receivable # 110					
Date	Account/Explanation	PR	Debit	Credit	Balance
Sept 1, 2023	Opening balance				216,000
	Credit Sales Journal	S1	176,260		
	Cash Distrib. Journal	CD1		39,120	353,140

Note how the general ledger can now be posted using the monthly totals from the sales journal instead of by individual transaction. Each line item within the sales journal is now posted on a daily basis directly to the subledger by customer instead, and balanced to the accounts receivable control balance in the general ledger. The subledger enables the company to quickly determine which customers owe money and details about those amounts.

At one time, recording transactions to the various journals and ledgers was all done manually as illustrated above. Today, accounting software makes this process easy and efficient. Data for each transaction is entered into the various data fields within the software transaction record. Once the transaction entry has been input and saved, the software automatically posts the data to any special journals, subledgers and general ledger. At any time, the accountant can easily obtain summary or detailed reports including a trial balance, accounts receivable by customer, accounts payable by creditor, inventory by inventory item, and so on.

Below is a flowchart that illustrates the flow of the information for a manual system from the source documents to the special journals, the subledgers and to the general ledger. This illustration also helps to give a sense of how the data would flow using accounting software.



2.5 The Accounting Cycle Watch video

LO5 – Define the accounting cycle.

In the preceding sections, the January transactions of Big Dog Carworks Corp. were used to demonstrate the steps performed to convert economic data into financial information. This conversion was carried out in accordance with the basic double-entry accounting model. These steps are summarized in Figure 2.9.

Step 1: Transactions are analyzed and journalized.
Journalizing consists of analyzing transactions as they occur to see how they affect the accounting equation. Then, the transactions are recorded chronologically in the general journal.

Step 2: Transactions are summarized by account.
Posting consists of transferring debits and credits from the general journal to the appropriate general ledger accounts.

Step 3: The equality of debits and credits is proved.
A trial balance is prepared, listing account numbers and names along with account balances to prove the equality of the debits and credits.

Step 4: The summarized transactions are communicated.
Preparing the financial statements consists of using the balances listed in the columns of the trial balance to prepare the income statement, statement of changes in equity, and balance sheet.

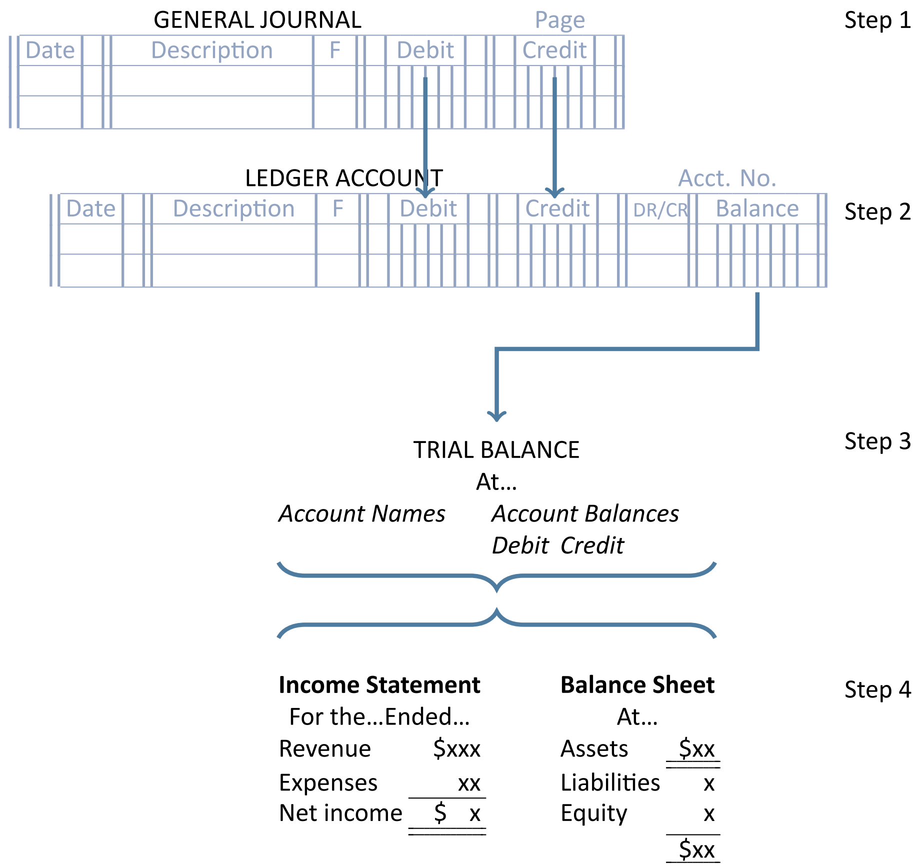


Figure 2.9: Illustrating the Steps in the Accounting Cycle

The sequence just described, beginning with the journalising of the transactions and ending with the communication of financial information in financial statements, is commonly referred to as the **accounting cycle**. There are additional steps involved in the accounting cycle and these will be introduced in Chapter 3.

Summary of Chapter 2 Learning Objectives

LO1 – Describe asset, liability, and equity accounts, identifying the effect of debits and credits on each.

Assets are resources that have future economic benefits such as cash, receivables, prepaids, and machinery. Increases in assets are recorded as debits and decreases as credits. Liabilities represent an obligation to pay an asset in the future and include payables and unearned revenues. Inrceases in liabilities are recorded as credits and decreases as debits. Equity represents the net assets owned by the owners and includes share capital, dividends, revenues, and expenses. Increases in equity, caused by the issuance of shares and revenues, are recorded as credits, and decreases in equity, caused by dividends and expenses, are recorded as debits. The following summary can be used to show how debits and credits impact the types of accounts.

LO2 – Analyze transactions using double-entry accounting.

Double-entry accounting requires that each transaction be recorded in at least two accounts where the total debits always equal the total credits. The double-entry accounting rule is rooted in the accounting equation: Assets = Liabilities + Equity.

LO3 – Prepare a trial balance and explain its use.

To help prove the accounting equation is in balance, a trial balance is prepared. The trial balance is an internal document that lists all the account balances at a point in time. The total debits must equal total credits on the trial balance. The trial balance is used in the preparation of financial statements.

LO4 – Record transactions in a general journal and post in a general ledger.

The recording of financial transactions was introduced in this chapter using T-accounts, an illustrative tool. A business actually records transactions in a general journal, a document which chronologically lists each debit and credit journal entry. To summarize the debit and credit entries by account, the entries in the general journal are posted (or transferred) to the general ledger. The account balances in the general ledger are used to prepare the trial balance.

LO5 – Define the accounting cycle.

Analyzing transactions, journalizing them in the general journal, posting from the general journal into the general ledger, preparing the trial balance, and generating financial statements are steps followed each accounting period. These steps form the core of the accounting cycle. Additional steps involved in the accounting cycle will be introduced in Chapter 3.

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Chapter 3

Financial Accounting and Adjusting Entries

Chapters 1 and 2 described the recording and reporting of economic transactions in detail. However, the account balances used to prepare the financial statements in these previous chapters did not necessarily reflect correct amounts. Chapter 3 introduces the concept of adjusting entries and how these satisfy the matching principle, ensuring revenues and expenses are reported in the correct accounting period. The preparation of an adjusted trial balance is discussed, as well as its use in completing financial statements. At the end of the accounting period, after financial statements have been prepared, it is necessary to close temporary accounts to retained earnings. This process is introduced in this chapter, as is the preparation of a post-closing trial balance. The accounting cycle, the steps performed each accounting period that result in financial statements, is also reviewed.

Chapter 3 Learning Objectives Watch video

LO1 – Explain how the timeliness, matching, and recognition GAAP require the recording of adjusting entries.

LO2 – Explain the use of and prepare the adjusting entries required for prepaid expenses, depreciation, unearned revenues, accrued revenues, and accrued expenses.

LO3 – Prepare an adjusted trial balance and explain its use.

LO4 – Use an adjusted trial balance to prepare financial statements.

LO5 – Identify and explain the steps in the accounting cycle.

LO6 – Explain the use of and prepare closing entries and a post-closing trial balance.

Concept Self-Check

Use the following as a self-check while working through Chapter 3.

1. What is the GAAP principle of timeliness?
2. What is the GAAP principle of matching?

3. What is the GAAP principle of revenue recognition?
4. What are adjusting entries and when are they journalized?
5. What are the five types of adjustments?
6. Why is an adjusted trial balance prepared?
7. How is the unadjusted trial balance different from the adjusted trial balance?
8. What are the four closing entries and why are they journalized?
9. Why is the Dividends account not closed to the income summary?
10. When is a post-closing trial balance prepared?
11. How is a post-closing trial balance different from an adjusted trial balance?

NOTE: The purpose of these questions is to prepare you for the concepts introduced in the chapter. Your goal should be to answer each of these questions as you read through the chapter. If, when you complete the chapter, you are unable to answer one or more the Concept Self-Check questions, go back through the content to find the answer(s). Solutions are not provided to these questions.

3.1 The Operating Cycle Watch video

LO1 – Explain how the timeliness, matching, and recognition GAAP require the recording of adjusting entries.

Financial transactions occur continuously during an accounting period as part of a sequence of operating activities. For Big Dog Carworks Corp., this sequence of operating activities takes the following form:

1. Operations begin with some cash on hand.
2. Cash is used to purchase supplies and to pay expenses.
3. Revenue is earned as repair services are completed for customers.
4. Cash is collected from customers.

This cash-to-cash sequence of transactions is commonly referred to as an **operating cycle** and is illustrated in Figure 3.1.

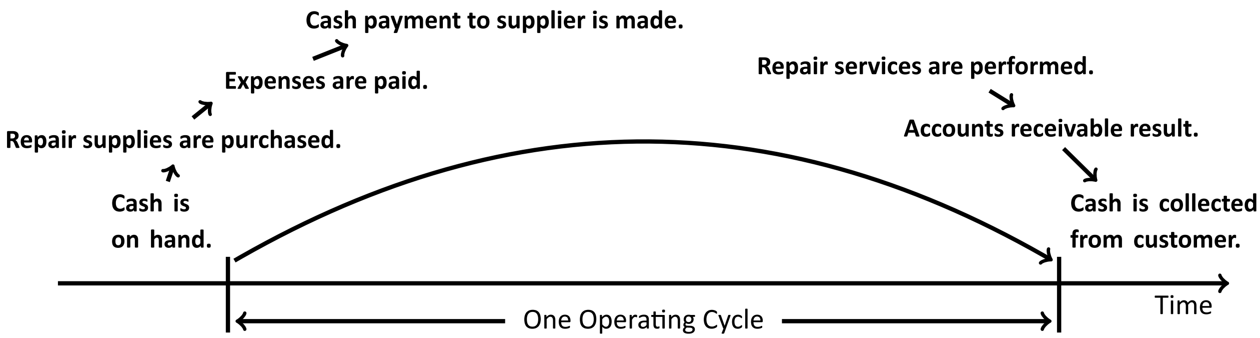


Figure 3.1: One Operating Cycle

Depending on the type of business, an operating cycle can vary in duration from short, such as one week (e.g., a grocery store) to much longer, such as one year (e.g., a car dealership). Therefore, an annual accounting period could involve multiple operating cycles as shown in Figure 3.2.

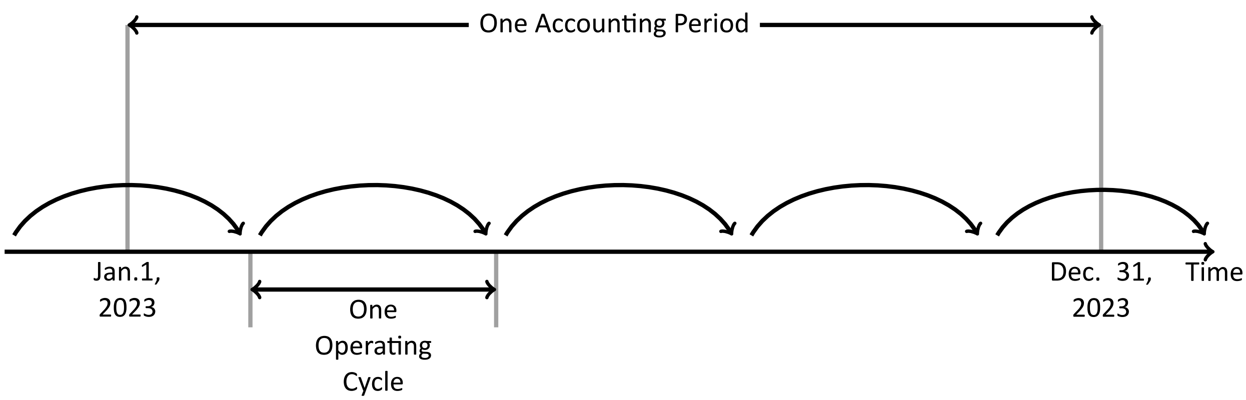


Figure 3.2: Operating Cycles Within an Annual Accounting Period

Notice that not all of the operating cycles in Figure 3.2 are completed within the accounting period. Since financial statements are prepared at specific time intervals to meet the GAAP requirement of timeliness, it is necessary to consider how to record and report transactions related to the accounting period's incomplete operating cycles. Two GAAP requirements — recognition and matching — provide guidance in this area, and are the topic of the next sections.

Recognition Principle in More Detail

GAAP provide guidance about when an economic activity should be recognized in financial statements. An economic activity is recognized when it meets two criteria:

1. it is probable that any future economic benefit associated with the item will flow to the business; and
2. it has a value that can be measured with reliability.

Revenue Recognition Illustrated

Revenue recognition is the process of recording revenue in the accounting period in which it was earned; this is not necessarily when cash is received. Most corporations assume that revenue has been earned at an objectively-determined point in the accounting cycle. For instance, it is often convenient to recognize revenue at the point when a sales invoice has been sent to a customer and the related goods have been received or services performed. This point can occur before receipt of cash from a customer, creating an asset called *Accounts Receivable* and resulting in the following entry:

General Journal				
Date	Account/Explanation	PR	Debit	Credit
	Accounts Receivable		XX	
	Revenue			XX
	To record revenue earned on account.			

When cash payment is later received, the asset *Accounts Receivable* is exchanged for the asset *Cash* and the following entry is made:

General Journal				
Date	Account/Explanation	PR	Debit	Credit
	Cash		XX	
	Accounts Receivable			XX
	To record cash received from credit customer.			

Revenue is recognized in the first entry (the credit to revenue), prior to the receipt of cash. The second entry has no effect on revenue.

When cash is received at the same time that revenue is recognized, the following entry is made:

General Journal				
Date	Account/Explanation	PR	Debit	Credit
	Cash		XX	
	Revenue			XX
	To record cash received from customer.			

When a cash deposit or advance payment is obtained ***before*** revenue is earned, a liability called Unearned Revenue is recorded as follows:

General Journal				
Date	Account/Explanation	PR	Debit	Credit
	Cash		XX	
	Unearned Revenue			XX
	To record cash received from customer for work to be done in the future.			

Revenue is ***not*** recognized until the services have been performed. At that time, the following entry is made:

General Journal				
Date	Account/Explanation	PR	Debit	Credit
	Unearned Revenue		XX	
	Revenue			XX
	To record the earned portion of Unearned Revenue.			

The preceding entry reduces the unearned revenue account by the amount of revenue earned.

The matching of revenue to a particular time period, regardless of when cash is received, is an example of *accrual accounting*. **Accrual accounting** is the process of recognizing revenues when earned and expenses when incurred regardless of when cash is exchanged; it forms the basis of GAAP. Recognition of expenses is discussed in the next section.

Expense Recognition Illustrated

In a business, costs are incurred continuously. To review, a cost is recorded as an *asset* if it will be incurred in producing revenue in future accounting periods. A cost is recorded as an *expense* if it will be used or consumed during the current period to earn revenue. This distinction between types of cost outlays is illustrated in Figure 3.3.

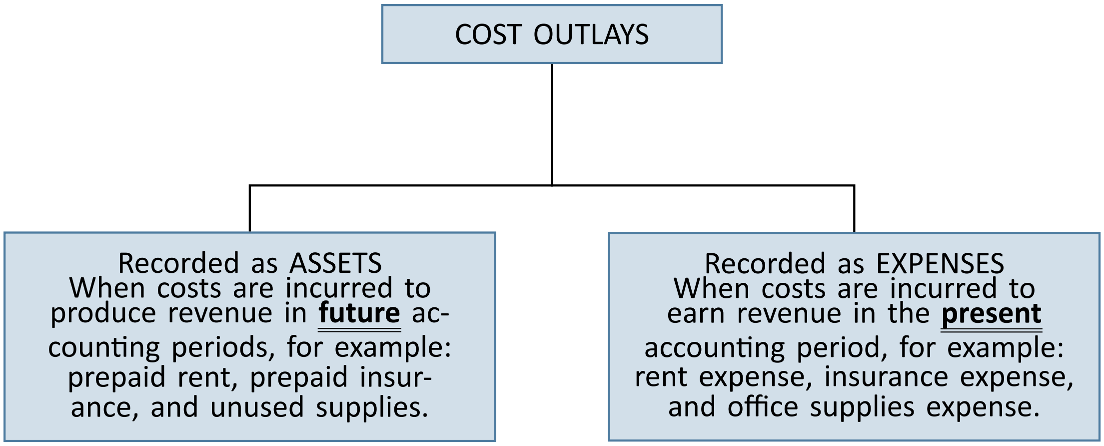


Figure 3.3: The Interrelationship Between Assets and Expense

In the previous section regarding revenue recognition, journal entries illustrated three scenarios where *revenue* was recognized before, at the same time as, and after cash was received. Similarly, expenses can be incurred before, at the same time as, or after cash is paid out. An example of when expenses are incurred before cash is paid occurs when the utilities expense for January is not paid until February. In this case, an *account payable* is created in January as follows:

General Journal				
Date	Account/Explanation	PR	Debit	Credit
	Utilities Expense		XX	
	Accounts Payable (or Utilities Payable)			XX
	To record January utilities expense to be paid in February.			

The utilities expense is reported in the January income statement.

When the January utilities are paid in February, the following is recorded:

General Journal				
Date	Account/Explanation	PR	Debit	Credit
	Accounts Payable (or Utilities Payable) . . .		XX	
	Cash			XX
	To record payment in February of utilities used in January.			

The preceding entry has no effect on expenses reported on the February income statement.

Expenses can also be recorded at the same time that cash is paid. For example, if salaries for January are paid on January 31, the entry on January 31 is:

General Journal				
Date	Account/Explanation	PR	Debit	Credit
	Salaries Expense		XX	
	Cash			XX
	To record payment of January salaries.			

As a result of this entry, salaries expense is reported on the January income statement when cash is paid.

Finally, a cash payment can be made ***before*** the expense is incurred, such as insurance paid in advance. A prepayment of insurance creates an asset *Prepaid Insurance* and is recorded as:

General Journal				
Date	Account/Explanation	PR	Debit	Credit
	Prepaid Insurance		XX	
	Cash			XX
	To record payment of insurance in advance.			

As the prepaid insurance is used, it is appropriate to report an expense on the income statement by recording the following entry:

General Journal				
Date	Account/Explanation	PR	Debit	Credit
	Insurance Expense		XX	
	Prepaid Insurance			XX
	To record the use of Prepaid Insurance.			

The preceding examples illustrate how to *match* expenses to the appropriate accounting period. The **matching principle** requires that expenses be reported in the same period as the revenues they helped generate. That is, expenses are reported on the income statement: a) when related revenue is recognized, or b) during the appropriate time period, regardless of when cash is paid.

To ensure the recognition and matching of revenues and expenses to the correct accounting period, account balances must be reviewed and adjusted prior to the preparation of financial statements. This is the topic of the next section.

3.2 Adjusting Entries Watch video

LO2 – Explain the use of and prepare the adjusting entries required for prepaid expenses, depreciation, unearned revenues, accrued revenues, and accrued expenses.

At the end of an accounting period, before financial statements can be prepared, the accounts must be reviewed for potential adjustments. This review is done by using the *unadjusted trial balance*. The **unadjusted trial balance** is a trial balance where the accounts have not yet been adjusted. The trial balance of Big Dog Carworks Corp. at January 31 was prepared in Chapter 2 and appears in Figure 3.4 below. It is an unadjusted trial balance because the accounts have not yet been updated for adjustments. We will use this trial balance to illustrate how adjustments are identified and recorded.

Big Dog Carworks Corp.
Unadjusted Trial Balance
At January 31, 2023

Acct.	*Account*	*Debit*	*Credit*
101	Cash	$3,700	
110	Accounts receivable	2,000	
161	Prepaid insurance	2,400	
183	Equipment	3,000	
184	Truck	8,000	
201	Bank loan		$6,000
210	Accounts payable		700
247	Unearned revenue		400
320	Share capital		10,000
330	Dividends	200	
450	Repair revenue		10,000
654	Rent expense	1,600	
656	Salaries expense	3,500	
668	Supplies expense	2,000	
670	Truck operation expense	700	
		$27,100	$27,100

Figure 3.4: Unadjusted Trial Balance of Big Dog Carworks Corp. at January 31, 2023

Adjustments are recorded with *adjusting entries*. The purpose of **adjusting entries** is to ensure both the balance sheet and the income statement faithfully represent the account balances for the accounting period. Adjusting entries help satisfy the matching principle. There are five types of adjusting entries as shown in Figure 3.5, each of which will be discussed in the following sections.

Adjust prepaid assets	Adjust unearned liabilities	Adjust plant and equipment assets	Adjust for accrued revenues[1]	Adjust for accrued expenses[2]

1. An **accrued revenue** is a revenue that has been earned but has not been collected or recorded.
2. An **accrued expense** is an expense that has been incurred but has not yet been paid or recorded.

Figure 3.5: Five Types of Adjusting Entries

Adjusting Prepaid Asset Accounts

An asset or liability account requiring adjustment at the end of an accounting period is referred to as a **mixed account** because it includes both a balance sheet portion and an income statement portion. The income statement portion must be removed from the account by an adjusting entry.

Refer to Figure 3.4 which shows an unadjusted balance in prepaid insurance of $2,400. Recall from Chapter 2 that Big Dog paid for a 12-month insurance policy that went into effect on January 1 (transaction 5).

The unadjusted trial balance shows the following balance in the Prepaid Insurance account:

Prepaid Insurance	
2,400	

The balance resulted when the journal entry below was recorded:

Prepaid Insurance	2,400	
Cash		2,400

At January 31, one month or $200 of the policy has expired (been used up) calculated as $2,400/12 months = $200.

The adjusting entry on January 31 to transfer $200 out of prepaid insurance and into insurance expense is:

General Journal				
Date	Account/Explanation	PR	Debit	Credit
Jan 31	Insurance Expense		200	
	Prepaid Insurance			200
	To adjust for the use of one month of Prepaid Insurance.			

As shown below, the balance remaining in the Prepaid Insurance account is $2,200 after the adjusting entry is posted. The $2,200 balance represents the unexpired asset that will benefit future periods, namely, the 11 months from February to December, 2023. The $200 transferred out of prepaid insurance is posted as a debit to the Insurance Expense account to show how much insurance has been used during January.

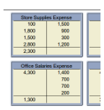
Insurance Expense	
200	

Prepaid Insurance	
2,400	200
Bal. 2,200	

An expense account, Insurance Expense, is increased by the amount used.

An asset account, Prepaid Insurance, is decreased by the $200 of insurance coverage that was used during January.

If the adjustment was not recorded, assets on the balance sheet would be overstated by $200 and expenses would be understated by the same amount on the income statement.



An exploration is available on the Lyryx site. Log into your Lyryx course to run Prepaid Expenses.

Adjusting Unearned Liability Accounts

On January 15, Big Dog received a $400 cash payment in advance of services being performed.

The unadjusted trial balance shows the following in the Unearned Repair Revenue account:

Unearned Repair Revenue	
	400

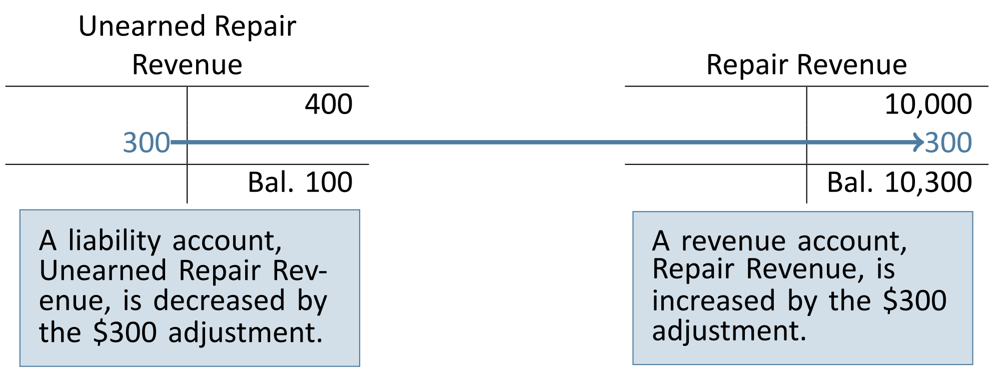
The receipt of the $400 advance payment was recorded as follows:

Cash	400	
Unearned Repair Rev.		400

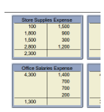
This advance payment was originally recorded as unearned, since the cash was received ***before*** repair services were performed. At January 31, $300 of the $400 unearned amount has been earned. Therefore, $300 must be transferred from unearned repair revenue into repair revenue. The adjusting entry at January 31 is:

General Journal				
Date	Account/Explanation	PR	Debit	Credit
Jan 31	Unearned Repair Revenue		300	
	Repair Revenue			300
	To adjust for repair revenue earned.			

After posting the adjustment, the $100 remaining balance in unearned repair revenue ($400 – $300) represents the amount at the end of January that will be earned in the future.



If the adjustment was not recorded, unearned repair revenue would be overstated (too high) by $300 causing liabilities on the balance sheet to be overstated. Additionally, revenue would be understated (too low) by $300 on the income statement if the adjustment was not recorded.



An exploration is available on the Lyryx site. Log into your Lyryx course to run Unearned Revenues.

Adjusting Plant and Equipment Accounts

Plant and equipment assets, also known as long-lived assets, are expected to help generate revenues over the current and future accounting periods because they are used to produce goods, supply services, or used for administrative purposes. The truck and equipment purchased by Big Dog Carworks Corp. in January are examples of plant and equipment assets that provide economic benefits for more than one accounting period. Because plant and equipment assets are useful for more than one accounting period, their cost must be spread over the time they are used. This is done to satisfy the matching principle. For example, the $100,000 cost of a machine expected to be used over five years is not expensed entirely in the year of purchase because this would cause expenses to be overstated in Year 1 and understated in Years 2, 3, 4, and 5. Therefore, the $100,000 cost must be spread over the asset's five-year life.

The process of allocating the cost of a plant and equipment asset over the period of time it is expected to be used is called **depreciation**. The amount of depreciation is calculated using the actual cost and an estimate of the asset's *useful life* and *residual value*. The **useful life** of a plant and equipment asset is an estimate of how long it will actually be used by the business regardless of how long the asset is expected to last. For example, a car might have a manufacturer's suggested life of 10 years but a business may have a policy of keeping cars for only 2 years. The useful life for depreciation purposes would therefore be 2 years and not 10 years. The **residual value** is an estimate of what the plant and equipment asset will be sold for when it is no longer used by a business. Residual value can be zero. There are different formulas for calculating depreciation. We will use the **straight-line method of depreciation**:

$$\frac{\text{Cost} - \text{Estimated Residual Value}}{\text{Estimated Useful Life}}$$

The cost less estimated residual value is the total **depreciable cost** of the asset. The straight-line method allocates the depreciable cost equally over the asset's estimated useful life. When recording depreciation expense, our initial instinct is to debit depreciation expense and credit the Plant and Equipment asset account in the same way prepaids were adjusted with a debit to an expense and a credit to the Prepaid asset account. However, crediting the Plant and Equipment asset account is incorrect. Instead, a *contra account* called *accumulated depreciation* must be credited. A **contra account** is an account that is related to another account and typically has an opposite normal balance that is subtracted from the balance of its related account on the financial statements. **Accumulated depreciation** records the amount of the asset's cost that has been expensed since it was put into use. Accumulated depreciation has a normal credit balance that is subtracted from a Plant and Equipment asset account on the balance sheet.

Initially, the concept of crediting Accumulated Depreciation may be confusing because of how we learned to adjust prepaids (debit an expense and credit the prepaid). Remember that prepaids actually get used up and disappear over time. The Plant and Equipment asset account is not credited because, unlike a prepaid, a truck or building does not get used up and disappear. The goal in recording depreciation is to match the cost of the asset to the revenues it helped generate. For example, a $50,000 truck that is expected to be used by a business for 4 years will have its cost spread over 4 years. After 4 years, the asset will likely be sold (journal entries related to the sale of plant and equipment assets are discussed in Chapter 8).

The adjusting journal entry to record depreciation is:

General Journal				
Date	Account/Explanation	PR	Debit	Credit
	Depreciation Expense		XX	
	Accumulated Depreciation			XX
	To adjust for depreciation.			

Subtracting the accumulated depreciation account balance from the Plant and Equipment asset account balance equals the **carrying amount** or **net book value** of the plant and equipment asset that is reported on the balance sheet.

Let's work through two examples to demonstrate depreciation adjustments. Big Dog Carworks Corp.'s January 31, 2023 unadjusted trial balance showed the following two plant and equipment assets:

Big Dog Carworks Corp.
Unadjusted Trial Balance
At January 31, 2023

Acct.	*Account*	*Debit*	*Credit*
183	Equipment	3,000	
184	Truck	8,000	

The equipment was purchased for $3,000.

The Equipment general ledger account appears as follows:

The balance resulted when this journal entry was recorded:

Equipment	
3,000	

Equipment	3,000	
Cash		3,000

The equipment was recorded as a plant and equipment asset because it has an estimated useful life greater than 1 year. Assume its actual useful life is 10 years (120 months) and the equipment is estimated to be worth $0 at the end of its useful life (residual value of $0).

$$\frac{\text{Cost} - \text{Estimated Residual Value}}{\text{Estimated Useful Life}} = \frac{\$3,000 - \$0}{120 \text{ months}} = \$25/\text{month}$$

Note that depreciation is always rounded to the nearest whole dollar. This is because depreciation is based on estimates — an estimated residual value and an estimated useful life; it is not exact. The following adjusting journal entry is made on January 31:

General Journal				
Date	Account/Explanation	PR	Debit	Credit
Jan 31	Depreciation Expense, Equipment		25	
	Accumulated Depreciation, Equipment			25
	To adjust for one month of depreciation on the equipment.			

When the adjusting entry is posted, the accounts appear as follows:

Equipment	
3,000	

Accumulated Depreciation – Equipment	
	25

Depreciation Expense – Equipment	
25	

The Equipment account remains unchanged by the adjusting entry.

A contra account, Accumulated Depreciation, is increased by $25.

Depreciation Expense is increased by $25, the amount of the equipment's cost that has been allocated to expense.

For financial statement reporting, the asset and contra asset accounts are combined. The net book value of the equipment on the balance sheet is shown as $2,975 ($3,000 – $25).

BDCC also shows a truck for $8,000 on the January 31, 2023 unadjusted trial balance.

The Truck general ledger accounts appears as:

The journal entry to record the purchase of the truck was:

Truck	
8,000	

Truck	8,000	
Bank Loan		5,000
Cash		3,000

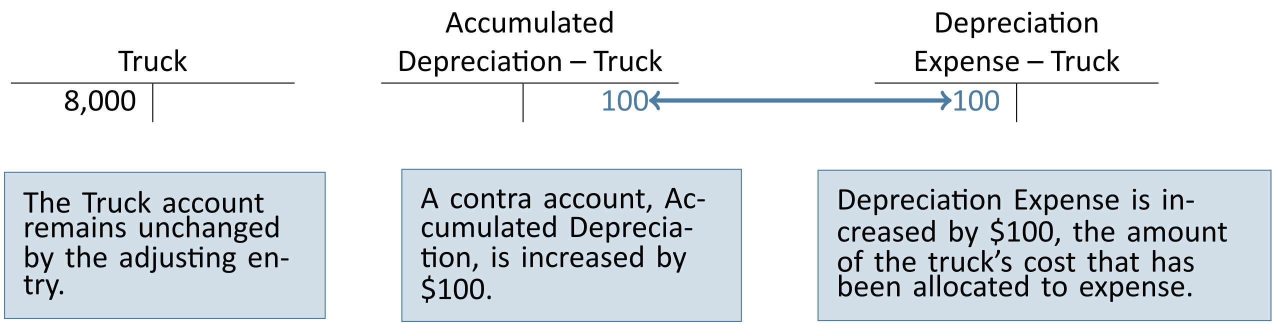
Assume the truck has an estimated useful life of 80 months and a zero estimated residual value. At January 31, one month of the truck cost has expired since it was put into operation in January. Using the straight-line method, depreciation is calculated as:

$$\frac{\text{Cost} - \text{Estimated Residual Value}}{\text{Estimated Useful Life}} = \frac{\$8{,}000 - \$0}{80 \text{ months}} = \$100/\text{month}$$

The adjusting entry recorded on January 31 is:

General Journal				
Date	Account/Explanation	PR	Debit	Credit
Jan 31	Depreciation Expense, Truck		100	
	Accumulated Depreciation, Truck			100
	To adjust for one month of depreciation on the truck.			

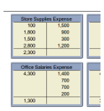
When the adjusting entry is posted, the accounts appear as follows:



For financial statement reporting, the asset and contra asset accounts are combined. The net book value of the truck on the balance sheet is shown as $7,900 ($8,000 – $100).

If depreciation adjustments are not recorded, assets on the balance sheet would be overstated. Additionally, expenses would be understated on the income statement causing net income to be overstated. If net income is overstated, retained earnings on the balance sheet would also be overstated.

It is important to note that land is a long-lived asset. However, it is ***not depreciated*** because it does not get used up over time. Therefore, land is often referred to as a non-depreciable asset.



An exploration is available on the Lyryx site. Log into your Lyryx course to run Depreciation.

Adjusting for Accrued Revenues

Accrued revenues are revenues that have been earned but not yet collected or recorded. For example, a bank has numerous notes receivable. Interest is earned on the notes receivable as time passes. At the end of an accounting period, there would be notes receivable where the interest has been earned but not collected or recorded. The adjusting entry for accrued revenues is:

General Journal				
Date	Account/Explanation	PR	Debit	Credit
	Receivable		XXX	
	Revenue			XXX
	To adjust for accrued revenue.			

For Big Dog Carworks Corp., assume that on January 31, $400 of repair work was completed for a client but it had not yet been collected or recorded. BDCC must record the following adjusting entry:

General Journal				
Date	Account/Explanation	PR	Debit	Credit
Jan 31	Accounts Receivable		400	
	Repair Revenue			400
	To adjust for accrued revenue.			

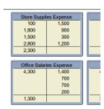
Accounts Receivable	
2,000	
400	
Bal. 2,400	

An asset account, Accounts Receivable, is increased by the accrued amount.

Repair Revenue	
	10,300
	400
	Bal. 10,700

An income statement account, Repair Revenue, is increased by the $400 of accrued revenue.

If the adjustment was not recorded, assets on the balance sheet would be understated by $400 and revenues would be understated by the same amount on the income statement.



An exploration is available on the Lyryx site. Log into your Lyryx course to run Accrued Revenues.

Adjusting for Accrued Expenses

Accrued expenses are expenses that have been incurred but not yet paid or recorded. For example, a utility bill received at the end of the accounting period is likely not payable for 2–3 weeks. Utilities for the period have been used but have not yet been paid or recorded. The adjusting entry for accrued expenses is:

General Journal				
Date	Account/Explanation	PR	Debit	Credit
	Expense		XXX	
	Payable			XXX
	To adjust for accrued expense.			

Accruing Interest Expense

For Big Dog Carworks Corp., the January 31, 2023 unadjusted trial balance shows a $6,000 bank loan balance. Assume it is a 4%, 60-day bank loan[1]. It was dated January 3 which means that on

[1]The maturity date is March 4, 2023 calculated as: January 31 less January 3 = 28 days + 28 days in February = 56 days + 4 days = March 4.

January 31, 28 days of interest have accrued (January 31 less January 3 = 28 days) as shown in Figure 3.6.

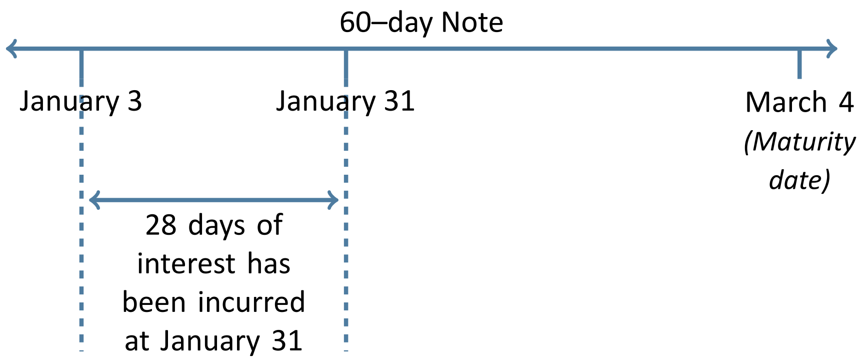


Figure 3.6: Interest Incurred During an Accounting Period

The formula for calculating interest when the term is expressed in days is:

$$\text{Interest} = \text{Principal} \times \text{Interest rate} \times \frac{\text{Elapsed time in days}}{365}$$

The interest expense accrued at January 31 is calculated as:

$$\text{Interest} = \$6{,}000 \times 0.04 \times \frac{28}{365} = \$18 \text{ (rounded to nearest whole dollar)}$$

Interest is normally expressed as an annual rate. Therefore, the 28 days must be divided by the 365 days in a year. Normally all interest calculations in this textbook are rounded to two decimal places. However, for simplicity of demonstrations in this chapter, we will round to the nearest whole dollar.

BDCC's adjusting entry on January 31 is:

General Journal				
Date	Account/Explanation	PR	Debit	Credit
Jan 31	Interest Expense		18	
	Interest Payable			18
	To adjust for accrued interest; $6,000 X 4% X 28/365 = $18.41 (rounded to $18 for illustrative purposes in this chapter).			

This adjusting entry enables BDCC to include the interest expense on the January income statement even though the payment has not yet been made. The entry creates a payable that will be reported as a liability on the balance sheet at January 31.

When the adjusting entry is posted, the accounts appear as:

On February 28, interest will again be accrued and recorded as:

General Journal				
Date	**Account/Explanation**	**PR**	**Debit**	**Credit**
Feb 28	Interest Expense		18	
	Interest Payable			18
	To adjust for accrued interest; $6,000 X 4% X 28/365 = $18.41 (rounded to $18 for illustrative purposes in this chapter).			

On March 4 when the bank loan matures, Big Dog will pay the interest and principal and record the following entry:

General Journal				
Date	**Account/Explanation**	**PR**	**Debit**	**Credit**
Mar 4	Interest Expense		3	
	Interest Payable		36	
	Bank Loan		6,000	
	Cash			6039
	To record payment of the bank loan and interest; interest expense for March is $6,000 X 4% X 4/365 = $2.63 (rounded to $3 for illustrative purposes in this chapter).			

The $36 debit to interest payable will cause the Interest Payable account to go to zero since the liability no longer exists once the cash is paid. Notice that the total interest expense recorded on the bank loan was $39 – $18 expensed in January, $18 expensed in February, and $3 expensed in March. The interest expense was matched to the life of the bank loan.

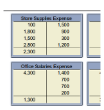
Accruing Income Tax Expense

Another adjustment that is required for Big Dog Carworks Corp. involves the recording of corporate income taxes. In most jurisdictions, a corporation is taxed as an entity separate from its shareholders. For simplicity, assume BDCC's income tax due for January 2023 is $500. The adjusting entry is at January 31:

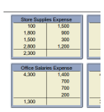
General Journal				
Date	Account/Explanation	PR	Debit	Credit
Jan 31	Income Tax Expense		500	
	Income Tax Payable			500
	To adjust for January accrued income tax.			

When the adjusting entry is posted, the accounts appear as follows:

The above adjusting entry enables the company to match the income tax expense accrued in January to the income earned during the same month.



An exploration is available on the Lyryx site. Log into your Lyryx course to run Accrued Expenses.



An exploration is available on the Lyryx site. Log into your Lyryx course to run Collection/Payment of Accrual Adjustments in the Next Accounting Period.

The five types of adjustments discussed in the previous paragraphs are summarized in Figure 3.7.

Each of the five steps of adjusting entries either debits an expense or credits a revenue.

Adjust Prepaid assets by recording:

Expense	XX	
Prepaid		XX

To adjust a Prepaid for the amount used.

Adjust Plant and Equipment assets by recording:

Depreciation Expense	XX	
Accumulated Depreciation . .		XX

To adjust Plant and Equipment assets for depreciation.

Adjust for Accrued Expenses by recording:

Expense	XX	
Liability		XX

To accrue an expense.

Adjust Unearned liabilities by recording:

Unearned Liability	XX	
Revenue		XX

To adjust an Unearned Liability for the amount earned.

Adjust for Accrued Revenues by recording:

Receivable	XX	
Revenue		XX

To accrue a revenue.

1. An **accrued revenue** is a revenue that has been earned but has not yet been collected or recorded.
2. An **accrued expense** is an expense that has been incurred but has not yet been paid or recorded.

Figure 3.7: Summary of the Five Types of Adjusting Entries

3.3 The Adjusted Trial Balance Watch video

LO3 – Prepare an adjusted trial balance and explain its use.

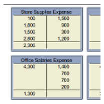
In the last section, adjusting entries were recorded and posted. As a result, some account balances reported on the January 31, 2023 unadjusted trial balance in Figure 2 have changed. Recall that an unadjusted trial balance reports account balances *before* adjusting entries have been recorded and posted. An **adjusted trial balance** reports account balances *after* adjusting entries have been recorded and posted. Figure 3.8 shows the adjusted trial balance for BDCC at January 31, 2023.

In Chapters 1 and 2, the preparation of financial statements was demonstrated using BDCC's *unadjusted* trial balance. We now know that an adjusted trial balance must be used to prepare financial statements.

Big Dog Carworks Corp.
Adjusted Trial Balance
At January 31, 2023

	Account Balance	
Account	*Debit*	*Credit*
Cash	$3,700	
Accounts receivable	2,400	
Prepaid insurance	2,200	
Equipment	3,000	
Accumulated depreciation – equipment		$ 25
Truck	8,000	
Accumulated depreciation – truck		100
Bank loan		6,000
Accounts payable		700
Interest payable		18
Unearned repair revenue		100
Income tax payable		500
Share capital		10,000
Dividends	200	
Repair revenue		10,700
Depreciation expense – equipment	25	
Depreciation expense – truck	100	
Rent expense	1,600	
Insurance expense	200	
Interest expense	18	
Salaries expense	3,500	
Supplies expense	2,000	
Truck operation expense	700	
Income tax expense	500	
Total debits and credits	$28,143	$28,143

Figure 3.8: BDCC's January 31, 2023 Adjusted Trial Balance



An exploration is available on the Lyryx site. Log into your Lyryx course to run Adjusted Trial Balance.

3.4 Using the Adjusted Trial Balance to Prepare Financial Statements

Watch video

LO4 – Use an adjusted trial balance to prepare financial statements.

In the last section, we saw that the adjusted trial balance is prepared after journalizing and posting the adjusting entries. This section shows how financial statements are prepared using the adjusted trial balance.

Big Dog Carworks Corp.
Adjusted Trial Balance
January 31, 2023

	Account Balance	
Account	*Debit*	*Credit*
Cash	$ 3,700	
Accounts receivable	2,400	
Prepaid insurance	2,200	
Equipment	3,000	
Accumulated depreciation – equipment		$ 25
Truck	8,000	
Accumulated depreciation – truck		100
Bank loan		6,000
Accounts payable		700
Interest payable		18
Unearned repair revenue		100
Income tax payable		500
Share capital		10,000
Dividends	200	
Repair revenue		10,700
Depreciation expense – equipment	25	
Depreciation expense – truck	100	
Rent expense	1,600	
Insurance expense	200	
Interest expense	18	
Salaries expense	3,500	
Supplies expense	2,000	
Truck operation expense	700	
Income tax expense	500	
Total debits and credits	$28,143	$28,143

Asset accounts, liability accounts, and the equity accounts from the statement of changes in equity are used to prepare the balance sheet.

Share capital, dividends, and the net income/loss from the income statement are used to prepare the statement of changes in equity.

Revenue and expense accounts are used to prepare the income statement.

Figure 3.9: BDCC's January 31, 2023 Adjusted Trial Balance and Links Among Financial Statements

The income statement is prepared first, followed by the statement of changes in equity as shown below.

Big Dog Carworks Corp.
Adjusted Trial Balance
At January 31, 2023

Account	*Debit*	*Credit*
Cash	$ 3,700	
Accounts receivable	2,400	
Prepaid insurance	2,200	
Equipment	3,000	
Accum. dep. – equipment		$ 25
Truck	8,000	
Accum. dep. – truck		100
Bank loan		6,000
Accounts payable		700
Interest payable		18
Unearned revenue		100
Income tax payable		500
Share capital		10,000
Dividends	200	
Repair revenue		10,700
Dep. expense – equipment	25	
Dep. expense – truck	100	
Rent expense	1,600	
Insurance expense	200	
Interest expense	18	
Salaries expense	3,500	
Supplies expense	2,000	
Truck operation expense	700	
Income tax expense	500	
	$28,143	$28,143

Big Dog Carworks Corp.
Income Statement
For the Month Ended January 31, 2023

Revenues		
Repair revenue		$10,700
Expenses		
Salaries expense	$ 3,500	
Supplies expense	2,000	
Rent expense	1,600	
Truck operation expense	700	
Income tax expense	500	
Insurance expense	200	
Dep. expense – truck	100	
Dep. expense – equipment	25	
Interest expense	18	
Total expenses		8,643
Net income		$2,057

Net income is transferred to the Statement of Changes in Equity as part of retained earnings.

Big Dog Carworks Corp.
Statement of Changes in Equity
For the Month Ended January 31, 2023

	Share capital	*Retained earnings*	*Total equity*
Balance at beginning of period	$ -0-	$ -0-	$ -0-
Shares issued	10,000		10,000
Dividends		(200)	(200)
Net income		2,057	2,057
Balance at end of period	$10,000	$1,857	$11,857

Share capital and dividends are transferred to the Statement of Changes in Equity. Dividends is part of retained earnings because it is a distribution of net income.

The balance sheet can be prepared once the statement of changes in equity is complete.

These accounts are used to prepare the Balance Sheet.

Big Dog Carworks Corp.
Trial Balance
At January 31, 2023

Account	*Debit*	*Credit*
Cash	$ 3,700	
Accounts receivable	2,400	
Prepaid insurance	2,200	
Equipment	3,000	
Accum. dep. – equipment		$ 25
Truck	8,000	
Accum. dep. – truck		100
Bank loan		6,000
Accounts payable		700
Interest payable		18
Unearned revenue		100
Income tax payable		500
Share capital		10,000
Dividends	200	
Repair revenue		10,700
Dep. expense – equipment	25	
Dep. expense – truck	100	
Rent expense	1,600	
Insurance expense	200	
Interest expense	18	
Salaries expense	3,500	
Supplies expense	2,000	
Truck operation expense	700	
Income tax expense	500	
	$28,143	$28,143

Big Dog Carworks Corp.
Balance Sheet
At January 31, 2023

Assets		
Cash		$ 3,700
Accounts receivable		2,400
Prepaid insurance		2,200
Equipment	$3,000	
Less: Accum. dep.	25	2,975
Truck	$8,000	
Less: Accum. dep.	100	7,900
Total assets		$19,175
Liabilities		
Bank loan		$ 6,000
Accounts payable		700
Interest payable		18
Unearned repair revenue		100
Income tax payable		500
Total liabilities		$7,318
Equity		
Share capital	$10,000	
Retained earnings	1,857	
Total equity		11,857
Total liabilities and equity		$19,175

The share capital and retained earnings balances are transferred to the balance sheet from the statement of changes in equity.

Notice how accumulated depreciation is shown on the balance sheet.

An exploration is available on the Lyryx site. Log into your Lyryx course to run Adjustments and Financial Statements.

3.5 The Accounting Cycle Watch video

LO5 – Identify and explain the steps in the accounting cycle.

The concept of the accounting cycle was introduced in Chapter 2. The accounting cycle consists of the steps followed each accounting period to prepare financial statements. These eight steps are:

Step 1: Transactions are analyzed and recorded in the general journal

Step 2: The journal entries in the general journal are posted to accounts in the general ledger

Step 3: An unadjusted trial balance is prepared to ensure total debits equal total credits

Step 4: The unadjusted account balances are analyzed and adjusting entries are journalized in the general journal and posted to the general ledger

Step 5: An adjusted trial balance is prepared to prove the equality of debits and credits

Step 6: The adjusted trial balance is used to prepare financial statements

Step 7: Closing entries are journalized and posted

Step 8: Prepare a post-closing trial balance

Steps 1 through 6 were introduced in this and the preceding chapters. Steps 7 and 8 are discussed in the next section.

An exploration is available on the Lyryx site. Log into your Lyryx course to run Reviewing the Accounting Cycle.

3.6 The Closing Process Watch video

LO6 – Explain the use of and prepare closing entries and a post-closing trial balance.

At the end of a fiscal year, after financial statements have been prepared, the revenue, expense, and dividend account balances must be zeroed so that they can begin to accumulate amounts belonging to the new fiscal year. To accomplish this, *closing entries* are journalized and posted. **Closing entries** transfer each revenue and expense account balance, as well as any balance in the Dividend account, into retained earnings. Revenues, expenses, and dividends are therefore referred to as **temporary accounts** because their balances are zeroed at the end of each accounting period. Balance sheet accounts, such as retained earnings, are **permanent accounts** because they have a continuing balance from one fiscal year to the next. The closing process transfers temporary account balances into a permanent account, namely retained earnings. The four entries in the closing process are detailed below.

Entry 1: Close the revenue accounts to the income summary account

A single compound closing entry is used to transfer revenue account balances to the *income summary account*. The **income summary** is a checkpoint: once all revenue and expense account balances are transferred/closed to the income summary, the balance in the Income Summary account must be equal to the net income/loss reported on the income statement. If not, the revenues and expenses were not closed correctly.

Entry 2: Close the expense accounts to the Income Summary account

The expense accounts are closed in one compound closing journal entry to the Income Summary account. All expense accounts with a debit balance are credited to bring them to zero. Their balances are transferred to the Income Summary account as an offsetting debit.

After entries 1 and 2 above are posted to the Income Summary account, the balance in the income summary must be compared to the net income/loss reported on the income statement. If the income summary balance does not match the net income/loss reported on the income statement, the revenues and/or expenses were not closed correctly.

Entry 3: Close the income summary to retained earnings

The Income Summary account is closed to the Retained Earnings account. This procedure transfers the balance in the income summary to retained earnings. Again, the amount closed from the income summary to retained earnings must always equal the net income/loss as reported on the income statement.

Note that the Dividend account is **not** closed to the Income Summary account because dividends is not an income statement account. The dividend account is closed in Entry 4.

Entry 4: Close dividends to retained earnings

The Dividend account is closed to the Retained Earnings account. This results in transferring the balance in dividends, a temporary account, to retained earnings, a permanent account.

The balance in the Income Summary account is transferred to retained earnings because the net income (or net loss) belongs to the shareholders. The closing entries for Big Dog Carworks Corp. are shown in Figure 3.10.

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Date	Description	F	Debit	Credit
2023				
	Closing Entries			
Jan. 31	Repair Revenue		10700 -	
	Income Summary			10700 -
	To close the revenue account balance.			
	Income Summary		8643 -	
	Depreciation expense – equipment			25 -
	Depreciation expense – truck			100 -
	Income tax expense			500 -
	Insurance expense			200 -
	Interest expense			18 -
	Rent expense			1600 -
	Salaries expense			3500 -
	Supplies expense			2000 -
	Truck operation expense			700 -
	To close expense account balances.			
	Income Summary		2057 -	
	Retained earnings			2057 -
	To close income summary to retained earnings.			
	Retained Earnings		200 -	
	Dividends			200 -
	To close dividends to retained earnings.			

Figure 3.10: Closing Entries

Posting the Closing Entries to the General Ledger

When entries 1 and 2 are posted to the general ledger, the balances in all revenue and expense accounts are transferred to the Income Summary account. The transfer of these balances is shown in Figure 3.11. Notice that a zero balance results for each revenue and expense account after the closing entries are posted, and there is a $2,057 credit balance in the income summary. The income summary balance agrees to the net income reported on the income statement.

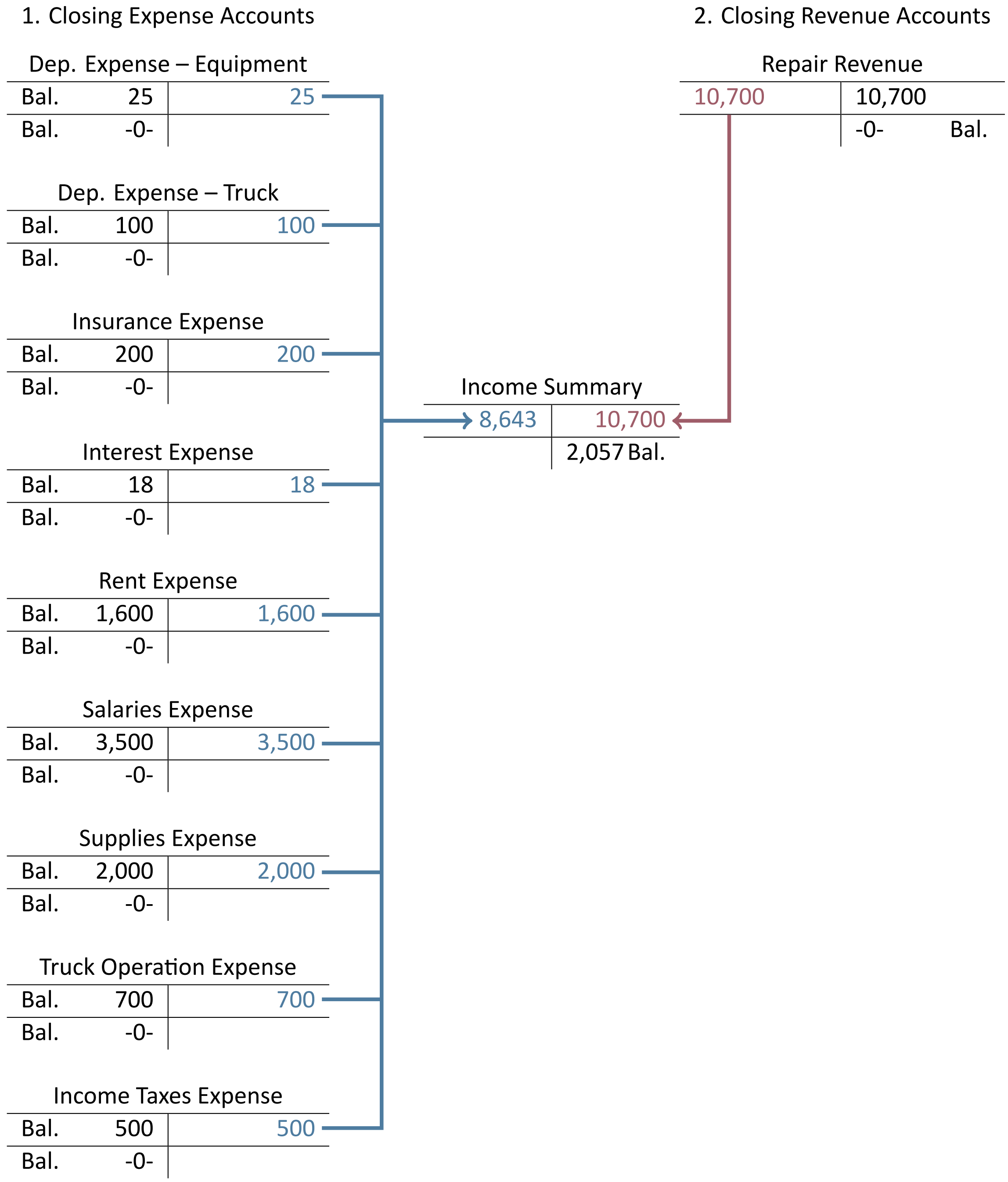


Figure 3.11: Closing Revenue and Expense Accounts

When the income summary is closed to retained earnings in the third closing entry, the $2,057 credit balance in the income summary account is transferred into retained earnings as shown in Figure 3.12. As a result, the income summary is left with a zero balance.

3. Closing the Income Summary Account

Income Summary

	Debit	Credit	
	8,643	10,700	
	2,057	2,057	Bal.
Bal.	-0-		

Retained Earnings

Debit	Credit
	2,057

Figure 3.12: Closing the Income Summary Account

This example demonstrated closing entries when there was a net income. When there is a net loss, the Income Summary account will have a debit balance after revenues and expenses have been closed. To close the Income Summary account when there is a net loss, the following closing entry is required:

General Journal				
Date	Account/Explanation	PR	Debit	Credit
	Retained Earnings		XX	
	Income Summary			XX
	To close the net loss, a debit balance in the income summary, to retained earnings.			

Finally, when dividends is closed to retained earnings in the fourth closing entry, the $200 debit balance in the Dividends account is transferred into retained earnings as shown in Figure 3.13. After the closing entry is posted, the Dividends account is left with a zero balance and retained earnings is left with a credit balance of $1,857. Notice that the $1,857 must agree to the retained earnings balance calculated on the statement of changes in equity.

4. Closing the Dividends Account

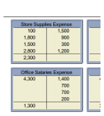
Dividends

	Debit	Credit
	200	200
Bal.	-0-	

Retained Earnings

Debit	Credit	
200	2,057	
	1,857	Bal.

Figure 3.13: Closing the Dividends Account



An exploration is available on the Lyryx site. Log into your Lyryx course to run Closing Entries.

The Post–Closing Trial Balance

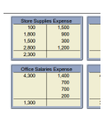
A **post-closing trial balance** is prepared immediately following the posting of closing entries. The purpose is to ensure that the debits and credits in the general ledger are equal and that all temporary accounts have been closed. The post-closing trial balance for Big Dog Carworks Corp. appears below.

Big Dog Carworks Corp.
Post-Closing Trial Balance
January 31, 2023

	Account Balance	
Account	*Debit*	*Credit*
Cash	$ 3,700	
Accounts receivable	2,400	
Prepaid insurance	2,200	
Equipment	3,000	
Accumulated depreciation – equipment		$ 25
Truck	8,000	
Accumulated depreciation – truck		100
Bank loan		6,000
Accounts payable		700
Interest payable		18
Unearned repair revenue		100
Income taxes payable		500
Share capital		10,000
Retained earnings		1,857
Total debits and credits	$19,300	$19,300

Only permanent accounts remain.

Note that only balance sheet accounts, the permanent accounts, have balances and are carried forward to the next accounting year. All temporary accounts begin the new fiscal year with a zero balance, so they can be used to accumulate amounts belonging to the new time period.



An exploration is available on the Lyryx site. Log into your Lyryx course to run Closing Errors.

Summary of Chapter 3 Learning Objectives

LO1 – Explain how the timeliness, matching, and recognition GAAP require the recording of adjusting entries.

Financial statements must be prepared in a timely manner, at minimum, once per fiscal year. For statements to reflect activities accurately, revenues and expenses must be recognized and reported in the appropriate accounting period. In order to achieve this type of matching, adjusting entries need to be prepared.

LO2 – Explain the use of and prepare the adjusting entries required for prepaid expenses, depreciation, unearned revenues, accrued revenues, and accrued expenses.

Adjusting entries are prepared at the end of an accounting period. They allocate revenues and expenses to the appropriate accounting period regardless of when cash was received/paid. The five types of adjustments are:

Expense	XX	
Prepaid		XX
To adjust prepaid for the amount used/expired.		
Depreciation Expense	XX	
Accumulated Depreciation		XX
To allocate the cost of a plan or equipment asset over its useful life.		
Unearned Revenue	XX	
Revenue		XX
To adjust unearned amounts for amount earned.		
Receivable	XX	
Revenue		XX
To adjust for accrued revenue.		
Expense	XX	
Payable		XX
To adjust for accrued expense.		

LO3 – Prepare an adjusted trial balance and explain its use.

The adjusted trial balance is prepared using the account balances in the general ledger after adjusting entries have been posted. Debits must equal credits. The adjusted trial balance is used to prepare the financial statements.

LO4 – Use an adjusted trial balance to prepare financial statements.

Financial statements are prepared based on adjusted account balances.

LO5 – Identify and explain the steps in the accounting cycle.

The steps in the accounting cycle are followed each accounting period in the recording and reporting of financial transactions. The steps are:

1. Transactions are analyzed and recorded in the general journal.
2. The journal entries in the general journal are posted to accounts in the general ledger.

3. An unadjusted trial balance is prepared to ensure total debits equal total credits.
4. The unadjusted account balances are analyzed, and adjusting entries are journalized in the general journal and posted to the general ledger.
5. An adjusted trial balance is prepared to prove the equality of debits and credits.
6. The adjusted trial balance is used to prepare financial statements.
7. Closing entries are journalized and posted.
8. Prepare a post-closing trial balance.

LO6 – Explain the use of and prepare closing entries and a post-closing trial balance.

After the financial statements have been prepared, the temporary account balances (revenues, expenses, and dividends) are transferred to retained earnings, a permanent account, via closing entries. The result is that the temporary accounts will have a zero balance and will be ready to accumulate transactions for the next accounting period. The four closing entries are:

Revenue	XX	
Income Summary		XX
To close each revenue to the income summary.		

Income Summary	XX	
Expense		XX
To close each expense to the income summary.		

Income Summary	XX		**OR**	Retained Earnings	XX	
Retained Earnings		XX		Income Summary		XX
To close a net income in income summary to retained earnings.				*To close a net loss in income summary to retained earnings.*		

Retained Earnings	XX	
Dividends		XX
To close dividends to retained earnings.		

The post-closing trial balance is prepared after the closing entries have been posted to the general ledger. The post-closing trial balance will contain only permanent accounts because all the temporary accounts have been closed.

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Chapter 4

The Classified Balance Sheet and Related Disclosures

Chapters 1 through 3 discussed and illustrated the steps in the accounting cycle. They also discussed the concepts, assumptions, and procedures that provide a framework for financial accounting as a whole. Chapter 4 expands upon the content and presentation of financial statements. It reinforces what has been learned in previous chapters and introduces the classification or grouping of accounts on the balance sheet. Chapter 4 expands on notes to the financial statements, the auditor's report, and the management's responsibility report which are all integral to meeting disclosure requirements.

Chapter 4 Learning Objectives Watch video

LO1 – Explain the importance of and challenges related to basic financial statement disclosure.

LO2 – Explain and prepare a classified balance sheet.

LO3 – Explain the purpose and content of notes to financial statements.

LO4 – Explain the purpose and content of the auditor's report.

LO5 – Explain the purpose and content of the report that describes management's responsibility for financial statements.

Concept Self-Check

Use the following as a self-check while working through Chapter 4.

1. What shapes and limits an accountant's measurement of wealth?
2. Are financial statements primarily intended for internal or external users?
3. What is a classified balance sheet?
4. What are the classifications within a classified balance sheet?
5. What are current assets?

6. What are non-current assets?
7. What are current liabilities?
8. What are long-term liabilities?
9. What is the current-portion of a long-term liability?
10. What is the purpose and content of the notes to the financial statements?
11. What is the purpose and content of the auditor's report?
12. What is the purpose and content of the report that describes management's responsibility for financial statements?

NOTE: The purpose of these questions is to prepare you for the concepts introduced in the chapter. Your goal should be to answer each of these questions as you read through the chapter. If, when you complete the chapter, you are unable to answer one or more the Concept Self-Check questions, go back through the content to find the answer(s). Solutions are not provided to these questions.

4.1 Financial Statement Disclosure Decisions Watch video

LO1 – Explain the importance of and challenges related to basic financial statement disclosure.

Financial statements communicate information, with a focus on the needs of financial statement users such as a company's investors and creditors. Accounting information should make it easier for management to allocate resources and for shareholders to evaluate management. A key objective of financial statements is to fairly present the entity's economic resources, obligations, equity, and financial performance.

Fulfilling these objectives is challenging. Accountants must make a number of subjective decisions about how to apply generally accepted accounting principles. For example, they must decide how to measure wealth and how to apply recognition criteria. They must also make practical cost-benefit decisions about how much information is useful to disclose. Some of these decisions are discussed in the following section.

Making Accounting Measurements

Economists often define wealth as an increase or decrease in the entity's ability to purchase goods and services. Accountants use a more specific measurement — they consider only increases and decreases resulting from actual transactions. If a transaction has not taken place, they do not record a change in wealth.

The accountant's measurement of wealth is shaped and limited by the generally accepted accounting principles introduced and discussed in Chapter 1, including cost, the monetary unit, the business entity, timeliness, recognition, and going concern. These principles mean that accountants record transactions in one currency (for example, dollars). They assume the monetary currency retains its purchasing power. Changes in market values of assets are generally not recorded. The entity is expected to continue operating into the foreseeable future.

Economists, on the other hand, do recognize changes in market value. For example, if an entity purchased land for $100,000 that subsequently increased in value to $125,000, economists would recognize a $25,000 increase in wealth. International Financial Reporting Standards generally do not recognize this increase until the entity actually disposes of the asset; accountants would continue to value the land at its $100,000 purchase cost. This practice is based on the application of the cost principle, which is a part of GAAP.

Economic wealth is also affected by changes in the purchasing power of the dollar. For example, if the entity has cash of $50,000 at the beginning of a time period and purchasing power drops by 10% because of inflation, the entity has lost wealth because the $50,000 can purchase only $45,000 of goods and services. Conversely, the entity gains wealth if purchasing power increases by 10%. In this case, the same $50,000 can purchase $55,000 worth of goods and services. However, accountants do not record any changes because the monetary unit principle assumes that the currency unit is a stable measure.

Qualities of Accounting Information

Financial statements are focused primarily on the needs of external users. To provide information to these users, accountants make cost-benefit judgments. They use materiality considerations to decide how particular items of information should be recorded and disclosed. For example, if the costs associated with financial information preparation are too high or if an amount is not sufficiently large or important, a business might implement a materiality policy for various types of asset purchases to guide how such costs are to be recorded. For example, a business might have a materiality policy for the purchase of office equipment whereby anything costing $100 or less is expensed immediately instead of recorded as an asset. In this type of situation, purchases of $100 or less are recorded as an expense instead of an asset to avoid having to record depreciation expense, a cost-benefit consideration that will not impact decisions made by external users of the business's financial statements.

Accountants must also make decisions based on whether information is useful. Is it comparable to prior periods? Is it verifiable? Is it presented with clarity and conciseness to make it understandable? Readers' perception of the usefulness of accounting information is determined by how well those who prepare financial statements address these qualitative considerations.

4.2 Classified Balance Sheet Watch video

LO2 – Explain and prepare a classified balance sheet.

The accounting cycle and double-entry accounting have been the focus of the preceding chapters. This chapter focuses on the presentation of financial statements, including how financial information is *classified* (the way accounts are grouped) and what is disclosed.

A common order for the presentation of financial statements is:

1. Income statement
2. Statement of changes in equity
3. Balance sheet
4. Statement of cash flows
5. Notes to the financial statements

In addition, the financial statements are often accompanied by an auditor's report and a statement entitled "Management's Responsibility for Financial Statements." Each of these items will be discussed below. Financial statement information must be disclosed for the most recent year with the prior year for comparison.

Because external users of financial statements have no access to the entity's accounting records, it is important that financial statements be organized in a manner that is easy to understand. Thus, financial data are grouped into useful, similar categories within *classified financial statements*, as discussed below.

The Classified Balance Sheet

A **classified balance sheet** organizes the asset and liability accounts into categories. The previous chapters used an **unclassified balance sheet** which included only three broad account groupings: assets, liabilities, and equity. The classification of asset and liability accounts into meaningful categories is designed to facilitate the analysis of balance sheet information by external users. Assets and liabilities are classified as either *current* or *non-current*. Another common term for *non-current* is *long-term*. Non-current assets, also referred to as long-term assets, can be classified further into *long-term investments*; *property, plant and equipment*; and *intangible assets*. The asset and liability classifications are summarized below:

Assets	**Liabilities**
Non-current or long-term assets:	Non-current or long-term liabilities
Long-term investments	
Property, plant and equipment (PPE)	
Intangible assets	

Current Assets

Current assets are those resources that the entity expects to convert to cash, or to consume during the next year or within the operating cycle of the entity, whichever is longer. Examples of current assets include:

- cash, comprising paper currency and coins, deposits at banks, cheques, and money orders.
- short-term investments, the investment of cash that will not be needed immediately, in short-term, interest-bearing notes that are easily convertible into cash.
- accounts receivable that are due to be collected within one year.
- notes receivable, usually formalized account receivables — written promises to pay specified amounts with interest, and due to be collected within one year.
- merchandise inventory that is expected to be sold within one year.

The current asset category also includes accounts whose future benefits are expected to expire in a short period of time. These are not expected to be converted into cash, and include:

- prepaid expenses that will expire within the next year, usually consisting of advance payments for insurance, rent, and other similar items.
- supplies on hand at the end of an accounting year that will be used during the next year.

On the balance sheet, current assets are normally reported before non-current assets. They are listed by decreasing levels of **liquidity** — their ability to be converted into cash. Therefore, cash appears first under the current asset heading since it is already liquid.

Non-current Assets

Non-current assets are assets that will be useful for more than one year; they are sometimes referred to as **long-lived assets**. Non-current assets include property, plant, and equipment (PPE) items used in the operations of the business. Some examples of PPE are: a) land, b) buildings, c) equipment, and d) motor vehicles such as trucks.

Other types of non-current assets include long-term investments and intangible assets. **Long-term investments** are held for more than one year or the operating cycle and include long-term notes receivable and investments in shares and bonds. **Intangible assets** are resources that do not have a physical form and whose value comes from the rights held by the owner. They are used over the long term to produce or sell products and services and include copyrights, patents, trademarks, and franchises.

Current Liabilities

Current liabilities are obligations that must be paid within the next 12 months or within the entity's next operating cycle, whichever is longer. They are shown first in the liabilities section of the balance sheet and listed in order of their due dates, with any bank loans shown first. Examples of current liabilities include:

- bank loans (or notes payable) that are payable on demand or due within the next 12 months
- accounts payable
- accrued liabilities such as interest payable and wages payable
- unearned revenue
- the current portion of long-term liabilities
- income taxes payable.

The **current portion of a long-term liability** is the principal amount of a long-term liability that is to be paid within the next 12 months. For example, assume a $24,000 note payable issued on January 1, 2023 where principal is repaid at the rate of $1,000 per month over two years. The current portion of this note on the January 31, 2023 balance sheet would be $12,000 (calculated as 12 months X $1,000/month). The remaining principal would be reported on the balance sheet as a long-term liability.

Non-Current or Long-Term Liabilities

Non-current liabilities, also referred to as long-term liabilities, are borrowings that do not require repayment for more than one year, such as the long-term portion of a bank loan or a mortgage. A **mortgage** is a liability that is secured by real estate.

Equity

The equity section of the classified balance sheet consists of two major accounts: share capital and retained earnings.

The following illustrates the presentation of Big Dog Carworks Corp.'s classified balance sheet after several years of operation.

Big Dog Carworks Corp.
Balance Sheet
At December 31, 2023

Assets	*2023*	*2022*	*Liabilities*	*2023*	*2022*
Current assets			*Current liabilities*		
Cash	$ 10,800	$ 12,000	Borrowings (Note 5)	$ 39,000	$ 82,250
Accounts receivable	26,000	24,000	Accounts payable	24,000	22,000
Merchandise inventories	120,000	100,000	Income taxes payable	15,000	10,000
Prepaid expenses	1,200	570	Total current liabilities	$ 78,000	$114,250
Total current assets	$158,000	$136,570			
Property, plant, and equipment (Note 4)	126,645	10,430			
			Long-term liabilities		
			Borrowings (Note 5)	163,145	-0-
			Total liabilities	$241,145	$114,250
			Equity		
			Share capital (Note 6)	$ 11,000	$ 11,000
			Retained earnings	32,500	21,750
			Total equity	43,500	32,750
Total assets	$284,645	$147,000	Total liabilities and equity	$284,645	$147,000

Notes are included at the end of the financial statements. Among other purposes, they provide details about a particular category on the balance sheet or income statement.

The balance sheet can be presented in the **account form** balance sheet, as shown above where liabilities and equities are presented to the right of the assets. An alternative is the **report form** balance sheet where liabilities and equity are presented below the assets.

The Classified Income Statement

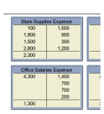
Recall that the income statement summarizes a company's revenues less expenses over a period of time. An income statement for BDCC was presented in Chapter 1 as copied below.

Big Dog Carworks Corp.
Income Statement
For the Month Ended January 31, 2023

Revenues		
Repair revenues		$10,000
Expenses		
Rent expense	$1,600	
Salaries expense	3,500	
Supplies expense	2,000	
Fuel expense	700	
Total expenses		7,800
Net income		$2,200

The format used above was sufficient to disclose relevant financial information for Big Dog's simple start-up operations. Like the classified balance sheet, an income statement can be classified as well as prepared with comparative information. The classified income statement will be discussed in detail in Chapter 5.

Regardless of the type of financial statement, any items that are *material* must be disclosed separately so users will not otherwise be misled. Materiality is a matter for judgment. Office supplies of $2,000 per month used by BDCC in January 2023 might be a material amount and therefore disclosed as a separate item on the income statement for the month ended January 31, 2023. If annual revenues grew to $1 million, $2,000 per month for supplies might be considered immaterial. These expenditures would then be grouped with other similar items and disclosed as a single amount.



An exploration is available on the Lyryx site. Log into your Lyryx course to run Classified Balance Sheets.

4.3 Notes to Financial Statements Watch video

LO3 – Explain the purpose and content of notes to financial statements.

As an integral part of its financial statements, a company provides *notes to the financial statements*. In accordance with the disclosure principle, **notes to the financial statements** provide relevant details that are not included in the body of the financial statements. For instance, details about property, plant, and equipment are shown in Note 4 in the following sample notes to the financial statements. The notes help external users understand and analyze the financial statements.

Although a detailed discussion of disclosures that might be included as part of the notes is beyond the scope of an introductory financial accounting course, a simplified example of note disclosure is shown below for Big Dog Carworks Corp.

Big Dog Carworks Corp.
Notes to the Financial Statements
For the Year Ended December 31, 2023

1. Nature of operations
   The principal activity of Big Dog Carworks Corp. is the servicing and repair of vehicles.

2. General information and statement of compliance with IFRS
   Big Dog Carworks Corp. is a limited liability company incorporated and domiciled in Canada. Its registered office and principal place of business is 123 Fox Street, Owlseye, Alberta, T1K 0L1, Canada. Big Dog Carworks Corp.'s shares are listed on the Toronto Stock Exchange.

   The financial statements of Big Dog Carworks Inc. have been prepared in accordance with International Financial Reporting Standards (IFRS) as issued the International Accounting Standards Boards (IASB).

   The financial statements for the year ended December 31, 2023 were approved and authorised for issue by the board of directors on March 17, 2024.

3. Summary of accounting policies
   The financial statements have been prepared using the significant accounting policies and measurement bases summarized below.

   (a) Revenue

       Revenue arises from the rendering of service. It is measured by reference to the fair value of consideration received or receivable.

   (b) Operating expenses

       Operating expenses are recognized in the income statement upon utilization of the service or at the date of their origin.

   (c) Borrowing costs

       Borrowing costs directly attributable to the acquisition, construction, or production of property, plant, and equipment are capitalized during the period of time that is necessary to complete and prepare the asset for its intended use or sale. Other borrowing costs are expensed in the period in which they are incurred and reported as interest expense.

(d) Property, plant, and equipment

Land held for use in production or administration is stated at cost. Other property, plant, and equipment are initially recognized at acquisition cost plus any costs directly attributable to bringing the assets to the locations and conditions necessary to be employed in operations. They are subsequently measured using the cost model: cost less subsequent depreciation.

Depreciation is recognized on a straight-line basis to write down the cost, net of estimated residual value. The following useful lives are applied:

Buildings: 25 years

Equipment: 10 years

Truck: 5 years

Residual value estimates and estimates of useful life are updated at least annually.

(e) Income taxes

Current income tax liabilities comprise those obligations to fiscal authorities relating to the current or prior reporting periods that are unpaid at the reporting date. Calculation of current taxes is based on tax rates and tax laws that have been enacted or substantively enacted by the end of the reporting period.

(f) Share capital

Share capital represents the nominal value of shares that have been issued.

(g) Estimation uncertainty

When preparing the financial statements, management undertakes a number of judgments, estimates, and assumptions about the recognition and measurement of assets, liabilities, income, and expenses. Information about estimates and assumptions that have the most significant effect on recognition and measurement of assets, liabilities, income, and expenses is provided below. Actual results may be substantially different.

4. Property, plant, and equipment

Details of the company's property, plant, and equipment and their carrying amounts at December 31 are as follows:

	2023					2022
	Land	*Building*	*Equip.*	*Truck*	*Total*	*Total*
Gross Carrying Amount						
Balance, January 1	$ -0-	$ -0-	$3,000	$8,000	$ 11,000	$ 11,000
Additions	30,000	90,000			120,000	
Balance, January 31	30,000	90,000	3,000	8,000	131,000	11,000
Depreciation						
Balance, January 1		-0-	90	480	570	285
Depreciation for year		3,500	45	240	3,785	285
Balance, December 31		3,500	135	720	4,355	570
Carrying Amount						
December 31	$30,000	$86,500	$2,865	$7,280	$126,645	$ 10,430

These amounts agree to the amount of PPE shown in the assets section of BDCC's balance sheet.

5. Borrowings

Borrowings include the following financial liabilities measured at cost:

	Current		Non-Current	
	2023	2022	2023	2022
Demand bank loan	$ 20,000	$ 52,250	$ -0-	$ -0-
Subordinated shareholder loan	13,762	30,000	-0-	-0-
Mortgage	5,238	-0-	163,145	-0-
Total carrying amount	$39,000	$82,250	$163,145	$ -0-

The bank loan is due on demand and bears interest at 6% per year. It is secured by accounts receivable and inventories of the company.

The shareholder loan is due on demand, non-interest bearing, and unsecured.

The mortgage is payable to First Bank of Capitalville. It bears interest at 5% per year and is amortized over 25 years. Monthly payments including interest are $960. It is secured by land and buildings owned by the company. The terms of the mortgage will be re-negotiated in 2026.

6. Share capital

The share capital of Big Dog Carworks Corp. consists of fully-paid common shares with a stated value of $1 each. All shares are eligible to receive dividends, have their capital repaid, and represent one vote at the annual shareholders' meeting. There were no shares issued during 2022 or 2023.

4.4 Auditor's Report Watch video

LO4 – Explain the purpose and content of the auditor's report.

Financial statements are often accompanied by an auditor's report. An **audit** is an external examination of a company's financial statement information and its system of *internal controls*.

Internal controls are the processes instituted by management of a company to direct, monitor, and measure the accomplishment of its objectives. This includes the prevention and detection of fraud and error. An audit seeks not certainty, but reasonable assurance that the financial statement information is not materially misstated.

The auditor's report is a structured statement issued by an independent examiner, usually a professional accountant, who is contracted by the company to report the audit's findings to the company's board of directors. An audit report provides some assurance to present and potential investors and creditors that the company's financial statements are trustworthy. Therefore, it is a useful means to reduce the risk of their financial decisions.

An example of an unqualified auditor's report for BDCC is shown below, along with a brief description of each component. Put in simple terms, an **unqualified auditor's report** indicates that the financial statements are truthful and a **qualified auditor's report** is one that indicates the financial statements are not or may not be truthful.

The auditor’s independence from the company is stated.

INDEPENDENT AUDITOR’S REPORT

The audit report is addressed to the board.

The Board of Directors of Big Dog Carworks Corp.
Owiseye, Alberta

The audited information is described.

I have audited the accompanying financial statements of Big Dog Carworks Corp., which comprise the balance sheet as at December 31, 2023, the income statement, statement of changes in equity, and statement of cash flows for the year then ended, and a summary of significant accounting policies and other explanatory information.

Management Responsibility for the Financial Statements

Management’s responsibilities are described.

Management is responsible for the preparation and fair presentation of these financial statements in accordance with Canadian generally accepted accounting principles, and for such internal control as management determines is necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error.

Auditor’s Responsibility

The auditor’s responsibilities and the audit standards are described.

My responsibility is to express an opinion on the financial statements based on my audit. I conducted my audit in accordance with Canadian generally accepted auditing standards. Those standards require that I comply with ethical requirements, and plan and perform the audit to obtain reasonable assurance about whether the financial statements are free from material misstatement.

The audit procedures are described in general terms.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditor’s judgement, including assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the entity’s preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity’s internal control. An audit also includes evaluation of the appropriateness of accounting policies used and the reasonableness of accounting estimates made by management, as well as evaluating the overall presentation of the financial statement.

A conclusion about the adequacy of audit evidence is stated.

I believe that the audit evidence I have obtained is sufficient and appropriate to provide a basis for my audit opinion.

Opinion

An opinion is expressed about the financial statement information.

In my opinion, the financial statements present fairly, in all material aspects, the financial position of Big Dog Carworks Corp. as at December 31, 2023, and its financial performance and its cash flows for the year then ended in accordance with Canadian generally accepted accounting principles.

The report is signed by the auditor and dated.

(signed)
H. K. Walker, CPA
March 15, 2024
Anywhereville, AB

4.5 Management's Responsibility for Financial Statements Watch video

LO5 – Explain the purpose and content of the report that describes management's responsibility for financial statements.

The final piece of information often included with the annual financial statements is a statement describing management's responsibility for the accurate preparation and presentation of financial statements. This statement underscores the division of duties involved with the publication of financial statements. Management is responsible for preparing the financial statements, including estimates that underlie the accounting numbers. An example of an estimate is the useful life of long-lived assets in calculating depreciation.

The independent auditor is responsible for examining the financial statement information as prepared by management, including the reasonableness of estimates, and then expressing an opinion on their accuracy. In some cases, the auditor may assist management with aspects of financial statement preparation. For instance, the auditor may provide guidance on how a new accounting standard will affect financial statement presentation or other information disclosure. Ultimately, however, the preparation of financial statements is management's responsibility.

An example of a statement describing management's responsibility for the preparation and presentation of annual financial statements is shown below.

MANAGEMENT'S RESPONSIBILITY FOR FINANCIAL STATEMENTS

Management's responsibility for all aspects of financial statement presentation and disclosure is expressly stated.

The accompanying financial statements of the company are the responsibility of management. The financial statements were prepared by management in accordance with accounting principles generally accepted in Canada, applied on a consistent basis, and conform in all material respects with International Accounting Standards. The significant accounting policies, which management believes are appropriate for the company, are described in Note 3 to the financial statements.

Management's responsibility for estimates used and maintenance of internal controls is acknowledged.

Management is responsible for the integrity and objectivity of the financial statements. Estimates are necessary in the preparation of these statements and, based on careful judgements, have been properly reflected. Management has established systems of internal control that are designed to provide reasonable assurance that assets are safeguarded from loss or unauthorized use, and to produce reliable accounting records for the preparation of financial information.

The board of directors' and audit committee's respective roles are explained.	The board of directors is responsible for ensuring that management fulfills its responsibilities for financial reporting and internal control. The audit committee of the board, which is comprised solely of directors who are not employees of the company, is appointed by the board of directors annually. The audit committee of the board meets regularly with financial management of the company and with the shareholders' independent auditor to discuss internal controls, audit matters, including audit scope and auditor remuneration, and financial reporting issues. The independent shareholders' auditor has unrestricted access to the audit committee. The audit committee reviews the annual financial statements and reporting to the board, and makes recommendations with respect to their acceptance. The audit committee also makes recommendations to the board with respect to the appointment and remuneration of the company's auditor.
Management acknowledges its obligation to oversee all aspects of the company's operations in a legal and ethical manner.	Management recognizes its responsibility for conducting the company's affairs in compliance with established financial standards and applicable laws, and maintains proper standards of conduct for its activities.
The officer responsible for the financial affairs of the company signs and dates the statement.	(signed) Bill Brown II, Chief Financial Officer March 3, 2023

Summary of Chapter 4 Learning Objectives

LO1 – Explain the importance of and challenges related to basic financial statement disclosure.

The objective of financial statements is to communicate information to meet the needs of external users. In addition to recording and reporting verifiable financial information, accountants make decisions regarding how to measure transactions. Applying GAAP can present challenges when judgment must be applied as in the case of cost-benefit decisions and materiality.

LO2 – Explain and prepare a classified balance sheet.

A classified balance sheet groups assets and liabilities as follows:

Assets:	**Liabilities:**
Current assets	Current liabilities
Non-current assets: • Property, plant, and equipment • Long-term investments • Intangible assets	Non-current or long-term liabilities

Current assets are those that are used within one year or one operating cycle, whichever is longer, and include cash, accounts receivables, and supplies. Non-current assets are used beyond one year or one operating cycle. There are three types of non-current assets: property, plant, and equipment (PPE), long-term investments, and intangible assets. Long-term investments include investments in shares and bonds. Intangible assets are rights held by the owner and do not have a physical substance; they include copyrights, patents, franchises, and trademarks. Current liabilities must be paid within one year or one operating cycle, whichever is longer. Long-term liabilities are paid beyond one year or one operating cycle. Income statements are also classified (discussed in Chapter 5).

LO3 – Explain the purpose and content of notes to financial statements.

In accordance with the GAAP principle of full disclosure, relevant details not contained in the body of financial statements are included in the accompanying notes to financial statements. Notes would include a summary of accounting policies, details regarding property, plant, and equipment assets, and specifics about liabilities such as the interest rates and repayment terms.

LO4 – Explain the purpose and content of the auditor's report.

An audit as it relates to the auditor's report is an external examination of a company's financial statement information and its system of internal controls. Internal controls are the processes instituted by management of a company to direct, monitor, and measure the accomplishment of its objectives including the prevention and detection of fraud and error. The auditor's report provides some assurance that the financial statements are trustworthy. In simple terms, an unqualified auditor's report indicates that the financial statements are truthful and a qualified auditor's report is one that indicates the financial statements are not or may not be truthful.

LO5 – Explain the purpose and content of the report that describes management's responsibility for financial statements.

This report makes a statement describing management's responsibility for the accurate preparation and presentation of financial statements.

Chapter 5

Accounting for the Sale of Goods

To this point, examples of business operations have involved the sale of services. This chapter introduces business operations based on the purchase and resale of goods. For example, Canadian Tire and Walmart each purchase and resell goods — such businesses are known as merchandisers. The accounting transactions for merchandising companies differ from those of service-based businesses. Chapter 5 covers accounting for transactions of sales of goods on credit and related cash collections by merchandising firms, and transactions involving purchases and payments for goods sold in the normal course of business activities.

Chapter 5 Learning Objectives Watch video

LO1 – Describe merchandising and explain the financial statement components of sales, cost of goods sold, merchandise inventory, and gross profit; differentiate between the perpetual and periodic inventory systems.

LO2 – Analyze and record purchase transactions for a merchandiser.

LO3 – Analyze and record sales transactions for a merchandiser.

LO4 – Record adjustments to merchandise inventory.

LO5 – Explain and prepare a classified multiple-step income statement for a merchandiser.

LO6 – Explain the closing process for a merchandiser.

LO7 – Explain and identify the entries regarding purchase and sales transactions in a periodic inventory system.

Concept Self-Check

Use the following questions as a self-check while working through Chapter 5.

1. What is gross profit and how is it calculated?
2. How is a merchandiser different from a service company?
3. What is a perpetual inventory system?

4. How is the purchase of merchandise inventory on credit recorded in a perpetual system?
5. How is a purchase return recorded in a perpetual system?
6. What does the credit term of "1/15, n30" mean?
7. How is a purchase discount recorded in a perpetual system?
8. How is the sale of merchandise inventory on credit recorded in a perpetual system?
9. How is a sales return that is restored to inventory recorded versus a sales return that is not restored to inventory (assuming a perpetual inventory system)?
10. What is a sales discount and how is it recorded in a perpetual inventory system?
11. Why does merchandise inventory need to be adjusted at the end of the accounting period and how is this done in a perpetual inventory system?
12. What types of transactions affect merchandise inventory in a perpetual inventory system?
13. How are the closing entries for a merchandiser using a perpetual inventory system different than for a service company?
14. When reporting expenses on an income statement, how is the function of an expense reported versus the nature of an expense?
15. On a classified multiple-step income statement, what is reported under the heading 'Other revenues and expenses' and why?
16. What is the periodic inventory system?
17. How is cost of goods sold calculated under the periodic inventory system?

NOTE: The purpose of these questions is to prepare you for the concepts introduced in the chapter. Your goal should be to answer each of these questions as you read through the chapter. If, when you complete the chapter, you are unable to answer one or more the Concept Self-Check questions, go back through the content to find the answer(s). Solutions are not provided to these questions.

5.1 The Basics of Merchandising Watch video

LO1 – Describe merchandising and explain the financial statement components of sales, cost of goods sold, merchandise inventory, and gross profit; differentiate between the perpetual and periodic inventory systems.

A merchandising company, or merchandiser, differs in several basic ways from a company that provides services. First, a merchandiser purchases and then sells goods whereas a service company sells services. For example, a car dealership is a merchandiser that sells cars while an airline is a service company that sells air travel. Because merchandising involves the purchase and then the resale of goods, an expense called **cost of goods sold** results. Cost of goods sold is the cost of the actual goods sold. For example, the cost of goods sold for a car dealership would be the cost of the cars purchased from manufacturers and then resold to customers. A service company does not have an expense called cost of goods sold since it does not sell goods. Because a merchandiser has cost of goods sold expense and a service business does not, the income statement for a merchandiser includes different details. A merchandising income statement highlights cost of goods sold by showing the difference between sales revenue and cost of goods sold called **gross profit** or **gross margin**. The basic income statement differences between a service business and a merchandiser are illustrated in Figure 5.1.

Service Company	***Merchandising Company***
Revenues	Sales
	Less: Cost of Goods Sold
	Equals: Gross Profit
Less: Expenses	*Less*: Expenses
Equals: Net Income	*Equals*: Net Income

Figure 5.1: Differences Between the Income Statements of Service and Merchandising Companies

Assume that Excel Cars Corporation decides to go into the business of buying used vehicles from a supplier and reselling these to customers. If Excel purchases a vehicle for $3,000 and then sells it for $4,000, the gross profit would be $1,000, as follows:

Sales	$	4,000
Cost of Goods Sold		3,000
Gross Profit . . .	$	1,000

The word "gross" is used by accountants to indicate that other expenses incurred in running the business must still be deducted from this amount before net income is calculated. In other words, gross profit represents the amount of sales revenue that remains to pay expenses after the cost of the goods sold is deducted.

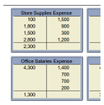
A **gross profit percentage** can be calculated to express the relationship of gross profit to sales. The sale of the vehicle that cost $3,000 results in a 25% gross profit percentage ($1,000/4,000). That is, for every $1 of sales, the company has $.25 left to cover other expenses after deducting cost of goods sold. Readers of financial statements use this percentage as a means to evaluate the performance of one company against other companies in the same industry, or in the same company from year to year. Small fluctuations in the gross profit percentage can have significant effects on the financial performance of a company because the amount of sales and cost of goods sold are often very large in comparison to other income statement items.

Another difference between a service company and a merchandiser relates to the balance sheet. A merchandiser purchases goods for resale. Goods held for resale by a merchandiser are called **merchandise inventory** and are reported as an asset on the balance sheet. A service company would not normally have merchandise inventory.

Inventory Systems

There are two types of ways in which inventory is managed: perpetual inventory system or periodic inventory system. In a **perpetual inventory system**, the merchandise inventory account and cost of goods sold account are updated immediately when transactions occur. In a perpetual system, as merchandise inventory is purchased, it is debited to the merchandise inventory account. As inventory is sold to customers, the cost of the inventory sold is removed from the merchandise inventory account and debited to the cost of goods sold account. A perpetual system means that account balances are known on a real-time basis. This chapter focuses on the perpetual system.

Some businesses still use a **periodic inventory system** in which the purchase of merchandise inventory is debited to a temporary account called Purchases. At the end of the accounting period, inventory is counted (known as a **physical count)** and the merchandise inventory account is updated and cost of goods sold is calculated. In a periodic inventory system, the real-time balances in merchandise inventory and cost of goods sold are not known. It should be noted that even in a perpetual system a physical count must be performed at the end of the accounting period to record differences between the actual inventory on hand and the account balance. The entry to record this difference is discussed later in this chapter. The periodic system is discussed in greater detail in the appendix to this chapter.



An exploration is available on the Lyryx site. Log into your Lyryx course to run Using the Information – Gross Profit Ratio.

5.2 The Purchase and Payment of Merchandise Inventory (Perpetual)

Watch video

LO2 – Analyze and record purchase transactions for a merchandiser.

As introduced in Chapter 3, a company's operating cycle includes purchases *on account* or *on credit* and is highlighted in Figure 5.2.

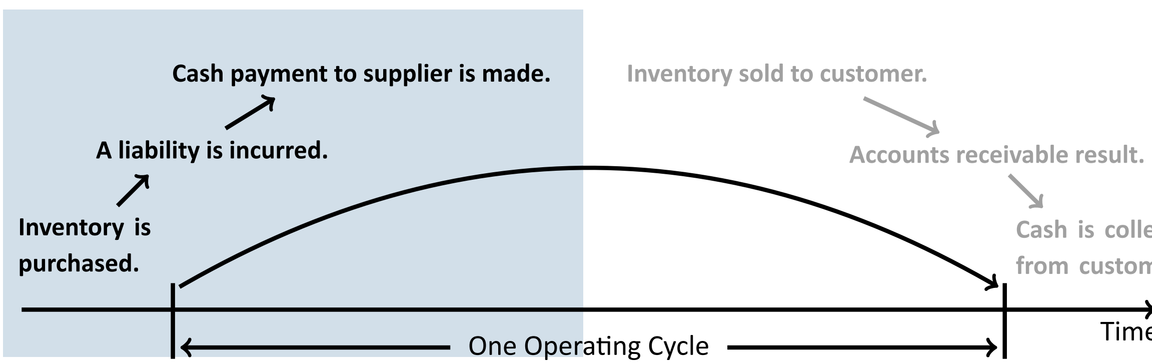


Figure 5.2: Purchase and Payment Portion of the Operating Cycle

Recording the Purchase of Merchandise Inventory (Perpetual)

When merchandise inventory is purchased, the cost is recorded in a Merchandise Inventory general ledger account. An account payable results when the merchandise inventory is acquired but will not be paid in cash until a later date. For example, recall the vehicle purchased on account by Excel for $3,000. The journal entry and general ledger T-account effects would be as follows.

General Journal				
Date	Account/Explanation	PR	Debit	Credit
	Merchandise Inventory		3,000	
	Accounts Payable			3,000
	To record the purchase of merchandise inventory on account.			

In addition to the purchase of merchandise inventory, there are other activities that affect the Merchandise Inventory account. For instance, merchandise may occasionally be returned to a supplier or damaged in transit, or discounts may be earned for prompt cash payment. These transactions result in the reduction of amounts due to the supplier and the costs of inventory. The purchase of merchandise inventory may also involve the payment of transportation and handling costs. These are all costs necessary to prepare inventory for sale, and all such costs are included in the Merchandise Inventory account. These costs are discussed in the following sections.

Purchase Returns and Allowances (Perpetual)

Assume that the vehicle purchased by Excel turned out to be the wrong colour. The supplier was contacted and agreed to reduce the price by $300 to $2,700. This is an example of a **purchase returns and allowances** adjustment. The amount of the allowance, or reduction, is recorded as a credit to the Merchandise Inventory account, as follows:

General Journal				
Date	Account/Explanation	PR	Debit	Credit
	Accounts Payable		300	
	Merchandise Inventory			300
	To record purchase allowance; incorrect colour.			

Note that the cost of the vehicle has been reduced to $2,700 ($3,000 – 300) as has the amount owing to the supplier. Again, the perpetual inventory system records changes in the Merchandise Inventory account each time a relevant transaction occurs.

Purchase Discounts (Perpetual)

Purchase discounts affect the purchase price of merchandise if payment is made within a time period specified in the supplier's invoice. For example, if the terms on the $3,000 invoice for one vehicle received by Excel indicates "1/15, n45", this means that the $3,000 must be paid within 45 days ('n' = net). However, if cash payment is made by Excel within 15 days, the purchase price will be reduced by 1%.

Assuming the amount is paid within 15 days, the supplier's terms entitle Excel to deduct $27 [($3,000 - $300) = $2,700 x 1% = $27]. The payment to the supplier would be recorded as:

General Journal				
Date	Account/Explanation	PR	Debit	Credit
	Accounts Payable		2,700	
	Merchandise Inventory			27
	Cash			2,673
	To record payment on account within the discount period.			

The cost of the vehicle in Excel's inventory records is now $2,673 ($3,000 – 300 – 27). If payment is made after the discount period, $2,700 of cash is paid and the entry would be:

General Journal				
Date	Account/Explanation	PR	Debit	Credit
	Accounts Payable		2,700	
	Cash			2,700
	To record payment of account; no purchase discount applied.			

Trade discounts are similar to purchase discounts. A supplier advertises a **list price** which is the normal selling price of its goods to merchandisers. **Trade discounts** are given by suppliers to merchandisers that buy a large quantity of goods. For instance, assume a supplier offers a 10% trade discount on purchases of 1,000 units or more where the list price is $1/unit. If Beta Merchandiser Corp. buys 1,000 units on account, the entry in Beta's records would be:

General Journal				
Date	Account/Explanation	PR	Debit	Credit
	Merchandise Inventory		900	
	Accounts Payable			900
	To record purchase on account; 10% trade discount ($1,000 – 10% = $900).			

Note that the net amount (list price less trade discount) is recorded.

Transportation

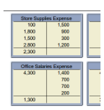
Costs to transport goods from the supplier to the seller must also be considered when recording the cost of merchandise inventory. The shipping terms on the invoice identify the point at which ownership of the inventory transfers from the supplier to the purchaser. When the terms are **FOB shipping point**, ownership transfers at the 'shipping point' so the purchaser is responsible for transportation costs. **FOB destination** indicates that ownership transfers at the 'destination point' so the seller is responsible for transportation costs. FOB is the abbreviation for "free on board."

Assume that Excel's supplier sells with terms of FOB shipping point indicating that transportation costs are Excel's responsibility. If the cost of shipping is $125 and this amount was paid in cash to the truck driver at time of delivery, the entry would be:

General Journal				
Date	Account/Explanation	PR	Debit	Credit
	Merchandise Inventory		125	
	Cash			125
	To record shipping costs on inventory purchased.			

The cost of the vehicle in the Excel Merchandise Inventory account is now $2,798 (calculated as $3,000 original cost - $300 allowance - $27 discount + $125 shipping). It is important to note that later when Excel sells vehicles to customers, its transportation costs to deliver goods to customers are recorded as delivery expenses and do not affect the Merchandise Inventory account. In other words, delivery expenses TO customers are a SELLING cost for the seller (Excel) and are to be expensed.

The next section describes how the sale of merchandise is recorded as well as the related costs of items sold.



An exploration is available on the Lyryx site. Log into your Lyryx course to run Purchases.

5.3 Merchandise Inventory: Sales and Collection (Perpetual) Watch video

LO3 – Analyze and record sales transactions for a merchandiser.

In addition to purchases on account, a merchandising company's operating cycle includes the sale of merchandise inventory *on account* or *on credit* as highlighted in Figure 5.3.

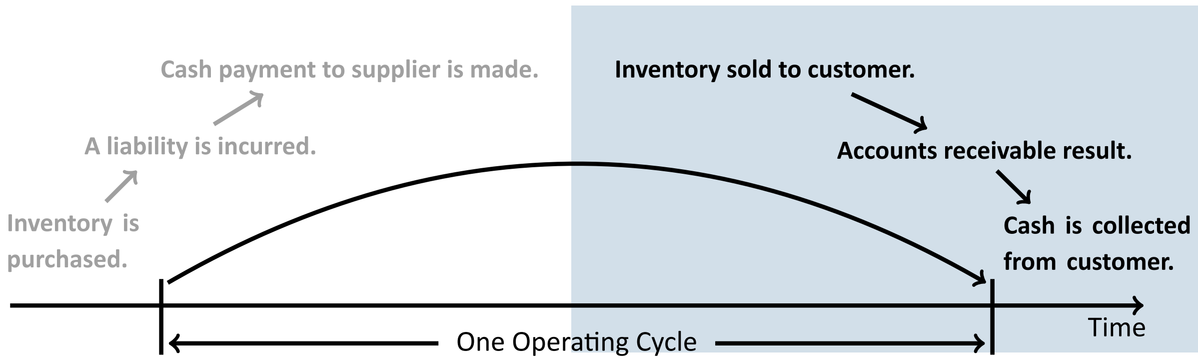


Figure 5.3: Sales and Collection Portion of the Operating Cycle

There are some slight recording differences when revenue is earned in a merchandising company. These are discussed below.

Recording the Sale of Merchandise Inventory (Perpetual)

The sale of merchandise inventory is recorded with two entries:

1. recording the sale by debiting Cash or Accounts Receivable and crediting Sales, and
2. recording the cost of the sale by debiting Cost of Goods Sold and crediting Merchandise Inventory.

Assume the vehicle purchased by Excel is sold for $4,000 on account. Recall that the cost of this vehicle in the Excel Merchandise Inventory account is $2,798, as shown below.

The entries to record the sale of the merchandise inventory are:

General Journal				
Date	Account/Explanation	PR	Debit	Credit
	Accounts Receivable		4,000	
	Sales			4,000
	To record the sale of merchandise on account.			

General Journal				
Date	Account/Explanation	PR	Debit	Credit
	Cost of Goods Sold		2,798	
	Merchandise Inventory			2,798
	To record the cost of the sale.			

The first entry records the sales revenue. The second entry is required to reduce the Merchandise Inventory account and transfer the cost of the inventory sold to the Cost of Goods Sold account. The second entry ensures that both the Merchandise Inventory account and Cost of Goods Sold account are up to date.

Sales Returns and Allowances

When merchandise inventory that has been sold is returned to the merchandiser by the customer, a **sales return and allowance** is recorded. For example, assume some damage occurs to the merchandise inventory sold by Excel while it is being delivered to the customer. Excel gives the customer a *sales allowance* by agreeing to reduce the amount owing by $100. The entry is:

General Journal				
Date	Account/Explanation	PR	Debit	Credit
	Sales Returns and Allowances		100	
	Accounts Receivable			100
	To record allowance for damage to merchandise inventory during delivery.			

Accounts receivable is credited because the original sale was made on account and has not yet been paid. The amount owing from the customer is reduced to $3,900. If the $4,000 had already been paid, a credit would be made to Cash and $100 refunded to the customer. The Sales Returns and Allowances account is a contra revenue account and is therefore ***deducted*** from Sales when preparing the income statement.

If goods are returned by a customer, a *sales return* occurs. The related sales and cost of goods sold recorded on the income statement are reversed and the goods are returned to inventory. For example, assume Max Corporation sells a plastic container for $3 that it purchased for $1. The dual entry at the time of sale would be:

General Journal				
Date	Account/Explanation	PR	Debit	Credit
	Accounts Receivable		3	
	Sales			3
	To record sale on credit.			

General Journal				
Date	Account/Explanation	PR	Debit	Credit
	Cost of Goods Sold		1	
	Merchandise Inventory			1
	To record the cost of the sale.			

If the customer returns the container and the merchandise is restored to inventory, the dual journal entry would be:

General Journal				
Date	Account/Explanation	PR	Debit	Credit
	Sales Returns and Allowances		3	
	Accounts Receivable			3
	To record sales return.			

General Journal				
Date	Account/Explanation	PR	Debit	Credit
	Merchandise Inventory		1	
	Cost of Goods Sold			1
	To record sales return being restored to inventory.			

The use of a contra account to record sales returns and allowances permits management to track the amount of returned and damaged items.

Sales Discounts

Another contra revenue account, **Sales Discounts**, records reductions in sales amounts when a customer pays within a certain time period. For example, assume Excel Cars Corporation offers sales terms of "2/10, n30." This means that the amount owed must be paid by the customer within 30 days ('n' = net); however, if the customer chooses to pay within 10 days, a 2% discount may be deducted from the amount owing.

Consider the sale of the vehicle for $3,900 ($4,000 less the $100 allowance for damage). Payment within 10 days entitles the customer to a $78 discount ($3,900 x 2% = $78). If payment is made within the discount period, Excel receives $3,822 cash ($3,900 - 78) and prepares the following entry:

General Journal				
Date	Account/Explanation	PR	Debit	Credit
	Cash		3,822	
	Sales Discounts		78	
	Accounts Receivable			3,900
	To record payment on account and sales discount applied.			

This entry reduces the accounts receivable amount to zero which is the desired result. If payment is not made within the discount period, the customer pays the full amount owing of $3,900.

As was the case for Sales Returns and Allowances, the balance in the Sales Discounts account is deducted from Sales on the income statement to arrive at Net Sales. Merchandisers often report only the net sales amount on the income statement. Details from sales returns and allowances, and sales discounts, are often omitted because they are immaterial in amount relative to total sales. However, as already stated, separate general ledger accounts for each of sales returns and allowances, and sales discounts, are useful in helping management identify potential problems that require investigation.

An exploration is available on the Lyryx site. Log into your Lyryx course to run Gross Profit.

An exploration is available on the Lyryx site. Log into your Lyryx course to run Sales.

5.4 Adjustments to Merchandise Inventory (Perpetual) Watch video

LO4 – Record adjustments to merchandise inventory.

To verify that the actual amount of merchandise inventory on hand is consistent with the balance recorded in the accounting records, a physical inventory count must be performed at the end of the accounting period. When a physical count of inventory is conducted, the costs attached to these inventory items are totalled. This total is compared to the Merchandise Inventory account balance in the general ledger. Any discrepancy is called **shrinkage**. Theft and deterioration of merchandise inventory are the most common causes of shrinkage.

The adjusting entry to record shrinkage is:

General Journal				
Date	Account/Explanation	PR	Debit	Credit
	Cost of Goods Sold		XX	
	Merchandise Inventory			XX
	To adjust for shrinkage.			

Summary of Merchandising Transactions

As the preceding sections have illustrated, there are a number of entries which are unique to a merchandiser. These are summarized below (assume all transactions were on account):

(a) To record the purchase of merchandise inventory from a supplier:

General Journal				
Date	Account/Explanation	PR	Debit	Credit
	Merchandise Inventory		XX	
	Accounts Payable			XX

(b) To record purchase return and allowances:

General Journal				
Date	Account/Explanation	PR	Debit	Credit
	Accounts Payable		XX	
	Merchandise Inventory			XX

(c) To record purchase discounts:

General Journal				
Date	Account/Explanation	PR	Debit	Credit
	Accounts Payable		XX	
	Merchandise Inventory			XX

(d) To record shipping costs from supplier to merchandiser:

General Journal				
Date	Account/Explanation	PR	Debit	Credit
	Merchandise Inventory		XX	
	Accounts Payable			XX

(e) To record sale of merchandise inventory and cost of the sale:

General Journal				
Date	Account/Explanation	PR	Debit	Credit
	Accounts Receivable		XX	
	Sales			XX

AND

General Journal				
Date	Account/Explanation	PR	Debit	Credit
	Cost of Goods Sold		XX	
	Merchandise Inventory			XX

(f) To record sales returns restored to inventory:

General Journal				
Date	Account/Explanation	PR	Debit	Credit
	Sales Returns and Allowances		XX	
	Accounts Receivable			XX

AND

General Journal				
Date	Account/Explanation	PR	Debit	Credit
	Merchandise Inventory		XX	
	Cost of Goods Sold			XX

(g) To record sales returns and allowances (where returns are not restored to inventory):

General Journal				
Date	Account/Explanation	PR	Debit	Credit
	Sales Returns and Allowances		XX	
	Accounts Receivable			XX

(h) To record discounts:

General Journal				
Date	Account/Explanation	PR	Debit	Credit
	Sales Discounts		XX	
	Cash		XX	
	Accounts Receivable			XX

(i) To record adjustment for shrinkage at the end of the accounting period:

General Journal				
Date	Account/Explanation	PR	Debit	Credit
	Cost of Goods Sold		XX	
	Merchandise Inventory			XX

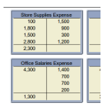
The effect of these transactions on each of merchandise inventory and cost of goods sold is depicted below:

Merchandise Inventory (MI)

(a) Purchase of MI	(b) Purchase Ret. & Allow.
(d) Shipping Costs	(c) Purchase Discounts
(f) Sales Return (when restored to inventory)	(e) Sale of MI
	(i) Shrinkage Adjustment
Adjusted Balance Reported on the Balance Sheet	

Cost of Goods Sold (COGS)

(e) Cost of MI Sold	(f) Cost of sales returns restored to inventory
(i) Shrinkage Adjustment	
Adjusted Balance Reported on the Income Statement	



An exploration is available on the Lyryx site. Log into your Lyryx course to run Merchandising Adjusting Entry.

5.5 Merchandising Income Statement Watch video

LO5 – Explain and prepare a classified multiple-step income statement for a merchandiser.

Businesses are required to show expenses on the income statement based on either the *nature* or the *function* of the expense. The **nature of an expense** is determined by its basic characteristics (what it is). For example, when expenses are listed on the income statement as interest, depreciation, income tax, or wages, this identifies the nature of each expense. In contrast, the **function of an expense** describes the grouping of expenses based on their purpose (what they relate to). For example, an income statement that shows cost of goods sold, selling expenses, and general and administrative expenses has grouped expenses by their function. When expenses are grouped by function, additional information must be disclosed to show the nature of expenses within each group. The **full disclosure principle** is the generally accepted accounting principle that requires financial statements to report all relevant information about the operations and financial position of the entity. Information that is relevant but not included in the body of the statements is provided in the notes to the financial statements.

A merchandising income statement can be prepared in different formats. For this course, only one format will be introduced — the classified multiple-step format. This format is generally used for internal reporting because of the detail it includes. An example of a classified multiple-step income statement is shown below using assumed data for XYZ Inc. for its month ended December 31, 2023.

XYZ Inc.
Income Statement
Month Ended December 31, 2023

Sales			$100,000
Less: Sales discounts		$1,000	
Sales returns and allowances		500	1,500
Net sales			$98,500
Cost of goods sold			50,000
Gross profit from sales			$48,500
Operating expenses:			
Selling expenses:			
Sales salaries expense	$11,000		
Rent expense, selling space	9,000		
Advertising expense	5,000		
Depreciation expense, store equipment	3,000		
Total selling expenses		$28,000	
General and administrative expenses:			
Office salaries expense	$9,000		
Rent expense, office space	3,000		
Office supplies expense	1,500		
Depreciation expense, office equipment	1,000		
Insurance expense	1,000		
Total general and administrative expenses		15,500	
Total operating expenses			43,500
Income from operations			$5,000
Other revenues and expenses:			
Rent revenue		$12,000	
Interest expense		1,500	10,500
Income before tax			$15,500
Income tax expense			3,000
Net income			$12,500

Notice that the classified multiple-step income statement shows expenses by both function and nature. The broad categories that show expenses by function include operating expenses, selling expenses, and general and administrative expenses. Within each category, the nature of expenses is disclosed including sales salaries, advertising, depreciation, supplies, and insurance. Notice that Rent Expense has been divided between two groupings because it applies to more than one category or function.

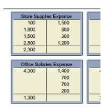
The normal operating activity for XYZ Inc. is merchandising. Revenues and expenses that are not part of normal operating activities are listed under Other Revenues and Expenses. XYZ Inc. shows Rent Revenue under Other Revenues and Expenses because this type of revenue is not part of its merchandising operations. Interest earned, dividends earned, and gains on the sale of property, plant, and equipment are other examples of revenues not related to merchandising operations. XYZ Inc. deducts Interest Expense under Other Revenues and Expenses. Interest expense does not result from operating activities; it is a financing activity because it is associated with the borrowing of money. Another example of a non-operating expense is losses on the sale of property, plant, and equipment. Income tax expense is a government requirement so it is shown separately. Notice that income tax expense follows the subtotal ‘Income before tax’.

5.6 Closing Entries for a Merchandiser Watch video

LO6 – Explain the closing process for a merchandiser.

The process of recording closing entries for service companies was illustrated in Chapter 3. The closing procedure for merchandising companies is the same as for service companies — all income statement accounts are transferred to the Income Summary account, the Income Summary is closed to Retained Earnings, and Dividends are closed to Retained Earnings.

When preparing closing entries for a merchandiser, the income statement accounts unique for merchandisers need to be considered — Sales, Sales Discounts, Sales Returns and Allowances, and Cost of Goods Sold. Sales is a revenue account so has a normal credit balance. To close Sales, it must be debited with a corresponding credit to the income summary. Sales Discounts and Sales Returns and Allowances are both contra revenue accounts so each has a normal debit balance. Cost of Goods Sold has a normal debit balance because it is an expense. To close these debit balance accounts, a credit is required with a corresponding debit to the income summary.



An exploration is available on the Lyryx site. Log into your Lyryx course to run Closing Entries.

5.7 Appendix A: The Periodic Inventory System Watch video

LO7 – Explain and identify the entries regarding purchase and sales transactions in a periodic inventory system.

The perpetual inventory system maintains a continuous, real-time balance in both Merchandise Inventory, a balance sheet account, and Cost of Goods Sold, an income statement account. As a result, the Merchandise inventory general ledger account balance should always equal the value of physical inventory on hand at any point in time. Additionally, the Cost of Goods Sold general ledger account balance should always equal the total cost of merchandise inventory sold for the accounting period. The accounts should perpetually agree; hence the name. An alternate system is considered below, called the *periodic* inventory system.

Description of the Periodic Inventory System

The periodic inventory system does not maintain a constantly-updated merchandise inventory balance. Instead, ending inventory is determined by a physical count and valued at the end of an accounting period. The change in inventory is recorded only periodically. Additionally, a Cost of

Goods Sold account is not maintained in a periodic system. Instead, cost of goods sold is calculated at the end of the accounting period.

When goods are purchased using the periodic inventory system, the cost of merchandise is recorded in a **Purchases** account in the general ledger, rather than in the Merchandise Inventory account as is done under the perpetual inventory system. The Purchases account is an income statement account that accumulates the cost of merchandise acquired for resale.

The journal entry, assuming a purchase of merchandise on credit, is:

General Journal				
Date	Account/Explanation	PR	Debit	Credit
	Purchases		XX	
	Accounts Payable			XX

Purchase Returns and Allowances (Periodic)

Under the periodic inventory system, any purchase returns or purchase allowances are accumulated in a separate account called **Purchase Returns and Allowances**, an income statement account, and recorded as:

General Journal				
Date	Account/Explanation	PR	Debit	Credit
	Accounts Payable		XX	
	Purchase Returns and Allowances			XX

Purchase Returns and Allowances is a contra expense account and the balance is deducted from Purchases when calculating cost of goods sold on the income statement.

Purchase Discounts (Periodic)

Another contra expense account, **Purchase Discounts**, accumulates reductions in the purchase price of merchandise if payment is made within a time period specified in the supplier's invoice and recorded as:

General Journal				
Date	Account/Explanation	PR	Debit	Credit
	Accounts Payable		XX	
	Purchase Discounts			XX

Transportation (Periodic)

Under the periodic inventory system, an income statement account called **Transportation-in** is used to accumulate transportation or freight charges on merchandise purchased for resale. The Transportation-in account is used in calculating the cost of goods sold on the income statement. It is recorded as:

General Journal				
Date	Account/Explanation	PR	Debit	Credit
	Transportation-In		XX	
	Cash or Accounts Payable			XX

At the end of the accounting period, cost of goods sold must be calculated which requires that the balance in Merchandise Inventory be determined. To determine the end of the period balance in Merchandise Inventory, a physical count of inventory is performed. The total value of the inventory as identified by the physical count becomes the ending balance in Merchandise Inventory. Cost of goods sold can then be calculated as follows:

Beginning Balance of Merchandise Inventory . .	XX
Plus: Net Cost of Goods Purchased*	XX
Less: Ending Balance of Merchandise Inventory	XX
Equals: Cost of Goods Sold	XX

*Net Cost of Goods Purchased is calculated as:

Purchases	XX
Less: Purchase Returns and Allowances . .	XX
Less: Purchase Discounts	XX
Equals: Net Purchases	XX
Add: Transportation-In	XX
Equals: Net Cost of Goods Purchased	XX

Closing Entries (Periodic)

In the perpetual inventory system, the Merchandise Inventory account is continuously updated and is adjusted at the end of the accounting period based on a physical inventory count. In the periodic inventory system, the balance in Merchandise Inventory does not change during the accounting period. As a result, at the end of the accounting period, the balance in Merchandise Inventory in a periodic system is the beginning balance. In order for the Merchandise Inventory account to reflect the ending balance as determined by the physical inventory count, the beginning inventory balance must be removed by crediting Merchandise Inventory, and the ending inventory balance entered by debiting it. This is accomplished as part of the closing process. Closing entries for a merchandiser that uses a periodic inventory system are illustrated below using the adjusted trial balance information for Norva Inc.

Norva Inc.
Adjusted Trial Balance
At December 31, 2023

	Debits	Credits
Cash	$15,000	
Merchandise inventory	1,000	
Accounts payable		$ 5,000
Common shares		8,000
Dividends	500	
Retained earnings		3,500
Sales		13,400
Sales discounts	200	
Purchases	5,000	
Purchase returns & allowances		800
Salaries expense	7,000	
Advertising expense	2,000	
Totals	$30,700	$30,700

Other information: The ending balance in merchandise inventory is $2,000 based on a physical count.

Step 1: Close debit balance income statement accounts plus beginning merchandise inventory:

Income Summary	15,200	
Merchandise Inventory		1,000
Sales Discounts		200
Purchases		5,000
Salaries Expense		7,000
Advertising Expense		2,000

Step 2: Close credit balance income statement accounts plus ending merchandise inventory:

Merchandise Inventory	2,000	
Sales	13,400	
Purchase Returns & Allowances	800	
Income Summary		16,200

Step 3: Close income summary to retained earnings:

Income Summary	1,000	
Retained Earnings		1,000

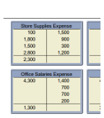
Step 4: Close dividends to retained earnings:

Retained Earnings	500	
Dividends		500

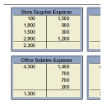
When the closing entries above are posted and a post-closing trial balance prepared as shown below, notice that the Merchandise Inventory account reflects the correct balance based on the physical inventory count.

Norva Inc.
Post-Closing Trial Balance
At December 31, 2023

	Debits	Credits
Cash	$15,000	
Merchandise inventory	2,000	
Accounts payable		$ 5,000
Common shares		8,000
Retained earnings		4,000
Totals	$17,000	$17,000



An exploration is available on the Lyryx site. Log into your Lyryx course to run Journalizing Merchandise Transactions.



An exploration is available on the Lyryx site. Log into your Lyryx course to run Income Statement and Closing Entries.

Summary of Chapter 5 Learning Objectives

LO1 – Describe merchandising and explain the financial statement components of sales, cost of goods sold, merchandise inventory, and gross profit; differentiate between the perpetual and periodic inventory systems.

Merchandisers buy and resell products. Merchandise inventory, an asset, is purchased from suppliers and resold to customers to generate sales revenue. The cost of the merchandise inventory sold is an expense called cost of goods sold. The profit realized on the sale of merchandise inventory before considering any other expenses is called gross profit. Gross profit may be expressed as a dollar amount or as a percentage. To track merchandise inventory and cost of goods sold in real time, a perpetual inventory system is used; the balance in each of Merchandise Inventory and Cost of Goods Sold is always up-to-date. In a periodic inventory system, a physical count of the inventory must be performed in order to determine the balance in Merchandise Inventory and Cost of Goods Sold.

LO2 – Analyze and record purchase transactions for a merchandiser.

In a perpetual inventory system, a merchandiser debits Merchandise Inventory regarding the purchase of merchandise for resale from a supplier. Any purchase returns and allowances or purchase discounts are credited to Merchandise Inventory as they occur to keep the accounts up-to-date.

LO3 – Analyze and record sales transactions for a merchandiser.

In a perpetual inventory system, a merchandiser records two entries at the time of sale: one to record the sale and a second to record the cost of the sale. Sales returns that are returned to inventory also require two entries: one to reverse the sale by debiting a sales returns and allowances account and a second to restore the merchandise to inventory by debiting Merchandise Inventory and crediting Cost of Goods Sold. Sales returns not restored to inventory as well as sales allowances are recorded with one entry: debit sales returns and allowances and credit cash or accounts receivable. Sales discounts are recorded when a credit customer submits their payment within the discount period specified.

LO4 – Record adjustments to merchandise inventory.

A physical count of merchandise inventory is performed and the total compared to the general ledger balance of Merchandise Inventory. Discrepancies are recorded as an adjusting entry that debits cost of goods sold and credits Merchandise Inventory.

LO5 – Explain and prepare a classified multiple-step income statement for a merchandiser.

A classified multiple-step income statement for a merchandiser is for internal use because of the detail provided. Sales, less sales returns and allowances and sales discounts, results in net sales. Net sales less cost of goods sold equals gross profit. Expenses are shown based on both their function and nature. The functional or group headings are: operating expenses, selling expenses, and general and administrative expenses. Within each grouping, the nature of expenses is detailed including: depreciation, salaries, advertising, wages, and insurance. A specific expense can be divided between groupings.

LO6 – Explain the closing process for a merchandiser.

The steps in preparing closing entries for a merchandiser are the same as for a service company. The difference is that a merchandiser will need to close income statement accounts unique to merchandising such as: Sales, Sales Returns and Allowances, Sales Discounts, and Cost of Goods Sold.

LO7 – Explain and identify the entries regarding purchase and sales transactions in a periodic inventory system.

A periodic inventory system maintains a Merchandise Inventory account but does not have a Cost of Goods Sold account. The Merchandise Inventory account is updated at the end of the accounting period as a result of a physical inventory count. Because a merchandiser using a period system does not use a Merchandise Inventory account to record purchase or sales transactions during the accounting period, it maintains accounts that are different than under a perpetual system, namely, Purchases, Purchase Returns and Allowances, Purchase Discounts, and Transportation-in.

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Chapter 6

Assigning Costs to Merchandise

Recording transactions related to the purchase and sale of merchandise inventory was introduced and discussed in Chapter 5. This chapter reviews how the cost of goods sold is calculated using various inventory cost flow assumptions. Additionally, issues related to merchandise inventory that remains on hand at the end of an accounting period are also explored.

Chapter 6 Learning Objectives Watch video

LO1 – Calculate cost of goods sold and merchandise inventory using specific identification, first-in first-out (FIFO), and weighted average cost flow assumptions — perpetual.

LO2 – Explain the impact on financial statements of inventory cost flows and errors.

LO3 – Explain and calculate lower of cost and net realizable value inventory adjustments.

LO4 – Estimate merchandise inventory using the gross profit method and the retail inventory method.

LO5 – Explain and calculate merchandise inventory turnover.

LO6 – Calculate cost of goods sold and merchandise inventory using specific identification, first-in first-out (FIFO), and weighted average cost flow assumptions — periodic.

Concept Self-Check

Use the following as a self-check while working through Chapter 6

1. What three inventory cost flow assumptions can be used in perpetual inventory systems?
2. What impact does the use of different inventory cost flow assumptions have on financial statements?
3. What is the meaning of the term *lower of cost and net realizable value*, and how is it calculated?
4. What is the effect on net income of an error in ending inventory values?

5. What methods are used to estimate ending inventory?
6. What ratio can be used to evaluate the liquidity of merchandise inventory?
7. What inventory cost flow assumptions can be used in a periodic inventory system?

NOTE: The purpose of these questions is to prepare you for the concepts introduced in the chapter. Your goal should be to answer each of these questions as you read through the chapter. If, when you complete the chapter, you are unable to answer one or more the Concept Self-Check questions, go back through the content to find the answer(s). Solutions are not provided to these questions.

6.1 Inventory Cost Flow Assumptions Watch video

LO1 – Calculate cost of goods sold and merchandise inventory using specific identification, first in first-out (FIFO), and weighted average cost flow assumptions — perpetual.

Determining the cost of each unit of inventory, and thus the total cost of ending inventory on the balance sheet, can be challenging. Why? We know from Chapter 5 that the cost of inventory can be affected by discounts, returns, transportation costs, and shrinkage. Additionally, the purchase cost of an inventory item can be different from one purchase to the next. For example, the cost of coffee beans could be $5.00 a kilo in October and $7.00 a kilo in November. Finally, some types of inventory flow into and out of the warehouse in a specific sequence, while others do not. For example, milk would need to be managed so that the oldest milk is sold first. In contrast, a car dealership has no control over which vehicles are sold because customers make specific choices based on what is available. So how is the cost of a unit in merchandise inventory determined? There are several methods that can be used. Each method may result in a different cost, as described in the following sections.

Assume a company sells only one product and uses the perpetual inventory system. It has no beginning inventory at June 1, 2023. The company purchased five units during June as shown in Figure 6.1.

	Purchase Transaction	
Date	*Number of units*	*Price per unit*
June 1	1	$1
5	1	2
7	1	3
21	1	4
28	1	5
	5	$15

Figure 6.1: June Purchases and Purchase Price per Unit

At June 28, there are 5 units in inventory with a total cost of $15 ($1 + $2 + $3 + $4 + $5). Assume four units are sold June 30 for $10 each on account. The cost of the four units sold could be determined based on identifying the cost associated with the specific units sold. For example, a car dealership tracks the cost of each vehicle purchased and sold. Alternatively, a business that sells perishable items would want the oldest units to move out of inventory first to minimize spoilage. Finally, if large quantities of low dollar value items are in inventory, such as pencils or hammers, an average cost might be used to calculate cost of goods sold. A business may choose one of three methods to calculate cost of goods and the resulting ending inventory based on an assumed flow. These methods are: specific identification, FIFO, and weighted average, and are discussed in the next sections.

Specific Identification

Under **specific identification**, each inventory item that is sold is matched with its purchase cost. This method is most practical when inventory consists of relatively few, expensive items, particularly when individual units can be identified with serial numbers — for example, motor vehicles.

Assume the four units sold on June 30 are those purchased on June 1, 5, 7, and 28. The fourth unit purchased on June 21 remains in ending inventory. Cost of goods sold would total $11 ($1 + $2 + $3 + $5). Sales would total $40 (4 @ $10). As a result, gross profit would be $29 ($40 – 11). Ending inventory would be $4, the cost of the unit purchased on June 21.

The general ledger T-accounts for Merchandise Inventory and Cost of Goods Sold would show:

Merchandise Inventory

Jun. 1	$1		
5	2		
7	3		
21	4		
28	5		
		11	Jun. 30
End. Bal.	4		

Cost of Goods Sold

11	

Figure 6.2: Cost of Goods Sold using Specific Identification

The entry to record the June 30 sale on account would be:

General Journal				
Date	Account/Explanation	PR	Debit	Credit
	Accounts Receivable		40	
	Sales			40
	To record the sale of merchandise on account.			
	Cost of Goods Sold		11	
	Merchandise Inventory			11
	To record the cost of the sale.			

It is not possible to use specific identification when inventory consists of a large number of similar, inexpensive items that cannot be easily differentiated. Consequently, a method of assigning costs to inventory items based on an **assumed** flow of goods can be adopted. Two such generally accepted methods, known as cost flow assumptions, are discussed next.

The First-in, First-out (FIFO) Cost Flow Assumption

First-in, first-out (FIFO) assumes that the first goods purchased are the first ones sold. A FIFO cost flow assumption makes sense when inventory consists of perishable items such as groceries and other time-sensitive goods.

Using the information from the previous example, the first four units purchased are assumed to be the first four units sold under FIFO. The cost of the four units sold is $10 ($1 + $2 + $3 + $4). Sales still equal $40, so gross profit under FIFO is $30 ($40 – $10). The cost of the one remaining unit in ending inventory would be the cost of the fifth unit purchased ($5).

The general ledger T-accounts for Merchandise Inventory and Cost of Goods Sold as illustrated in Figure 6.3 would show:

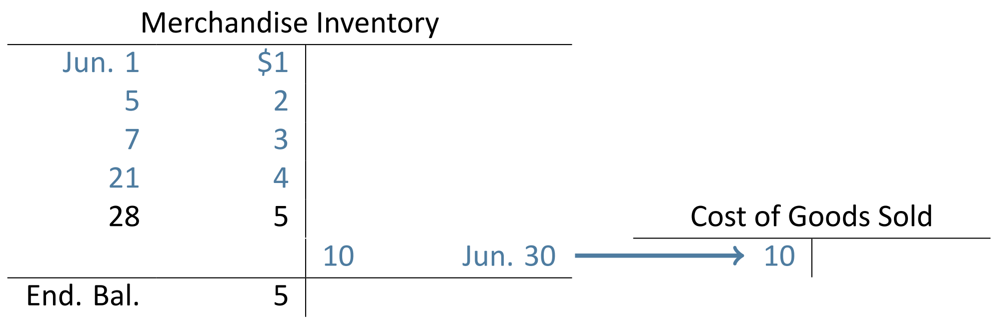


Figure 6.3: Cost of Goods Sold using FIFO

The entry to record the sale would be:

General Journal				
Date	Account/Explanation	PR	Debit	Credit
	Accounts Receivable		40	
	Sales			40
	To record the sale of merchandise on account.			
	Cost of Goods Sold		10	
	Merchandise Inventory			10
	To record the cost of the sale.			

The Weighted Average Cost Flow Assumption

A **weighted average** cost flow is assumed when goods purchased on different dates are mixed with each other. The weighted average cost assumption is popular in practice because it is easy to calculate. It is also suitable when inventory is held in common storage facilities — for example, when several crude oil shipments are stored in one large holding tank. To calculate a weighted average, the total cost of all purchases of a particular inventory type is divided by the number of units purchased.

To calculate the weighted average cost in our example, the purchase prices for all five units are totaled ($1 + $2 + $3 + $4 + $5 = $15) and divided by the total number of units purchased (5). The weighted average cost for each unit is $3 ($15/5). The weighted average cost of goods sold would be $12 (4 units @ $3). Sales still equal $40 resulting in a gross profit under weighted average of $28 ($40 – $12). The cost of the one remaining unit in ending inventory is $3.

The general ledger T-accounts for Merchandise Inventory and Cost of Goods Sold are:

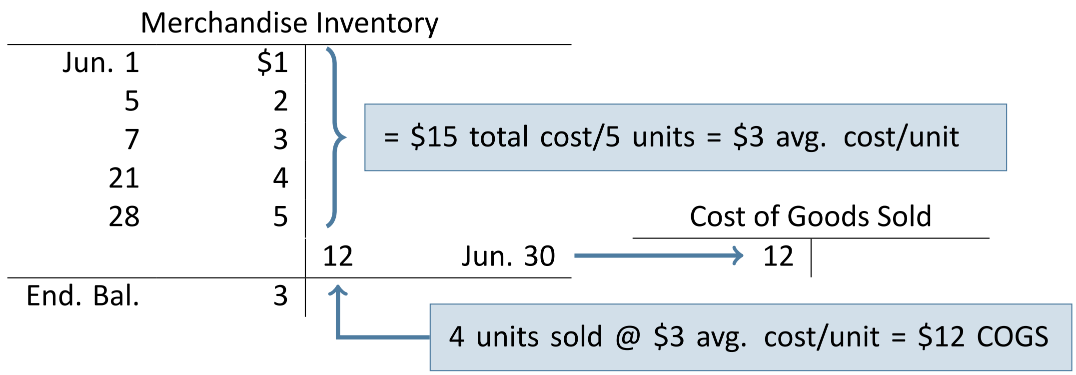


Figure 6.4: Cost of Goods Sold using Weighted Average

The entry to record the sale would be:

General Journal				
Date	Account/Explanation	PR	Debit	Credit
	Accounts Receivable		40	
	Sales			40
	To record the sale of merchandise on account.			
	Cost of Goods Sold		12	
	Merchandise Inventory			12
	To record the cost of the sale.			

Cost Flow Assumptions: A Comprehensive Example

Recall that under the perpetual inventory system, cost of goods sold is calculated and recorded in the accounting system at the time when sales are recorded. In our simplified example, all sales occurred on June 30 after all inventory had been purchased. In reality, the purchase and sale of merchandise is continuous. To demonstrate the calculations when purchases and sales occur continuously throughout the accounting period, let's review a more comprehensive example.

Assume the same example as above, except that sales of units occur as follows during June:

Date	*Number of Units Sold*
June 3	1
8	1
23	1
29	1

To help with the calculation of cost of goods sold, an *inventory record card* will be used to track the individual transactions. This card records information about purchases such as the date, number of units purchased, and purchase cost per unit. It also records cost of goods sold information: the date of sale, number of units sold, and the cost of each unit sold. Finally, the card records the balance of units on hand, the cost of each unit held, and the total cost of the units on hand. A partially-completed inventory record card is shown in Figure 6.5 below:

	Purchases/Shipping Costs/ (Purchase Returns/Discounts)			Cost of Goods Sold/ (Returns to Inventory)			Balance in Inventory		
Date	**Units**	**Cost/Unit**	**Total $**	**Units**	**Cost/Unit**	**Total $**	**Units**	**Cost/Unit**	**Total $**
June 1	**1**						**1**		
3				**1**			**0**		
5	**1**						**1**		
7	**1**						**2**		
8				**1**			**1**		
21	**1**						**2**		
23				**1**			**1**		
28	**1**						**2**		
29				**1**			**1**		

Ending Inventory is 1 unit.

Figure 6.5: Inventory Record Card

In Figure 6.5, the inventory at the end of the accounting period is one unit. This is the number of units on hand according to the accounting records. A *physical* inventory count must still be done, generally at the end of the fiscal year, to verify the quantities actually on hand. As discussed in Chapter 5, any discrepancies identified by the physical inventory count are adjusted for as shrinkage.

As purchases and sales are made, costs are assigned to the goods using the chosen cost flow assumption. This information is used to calculate the cost of goods sold amount for each sales transaction at the time of sale. These costs will vary depending on the inventory cost flow assumption used. As we will see in the next sections, the cost of sales may also vary depending on *when* sales occur.

Comprehensive Example—Specific Identification

To apply specific identification, we need information about which units were sold on each date. Assume that specific units were sold as detailed below.

Date of Sale	Specific Units Sold
June 3	The unit sold on June 3 was purchased on June 1
8	The unit sold on June 8 was purchased on June 7
23	The unit sold on June 23 was purchased on June 5
29	The unit sold on June 29 was purchased on June 28

Using the information above to apply specific identification, the resulting inventory record card appears in Figure 6.6.

	Purchases/Shipping Costs/ (Purchase Returns/Discounts)			Cost of Goods Sold/ (Returns to Inventory)			Balance in Inventory		
Date	**Units**	**Cost/Unit**	**Total $**	**Units**	**Cost/Unit**	**Total $**	**Units**	**Cost/Unit**	**Total $**
June 1	**1**	**$1**	**$1**				**1**	**$1**	**$1**
3				**1**	**$1**	**$1**	**0**	**$0**	**$0**
5	**1**	**$2**	**$2**				**1**	**$2**	**$2**
7	**1**	**$3**	**$3**				**2**	**1@$2 1@$3**	**$5**
8				**1**	**$3**	**$3**	**1**	**$2**	**$2**
21	**1**	**$4**	**$4**				**2**	**1@$2 1@$4**	**$6**
23				**1**	**$2**	**$2**	**1**	**$4**	**$4**
28	**1**	**$5**	**$5**				**2**	**1@$4 1@$5**	**$9**
29				**1**	**$5**	**$5**	**1**	**$4**	**$4**

Figure 6.6: Inventory Record Card using Specific Identification

Notice in Figure 6.7 that the number of units sold plus the units in ending inventory equals the total units that were available for sale. This will always be true regardless of which inventory cost flow method is used.

Date	Purchases/Shipping Costs/ (Purchase Returns/Discounts)			Cost of Goods Sold/ (Returns to Inventory)			Balance in Inventory		
	Units	Cost/Unit	Total $	Units	Cost/Unit	Total $	Units	Cost/Unit	Total $
June 1	1	$1	$1				1	$1	$1
3				1	$1	$1	0	$0	$0
5	1	$2	$2				1	$2	$2
7	1	$3	$3				2	1@$2 1@$3	$5
8				1	$3	$3	1	$2	$2
21	1	$4	$4				2	1@$2 1@$4	$6
23				1	$2	$2	1	$4	$4
28	1	$5	$5				2	1@$4 1@$5	$9
29				1	$5	$5	1	$4	$4

Total number of units available for sale: **5 units** = Total number of units sold: **4 units** + Total number of units in ending inventory: **1 unit**

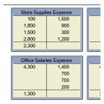
Figure 6.7: Total Units Sold plus Total Units in Ending Inventory equals Total Units Available for Sale

Date	Purchases/Shipping Costs/ (Purchase Returns/Discounts)			Cost of Goods Sold/ (Returns to Inventory)			Balance in Inventory		
	Units	Cost/Unit	Total $	Units	Cost/Unit	Total $	Units	Cost/Unit	Total $
June 1	1	$1	$1				1	$1	$1
3				1	$1	$1	0	$0	$0
5	1	$2	$2				1	$2	$2
7	1	$3	$3				2	1@$2 1@$3	$5
8				1	$3	$3	1	$2	$2
21	1	$4	$4				2	1@$2 1@$4	$6
23				1	$2	$2	1	$4	$4
28	1	$5	$5				2	1@$4 1@$5	$9
29				1	$5	$5	1	$4	$4

Total cost of goods available for sale: **$15** = Total cost of goods sold: **$11** + Total cost of ending inventory: **$4**

Figure 6.8: Total Cost of Goods Sold plus Total Cost of Units in Ending Inventory equals Total Cost of Goods Available for Sale (Specific Identification)

Figure 6.8 highlights the relationship in which total cost of goods sold plus total cost of ending inventory equals total cost of goods available for sale. This relationship will always be true for each of specific identification, FIFO, and weighted average.



An exploration is available on the Lyryx site. Log into your Lyryx course to run Specific Identification.

Comprehensive Example—FIFO (Perpetual)

Using the same information, we now apply the FIFO cost flow assumption as shown in Figure 6.9.

	Purchases/Shipping Costs/ (Purchase Returns/Discounts)			Cost of Goods Sold/ (Returns to Inventory)			Balance in Inventory		
Date	**Units**	**Cost/Unit**	**Total $**	**Units**	**Cost/Unit**	**Total $**	**Units**	**Cost/Unit**	**Total $**
June 1	**1**	**$1**	**$1**				**1**	**$1**	**$1**
3				**1**	**$1**	**$1**	**0**	**$0**	**$0**
5	**1**	**$2**	**$2**				**1**	**$2**	**$2**
7	**1**	**$3**	**$3**				**2**	**1@$2 1@$3**	**$5**
8				**1**	**$2**	**$2**	**1**	**$3**	**$3**
21	**1**	**$4**	**$4**				**2**	**1@$3 1@$4**	**$7**
23				**1**	**$3**	**$3**	**1**	**$4**	**$4**
28	**1**	**$5**	**$5**				**2**	**1@$4 1@$5**	**$9**
29				**1**	**$4**	**$4**	**1**	**$5**	**$5**

Figure 6.9: Inventory Record Card using FIFO (Perpetual)

When calculating the cost of the units sold in FIFO, the oldest unit in inventory will always be the first unit removed. For example, in Figure 6.9, on June 8, one unit is sold when the previous balance in inventory consisted of 2 units: 1 unit purchased on June 5 that cost $2 and 1 unit purchased on June 7 that cost $3. Because the unit costing $2 was in inventory first (before the June 7 unit costing $3), the cost assigned to the unit sold on June 8 is $2. Under FIFO, the first units into inventory are assumed to be the first units removed from inventory when calculating cost of goods sold. Therefore, under FIFO, ending inventory will always be the most recent units purchased. In Figure 6.9, there is one unit in ending inventory and it is assigned the $5 cost of the most recent purchase which was made on June 28.

The information in Figure 6.9 is repeated in Figure 6.10 to reinforce that goods available for sale equals the sum of goods sold and ending inventory.

Date	Purchases/Shipping Costs/ (Purchase Returns/Discounts) Units	Cost/Unit	Total $	Cost of Goods Sold/ (Returns to Inventory) Units	Cost/Unit	Total $	Balance in Inventory Units	Cost/Unit	Total $
June 1	1	$1	$1				1	$1	$1
3				1	$1	$1	0	$0	$0
5	1	$2	$2				1	$2	$2
7	1	$3	$3				2	1@$2 1@$3	$5
8				1	$2	$2	1	$3	$3
21	1	$4	$4				2	1@$3 1@$4	$7
23				1	$3	$3	1	$4	$4
28	1	$5	$5				2	1@$4 1@$5	$9
29				1	$4	$4	1	$5	$5

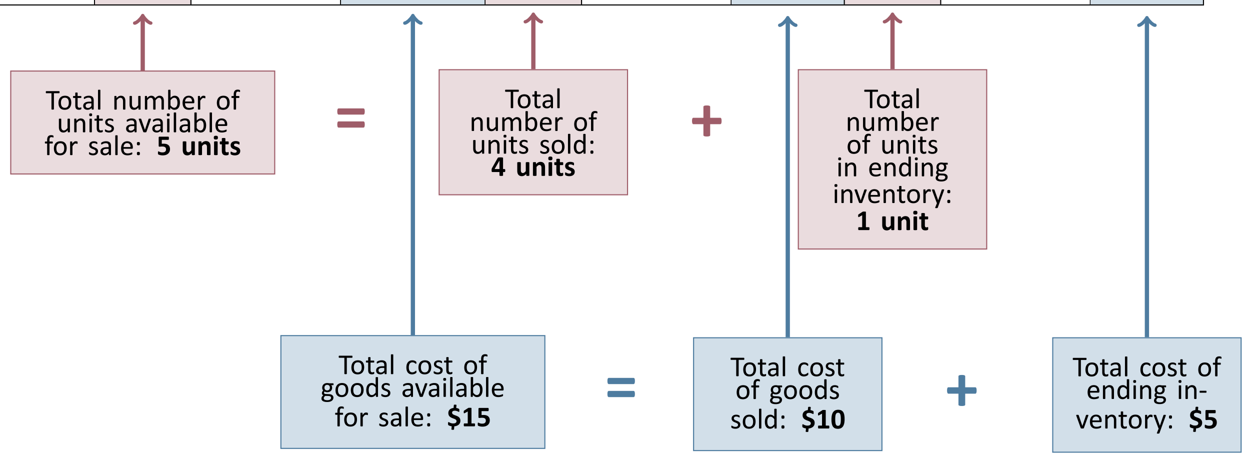
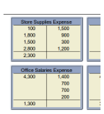


Figure 6.10: Total Goods Sold plus Ending Inventory equals Total Goods Available for Sale (FIFO Perpetual)



An exploration is available on the Lyryx site. Log into your Lyryx course to run FIFO Perpetual.

Comprehensive Example—Weighted Average (Perpetual)

The inventory record card transactions using weighted average costing are detailed in Figure 6.11. ***For consistency, all weighted average calculations will be rounded to two decimal places.*** When a perpetual inventory system is used, the weighted average is calculated each time a purchase is made. For example, after the June 7 purchase, the balance in inventory is 2 units with a total cost of $5.00 (1 unit at $2.00 + 1 unit at $3.00) resulting in an average cost per unit of $2.50 ($5.00 ÷ 2 units = $2.50). When a sale occurs, the cost of the sale is based on the most recent average cost per unit. For example, the cost of the sale on June 3 uses the $1.00 average cost per unit from June 1 while the cost of the sale on June 8 uses the $2.50 average cost per unit from June 7.

Date	Purchases/Shipping Costs/ (Purchase Returns/Discounts)			Cost of Goods Sold/ (Returns to Inventory)			Balance in Inventory		
	Units	Cost/Unit	Total $	Units	Cost/Unit	Total $	Units	AvgCost/Unit	Total $
June 1	1	$1	$1				1	$1.00	$1.00
3				1	$1.00	$1.00	0	$0.00	$0.00
5	1	$2	$2				1	$2.00	$2.00
7	1	$3	$3				2	$2.50	$5.00
8				1	$2.50	$2.50	1	$2.50	$2.50
21	1	$4	$4				2	$3.25	$6.50
23				1	$3.25	$3.25	1	$3.25	$3.25
28	1	$5	$5				2	$4.13*	$8.25
29				1	$4.13	$4.13	1	$4.12	$4.12

Calculating AvgCost/Unit				
Total $	÷	Total Units	=	AvgCost/ Unit
$1.00	÷	1	=	$1.00/unit
$0.00	÷	0	=	$0.00/unit
$2.00	÷	1	=	$2.00/unit
$5.00	÷	2	=	$2.50/unit
$2.50	÷	1	=	$2.50/unit
$6.50	÷	2	=	$3.25/unit
$3.25	÷	1	=	$3.25/unit
$8.25	÷	2	=	$4.13*/unit
$4.12	÷	1	=	$4.12/unit

**** Rounded***

Figure 6.11: Inventory Record Card using Weighted Average Costing (Perpetual)

A common error made by students when applying weighted average occurs when the unit costs are rounded. For example, on June 28, the average cost per unit is rounded to \$4.13 (\$8.25 ÷ 2 units = \$4.125/unit rounded to \$4.13). On June 29, the cost of the unit sold is \$4.13, the June 28 average cost per unit. Care must be taken to recognize that the total remaining balance in inventory after the June 29 sale is \$4.12, calculated as the June 28 ending inventory total dollar amount of \$8.25 less the June 29 total cost of goods sold of \$4.13. Students will often incorrectly use the average cost per unit, in this case \$4.13, to calculate the ending inventory balance. Remember that the cost of goods sold plus the balance in inventory must equal the goods available for sale as highlighted in Figure 6.12.

Date	Purchases/Shipping Costs/ (Purchase Returns/Discounts)			Cost of Goods Sold/ (Returns to Inventory)			Balance in Inventory		
	Units	Cost/Unit	Total $	Units	Cost/Unit	Total $	Units	AvgCost/Unit	Total $
June 1	1	$1	$1				1	$1.00	$1.00
3				1	$1.00	$1.00	0	$0.00	$0.00
5	1	$2	$2				1	$2.00	$2.00
7	1	$3	$3				2	$2.50	$5.00
8				1	$2.50	$2.50	1	$2.50	$2.50
21	1	$4	$4				2	$3.25	$6.50
23				1	$3.25	$3.25	1	$3.25	$3.25
28	1	$5	$5				2	$4.13*	$8.25
29				1	$4.13	$4.13	1	$4.12	$4.12

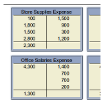
Calculating AvgCost/Unit				
Total $	÷	Total Units	=	AvgCost/ Unit
$1.00	÷	1	=	$1.00/unit
$0.00	÷	0	=	$0.00/unit
$2.00	÷	1	=	$2.00/unit
$5.00	÷	2	=	$2.50/unit
$2.50	÷	1	=	$2.50/unit
$6.50	÷	2	=	$3.25/unit
$3.25	÷	1	=	$3.25/unit
$8.25	÷	2	=	$4.13*/unit
$4.12	÷	1	=	$4.12/unit

***** *Rounded***

Total number of units available for sale: **5 units** = Total number of units sold: **4 units** + Total number of units in ending inventory: **1 unit**

Total cost of goods available for sale: **$15** = Total cost of goods sold: **$10.88** + Total cost of ending inventory: **$4.12**

Figure 6.12: Total Goods Sold plus Ending Inventory equals Total Goods Available for Sale (Weighted Average Perpetual)



An exploration is available on the Lyryx site. Log into your Lyryx course to run Weighted Average Perpetual.

Figure 6.13 compares the results of the three cost flow methods. Goods available for sale, units sold, and units in ending inventory are the same regardless of which method is used. Because each cost flow method allocates the cost of goods available for sale in a particular way, the cost of goods sold and ending inventory values are different for each method.

Cost Flow Assumption	Total Cost of Goods Available for Sale	Total Units Available for Sale	Total Cost of Goods Sold	Total Units Sold	Total Cost of Ending Inventory	Total Units in Ending Inventory
Specific Identification	$15.00	5	11.00	4	4.00	1
FIFO	15.00	5	10.00	4	5.00	1
Weighted Average	15.00	5	10.88	4	4.12	1

Figure 6.13: Comparing Specific Identification, FIFO, and Weighted Average

Journal Entries

In Chapter 5 the journal entries to record the sale of merchandise were introduced. Chapter 5 showed how the dollar value included in these journal entries is determined. We now know that the information in the inventory record is used to prepare the journal entries in the general journal. For example, the credit sale on June 23 using weighted average costing would be recorded as follows (refer to Figure 6.13).

General Journal				
Date	Account/Explanation	PR	Debit	Credit
	Accounts Receivable		10.00	
	Sales			10.00
	To record credit sale at a selling price of $10 per unit.			
	Cost of Goods Sold		3.25	
	Merchandise Inventory			3.25
	To record the cost of the sale.			

Perpetual inventory incorporates an internal control feature that is lost under the periodic inventory method. Losses resulting from theft and error can easily be determined when the actual quantity of goods on hand is counted and compared with the quantities shown in the inventory records as being on hand. It may seem that this advantage is offset by the time and expense required to continuously update inventory records, particularly where there are thousands of different items of various sizes on hand. However, computerization makes this record keeping easier and less expensive because the inventory accounting system can be tied in to the sales system so that inventory is updated whenever a sale is recorded.

Inventory Record Card

In a company such as a large drugstore or hardware chain, inventory consists of thousands of different products. For businesses that carry large volumes of many inventory types, the general ledger merchandise inventory account contains only summarized transactions of the purchases and sales. The detailed transactions for each type of inventory would be recorded in the underlying inventory record cards. The inventory record card is an example of a *subsidiary ledger*, more commonly called a *subledger*. The **merchandise inventory subledger** provides a detailed listing of type, amount, and total cost of all types of inventory held at a particular point in time. The sum of the balances on each inventory record card in the subledger would always equal the ending amount recorded in the Merchandise Inventory general ledger account. So a subledger contains the detail for each product in inventory while the general ledger account shows only a summary. In this way, the general ledger information is streamlined while allowing for detail to be available through the subledger. There are other types of subledgers: the accounts receivable subledger and the accounts payable subledger. These will be introduced in a subsequent chapter.

6.2 Financial Statement Impact of Different Inventory Cost Flows

Watch video

LO2 – Explain the impact of inventory cost flows and errors.

When purchase costs are increasing, as in a period of inflation (or decreasing, as in a period of deflation), each cost flow assumption results in a different value for cost of goods sold and the resulting ending inventory, gross profit, and net income.

Using information from the preceding comprehensive example, the effects of each cost flow assumption on net income and ending inventory are shown in Figure 6.14.

	Spec. Ident.	*FIFO*	*Wtd. Avg.*
Sales	$ 40.00	$ 40.00	$ 40.00
Cost of goods sold	11.00	10.00	10.88
Gross profit and net income	$ 29.00	$ 30.00	$ 29.12
Ending inventory (on the balance sheet)	$ 4.00	$ 5.00	$ 4.12

Figure 6.14: Effects of Different Cost Flow Assumptions

FIFO *maximizes* net income and ending inventory amounts when costs are rising. FIFO *minimizes* net income and ending inventory amounts when purchase costs are decreasing.

Because different cost flow assumptions can affect the financial statements, GAAP requires that the assumption adopted by a company be disclosed in its financial statements (full disclosure principle). Additionally, GAAP requires that once a method is adopted, it be used every accounting period thereafter (consistency principle) unless there is a justifiable reason to change. A business that has a variety of inventory items may choose a different cost flow assumption for each item. For example, Walmart might use weighted average to account for its sporting goods items and specific identification for each of its various major appliances.

Effect of Inventory Errors on the Financial Statements

There are two components necessary to determine the inventory value disclosed on a corporation's balance sheet. The first component involves calculating the quantity of inventory on hand at the end of an accounting period by performing a physical inventory count. The second requirement involves assigning the most appropriate cost to this quantity of inventory.

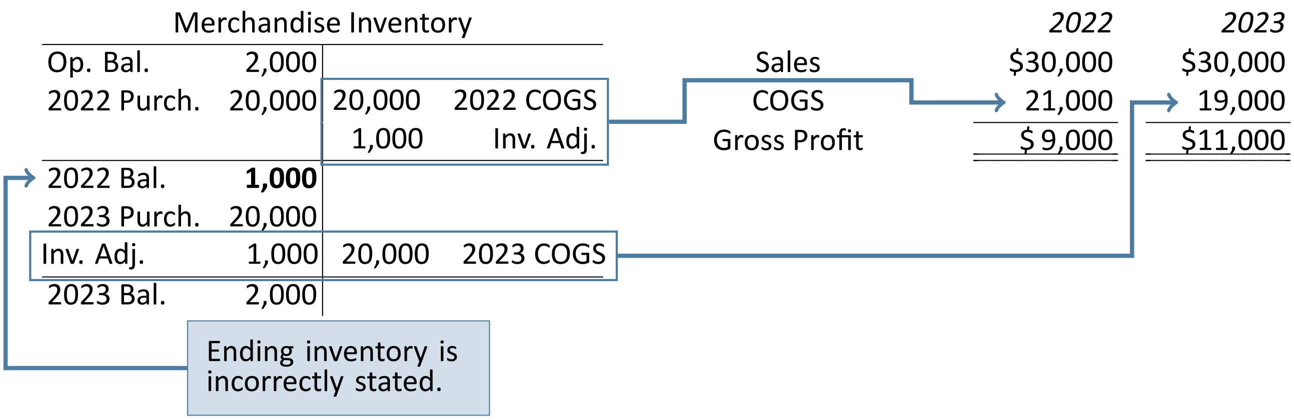
An error in calculating either the quantity or the cost of ending inventory will misstate reported income for two time periods. Assume merchandise inventory at December 31, 2021, 2022, and 2023 was reported as $2,000 and that merchandise purchases during each of 2022 and 2023 were $20,000. There were no other expenditures. Assume further that sales each year amounted to $30,000 with cost of goods sold of $20,000 resulting in gross profit of $10,000. These transactions are summarized below.

Merchandise Inventory

Beg. Bal.	2,000		
2022 Purch.	20,000	20,000	2022 COGS
2022 Bal.	2,000		
2023 Purch.	20,000	20,000	2023 COGS
2023 Bal.	2,000		

	2022	*2023*
Sales	$30,000	$30,000
COGS	20,000	20,000
Gross profit	$10,000	$10,000

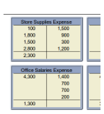
Assume now that ending inventory was misstated at December 31, 2022. Instead of the $2,000 that was reported, the correct value should have been $1,000. The effect of this error was to understate cost of goods sold on the income statement — cost of goods sold should have been $21,000 in 2022 as shown below instead of $20,000 as originally reported above. Because of the 2022 error, the 2023 beginning inventory was incorrectly reported above as $2,000 and should have been $1,000 as shown below. This caused the 2023 gross profit to be understated by $1,000 — cost of goods sold in 2023 should have been $19,000 as illustrated below but was originally reported above as $20,000.



As can be seen, income is misstated in both 2022 and 2023 because cost of goods sold in both years is affected by the adjustment to ending inventory needed at the end of 2022 and 2023. The opposite effects occur when inventory is understated at the end of an accounting period.

An error in ending inventory is offset in the next year because one year's ending inventory becomes the next year's opening inventory. This process can be illustrated by comparing gross profits for 2022 and 2023 in the above example. The sum of both years' gross profits is the same.

	Overstated Inventory	*Correct Inventory*
Gross profit for 2022	$10,000	$ 9,000
Gross profit for 2023	10,000	11,000
Total	$20,000	$20,000



An exploration is available on the Lyryx site. Log into your Lyryx course to run Inventory Errors.

6.3 Lower of Cost and Net Realizable Value (LCNRV) Watch video

LO3 – Explain and calculate lower of cost and net realizable value inventory adjustments.

In addition to the adjusting entry to record the shrinkage of merchandise inventory (discussed in Chapter 5), there is an additional adjusting entry to be considered at the end of the accounting period when calculating cost of goods sold and ending inventory values for the financial statements. Generally accepted accounting principles require that inventory be valued at the lesser amount of its *laid-down cost* and the amount for which it can likely be sold — its net realizable value (NRV). This concept is known as the lower of cost and net realizable value, or LCNRV. Note that the laid-down cost includes the invoice price of the goods (less any purchase discounts) plus transportation in, insurance while in transit, and any other expenditure made by the purchaser to get the merchandise to the place of business and ready for sale.

As an example, a change in consumer demand may mean that inventories become obsolete and need to be reduced in value below the purchase cost. This often occurs in the electronics industry as new and more popular products are introduced.

The lower of cost and net realizable value can be applied to individual inventory items or groups of similar items, as shown in Figure 6.15 below.

			LCNRV	
	Total Cost	*Total NRV*	*Unit Basis*	*Group Basis*
White paper	$1,250	$1,200	$1,200	
Coloured paper	1,400	1,500	1,400	
Total	$2,650	$2,700	$2,600	$2,650
Ending inventory (LCNRV)			$2,600	$2,650

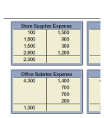
Figure 6.15: LCNRV Calculations

Depending on the calculation used, the valuation of ending inventory will be either $2,600 or $2,650. Under the unit basis, the lower of cost and net realizable value is selected for each item: $1,200 for white paper and $1,400 for coloured paper, for a total LCNRV of $2,600. Because the LCNRV is lower than cost, an adjusting entry must be recorded as follows.

General Journal				
Date	Account/Explanation	PR	Debit	Credit
	Cost of Goods Sold		50	
	Merchandise Inventory			50
	To adjust inventory to reflect its LCNRV.			

The purpose of the adjusting entry is to ensure that inventory is not overstated on the balance sheet and that income is not overstated on the income statement.

If white paper and coloured paper are considered a similar group, the calculations in Figure 6.15 above show they have a combined cost of $2,650 and a combined net realizable value of $2,700. LCNRV would therefore be $2,650. In this case, the cost is equal to the LCNRV so no adjusting entry would be required if applying LCNRV on a group basis.



An exploration is available on the Lyryx site. Log into your Lyryx course to run Lower of Cost or Net Realizable Value.

6.4 Estimating the Balance in Merchandise Inventory Watch video

LO4 – Estimate merchandise inventory using the gross profit method and the retail inventory method.

A physical inventory count determines the quantity of items on hand. When costs are assigned to these items and these individual costs are added, a total inventory amount is calculated. Is this dollar amount correct? Should it be larger? How can one tell if the physical count is accurate? Being able to estimate this amount provides a check on the reasonableness of the physical count and valuation.

The two methods used to estimate the inventory dollar amount are the *gross profit method* and the *retail inventory method*. Both methods are based on a calculation of the gross profit percentage in the income statement. Assume the following information:

Sales		$15,000	100%
Cost of Goods Sold:			
Opening Inventory	$ 4,000		
Purchases	12,000		
Cost of Goods Available for Sale	16,000		
Less: Ending Inventory	(6,000)		
Cost of Goods Sold		10,000	67%
Gross Profit		$ 5,000	33%

The gross profit percentage, rounded to the nearest whole percent, is 33% ($5,000/15,000). This means that for each dollar of sales, an average of $.33 is left to cover other expenses after deducting cost of goods sold.

Estimating ending inventory requires an understanding of the relationship of ending inventory with cost of goods sold. Review the following cost of goods sold calculations.

Cost of Goods Sold:	
Opening Inventory	$ 4,000
Purchases	12,000
Cost of Goods Available for Sale	$16,000
Less: Estimated Ending Inventory	?
Cost of Goods Sold	$10,000

How much of the $16,000 of goods that the company had available to sell is still not sold at December 31 (in other words, what is ending inventory)? You can calculate this as:

Available for sale	$16,000
Less inventory that was sold	10,000
Equals what must still be on hand	$ 6,000

Cost of Goods Sold:	
Opening Inventory	$ 4,000
Purchases	12,000
Cost of Goods Available for Sale	$16,000
Less: Estimated Ending Inventory	6,000
Cost of Goods Sold	?

How much of the $16,000 of goods that were available to be sold have been sold? You use the dollar amount of ending inventory to calculate this, as:

Available for sale	$16,000
Less inventory on hand	6,000
Equals what must have been sold	$10,000

The sum of cost of goods sold and ending inventory is always equal to cost of goods available for sale. Knowing any two of these amounts enables the third amount to be calculated. Understanding this relationship is the key to estimating inventory using either the gross profit or retail inventory methods, discussed below.

Gross Profit Method

The **gross profit method** of estimating ending inventory assumes that the percentage of gross profit on sales remains approximately the same from period to period. Therefore, if the gross profit percentage is known, the dollar amount of ending inventory can be estimated. First, gross profit is estimated by applying the gross profit percentage to sales. From this, cost of goods sold can be derived, namely the difference between sales and gross profit. Cost of goods available for sale can be determined from the accounting records (opening inventory + purchases). The difference between cost of goods available for sale and cost of goods sold is the estimated value of ending inventory.

To demonstrate, assume that Pete's Products Ltd. has an average gross profit percentage of 40%. If opening inventory at January 1, 2023 was $200, sales for the six months ended June 30, 2023 were $2,000, and inventory purchased during the six months ended June 30, 2023 was $1,100, the cost of goods sold and ending inventory can be estimated as follows.

		Six Months Ended June 30, 2023
Sales (given)		$2,000
Cost of Goods Sold:		
Opening Inventory (given)	$ 200	
Purchases (given)	1,100	
Cost of Goods Available for Sale	1,300	
Less: Estimated Ending Inventory	(100)	
Cost of Goods Sold		1,200
Gross Profit		$ 800

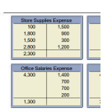
Step 3: Ending inventory can be estimated ($1,300-1,200=100).

Step 2: Cost of goods sold can be derived ($2,000-800=$1,200).

Step 1: Gross profit is estimated at $800 ($2,000 x 40%).

The estimated ending inventory at June 30 must be $100—the difference between the cost of goods available for sale and cost of goods sold.

The gross profit method of estimating inventory is useful in situations when goods have been stolen or destroyed by fire or when it is not cost-effective to make a physical inventory count.



An exploration is available on the Lyryx site. Log into your Lyryx course to run Gross Profit Method.

Retail Inventory Method

The **retail inventory method** is another way to estimate cost of goods sold and ending inventory. It can be used when items are consistently valued at a known percentage of cost, known as a *mark-up*. A **mark-up** is the ratio of retail value (or selling price) to cost. For example, if an inventory item had a retail value of $12 and a cost of $10, then it was marked up to 120% (12/10 x 100). Mark-ups are commonly used in clothing stores.

To apply the retail inventory method using the mark-up percentage, the cost of goods available for sale is first converted to its retail value (the selling price). To do this, the mark-up (ratio of retail to cost) must be known. Assume the same information as above for Pete's Products Ltd., except that now every item in the store is marked up to 160% of its purchase price. That is, if an item is purchased for $100, it is sold for $160. Based on this, opening inventory, purchases, and cost of goods available can be restated at retail. Cost of goods sold can then be valued at retail, meaning that it will equal sales for the period. From this, ending inventory at retail can be determined and then converted back to cost using the mark-up. These steps are illustrated below.

Step 1: Opening inventory and purchases are restated at retail by multiplying the cost x 160%.
$200 x 160% = $320
$1,100 x 160% = $1,760

Step 4: Ending inventory is restated at cost by dividing by 160%. Ending inventory of $80 at retail is divided by 160% to get ending inventory at cost of $50.

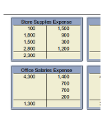
	Six Months Ended June 30, 2023	
	At Retail	*At Cost*
Cost of Goods Sold:		
Opening Inventory (from records)	$ 320	$ 200
Purchases (from records)	1,760	1,100
Cost of Goods Available for Sale	2,080	1,300
Less: Estimated Ending Inventory	(80)	(50)
Cost of Goods Sold	2,000	1,250

Step 3: Ending inventory can be derived by taking cost of goods available for sale at retail and subtracting sales at retail ($2,080-2,000=$80).

Step 2a: Cost of goods sold at retail is Sales of $2,000 which was given. Restating sales to cost requires dividing $2,000 by 160% ($2,000÷160%=$1,250).

Step 2b: Instead of continuing to Steps 3 and 4, ending inventory at cost could be calculated at this point by taking cost of goods available for sale of $1,300 and subtracting cost of goods sold of $1,250. Ending inventory at retail could then be calculated by multiplying ending inventory at cost of $50 x 160%.

The retail inventory method of estimating ending inventory is easy to calculate and produces a relatively accurate cost of ending inventory, provided that no change in the average mark-up has occurred during the period.



An exploration is available on the Lyryx site. Log into your Lyryx course to run Retail Inventory Method.

6.5 Appendix A: Ratio Analysis—Merchandise Inventory Turnover Watch video

LO5 – Explain and calculate merchandise inventory turnover.

To help determine how quickly a company is able to sell its inventory, the **merchandise inventory turnover** can be calculated as:

Cost of Goods Sold ÷ Average Merchandise Inventory

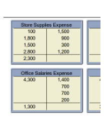
The average merchandise inventory is the beginning inventory plus the ending inventory divided by two. For example, assume Company A had cost of goods sold of $3,000; beginning merchandise inventory of $500; and ending inventory of $700. The merchandise inventory turnover would be 5, calculated as:

Cost of Goods Sold	÷	Average Merchandise Inventory
$3,000	÷	(($500+$700)/2)

The ‘5’ means that Company A sold its inventory 5 times during the year. In contrast, assume Company B had cost of goods sold of $3,000; beginning merchandise inventory of $1,000; and ending inventory of $1,400. The merchandise inventory turnover would be 2.50 calculated as:

Cost of Goods Sold	÷	Average Merchandise Inventory
$3,000	÷	(($1,000+$1,400)/2)

The ‘2.5’ means that Company B sold its inventory 2.5 times during the year which is much slower than Company A. The faster a business sells its inventory, the better, because high turnover positively affects *liquidity*. **Liquidity** is the ability to convert assets, such as merchandise inventory, into cash. Therefore, Company A’s merchandise turnover is more favourable than Company B’s.



An exploration is available on the Lyryx site. Log into your Lyryx course to run Using the Information - Merchandise Turnover.

6.6 Appendix B: Inventory Cost Flow Assumptions Under the Periodic System

Watch video

LO6 – Calculate cost of goods sold and merchandise inventory using specific identification, first-in first-out (FIFO), and weighted average cost flow assumptions periodic.

Recall from Chapter 5 that the periodic inventory system does not maintain detailed records to calculate cost of goods sold each time a sale is made. Rather, when a sale is made, the following entry is made:

General Journal				
Date	Account/Explanation	PR	Debit	Credit
	Accounts Receivable		XX	
	Sales			XX
	To record a credit sale.			

No entry is made to record cost of goods sold and to reduce Merchandise Inventory, as is done under the perpetual inventory system. Instead, all purchases are expenses and recorded in the general ledger account "Purchases." A physical inventory count is conducted at year-end. An amount for ending inventory is calculated based on this count and the valuation of the items in inventory, and cost of goods sold is calculated in the income statement based on this total amount. The income statement format is:

Sales		$10,000
Cost of Goods Sold:		
Opening Inventory	$ 1,000	
Purchases	5,000	
Goods Available for Sale	6,000	
Less: Ending Inventory	(2,000)	
Cost of Goods Sold		4,000
Gross Profit		$6,000

Even under the periodic inventory system, however, inventory cost flow assumptions need to be made (specific identification, FIFO, weighted average) when purchase prices change over time, as in a period of inflation. Further, different inventory cost flow assumptions produce different cost of goods sold and ending inventory values, just as they did under the perpetual inventory system. These effects have been explained earlier in this chapter. *Under the periodic inventory system, cost of goods sold and ending inventory values are determined as if the sales for the period all take place at the end of the period.* These calculations were demonstrated in our earliest example in this chapter.

Our original example using units assumed there was no opening inventory at June 1, 2023 and that purchases were made as follows.

	Purchase Transaction	
Date	*Number of units*	*Price per unit*
June 1	1	$1
5	1	2
7	1	3
21	1	4
28	1	5
	5	$15

When recorded in the general ledger T-account "Purchases" (an income statement account), these transactions would be recorded as follows.

Purchases		No. 570
Jun. 1	$1	
5	2	
7	3	
21	4	
28	5	

Sales of four units are all assumed to take place on June 30. Ending inventory would then be counted at the end of the day on June 30. One unit should be on hand. It would be valued as follows under the various inventory cost flow assumptions, as discussed in the first part of the chapter:

Specific identification	$4
FIFO	5
Weighted average	3

These values would be used to calculate cost of goods sold and gross profit on the income statement, as shown in Figure 6.16 below:

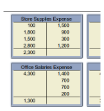
	Spec. Ident.	*FIFO*	*Wtd. Avg.*
Sales	$40	$40	$40
Cost of Goods Sold:			
Opening Inventory	-0-	-0-	-0-
Purchases	15	15	15
Goods Available for Sale	15	15	15
Less: Ending Inventory	(4)	(5)	(3)
Cost of Goods Sold	11	10	12
Gross Profit and Net Income	$29	$30	$28
Ending Inventory (Balance Sheet)	$ 4	$ 5	$ 3

Figure 6.16: Effects of Different Cost Flow Assumptions: Periodic Inventory System

Note that these results are the same as those calculated using the perpetual inventory method and assuming all sales take place on June 30 using specific identification (Figure 6.2), FIFO (Figure 6.3), and weighted average (Figure 6.4) cost flow assumptions, respectively.

As discussed in the appendix to Chapter 5, the ending inventory amount will be recorded in the accounting records when the income statement accounts are closed to the Income Summary at the end of the year. The amount of the closing entry for ending inventory is obtained from the income statement. Using the example above and assuming no other revenue or expense items, the closing entry to adjust ending inventory to actual under each inventory cost flow assumption would be as follows.

	Specific Identification	*FIFO*	*Weighted Average*
Merchandise Inventory (ending)	4	5	3
Sales	40	40	40
Income Summary	44	45	43
To close all income statement accounts with credit balances to the Income Summary and record ending inventory balance.			



An exploration is available on the Lyryx site. Log into your Lyryx course to run Assigning Costs to Inventory - Periodic System.

Summary of Chapter 6 Learning Objectives

LO1 – Calculate cost of goods sold and merchandise inventory using specific identification, first-in first-out (FIFO), and weighted average cost flow assumptions—perpetual.

Cost of goods available for sale must be allocated between cost of goods sold and ending inventory using a cost flow assumption. Specific identification allocates cost to units sold by using the actual cost of the specific unit sold. FIFO (first-in first-out) allocates cost to units sold by assuming the units sold were the oldest units in inventory. Weighted average allocates cost to units sold by calculating a weighted average cost per unit at the time of sale.

LO2 – Explain the impact on financial statements of inventory cost flows and errors.

As purchase prices change, particular inventory methods will assign different cost of goods sold and resulting ending inventory to the financial statements. Specific identification achieves the exact matching of revenues and costs while weighted average accomplishes an averaging of price changes, or smoothing. The use of FIFO results in the current cost of inventory appearing on the balance sheet in ending inventory. The cost flow method in use must be disclosed in the notes to the financial statements and be applied consistently from period to period. An error in ending inventory in one period impacts the balance sheet (inventory and equity) and the income statement (COGS and net income) for that accounting period and the next. However, inventory errors in one period reverse themselves in the next.

LO3 – Explain and calculate lower of cost and net realizable value inventory adjustments.

Inventory must be evaluated, at minimum, each accounting period to determine whether the net realizable value (NRV) is lower than cost, known as the lower of cost and net realizable value (LCNRV) of inventory. An adjustment is made if the NRV is lower than cost. LCNRV can be applied to groups of similar items or by item.

LO4 – Estimate merchandise inventory using the gross profit method and the retail inventory method.

Estimating inventory using the gross profit method requires that estimated cost of goods sold be calculated by, first, multiplying net sales by the gross profit ratio. Estimated ending inventory at cost is then arrived at by taking goods available for sale at cost less the estimated cost of goods sold. To apply the retail inventory method, three calculations are required:

- retail value of goods available for sale less retail value of net sales equals retail value of ending inventory,
- goods available for sale at cost divided by retail value of goods available for sale equals cost to retail ratio, and
- retail value of ending inventory multiplied by the cost to retail ratio equals estimated cost of ending inventory.

LO5 – Explain and calculate merchandise inventory turnover.

The merchandise turnover is a liquidity ratio that measures how quickly inventory is sold. It is calculated as: COGS/Average Merchandise Inventory. Average merchandise inventory is the beginning inventory balance plus the ending inventory balance divided by two.

LO6 – Calculate cost of goods sold and merchandise inventory using specific identification, first-in first-out (FIFO), and weighted average cost flow assumptions—periodic.

Periodic systems assign cost of goods available for sale to cost of goods sold and ending inventory at the end of the accounting period. Specific identification and FIFO give identical results in each of periodic and perpetual. The weighted average cost, periodic, will differ from its perpetual counterpart because in periodic, the average cost per unit is calculated at the end of the accounting period based on total goods that were available for sale.

Chapter 7

Cash and Receivables

This chapter focuses on the current assets of cash and receivables. Internal control over cash involves processes and procedures that include the use of a petty cash fund and the preparation of a bank reconciliation. Receivables can be determined to be uncollectible. To match the cost of uncollectible accounts and the related revenue, uncollectible accounts, more commonly referred to as bad debts, must be estimated. Bad debts are accounted for using the allowance approach, applied using either the income statement method or balance sheet method. When uncollectible accounts are specifically identified, they are written off. Write-offs can be subsequently recovered. The journalizing of short-term notes receivable and related interest revenue is also discussed in this chapter. To help in the analysis of cash and receivables, two ratios are introduced: the acid-test and accounts receivable turnover.

Chapter 7 Learning Objectives Watch video

LO1 – Define internal control and explain how it is applied to cash.

LO2 – Explain and journalize petty cash transactions.

LO3 – Explain the purpose of and prepare a bank reconciliation, and record related adjustments.

LO4 – Explain, calculate, and record estimated uncollectible accounts receivable and subsequent write-offs and recoveries.

LO5 – Explain and record a short-term notes receivable as well as calculate related interest.

LO6 – Explain and calculate the acid-test ratio.

LO7 – Explain and calculate the accounts receivable turnover.

Concept Self-Check

Use the following as a self-check while working through Chapter 7.

1. What constitutes a good system of control over cash?

2. What is a petty cash system and how is it used to control cash?
3. How is petty cash reported on the balance sheet?
4. How does the preparation of a bank reconciliation facilitate control over cash?
5. What are the steps in preparing a bank reconciliation?
6. How does the estimation of uncollectible accounts receivable address the GAAP of matching?
7. How are uncollectible accounts disclosed on financial statements?
8. What are the different methods used for estimating uncollectible accounts receivable?
9. How is aging of accounts receivable used in estimating uncollectible accounts?
10. How are notes receivable recorded?
11. What is the acid-test ratio and how is it calculated?
12. How is the accounts receivable turnover calculated and what does it mean?

NOTE: The purpose of these questions is to prepare you for the concepts introduced in the chapter. Your goal should be to answer each of these questions as you read through the chapter. If, when you complete the chapter, you are unable to answer one or more the Concept Self-Check questions, go back through the content to find the answer(s). Solutions are not provided to these questions.

7.1 Internal Control Watch video

LO1 – Define internal control and explain how it is applied to cash.

Assets are the lifeblood of a company. As such, they must be protected. This duty falls to managers of a company. The policies and procedures implemented by management to protect assets are collectively referred to as **internal controls**. An effective internal control program not only protects assets, but also aids in accurate recordkeeping, produces financial statement information in a timely manner, ensures compliance with laws and regulations, and promotes efficient operations. Effective internal control procedures ensure that adequate records are maintained, transactions are authorized, duties among employees are divided between recordkeeping functions and control of assets, and employees' work is checked by others. The use of electronic recordkeeping systems does not decrease the need for good internal controls.

The effectiveness of internal controls is limited by human error and fraud. Human error can occur because of negligence or mistakes. Fraud is the intentional decision to circumvent internal control systems for personal gain. Sometimes, employees cooperate in order to avoid internal controls. This *collusion* is often difficult to detect, but fortunately, it is not a common occurrence when adequate controls are in place.

Internal controls take many forms. Some are broadly based, like mandatory employee drug testing, video surveillance, and scrutiny of company email systems. Others are specific to a particular type of asset or process. For instance, internal controls need to be applied to a company's accounting system to ensure that transactions are processed efficiently and correctly to produce reliable records in a timely manner. Procedures should be documented to promote good recordkeeping, and employees need to be trained in the application of internal control procedures.

Financial statements prepared according to generally accepted accounting principles are useful not only to external users in evaluating the financial performance and financial position of the company, but also for internal decision making. There are various internal control mechanisms that aid in the production of timely and useful financial information. For instance, using a chart of accounts is necessary to ensure transactions are recorded in the appropriate account. As an example, expenses are classified and recorded in applicable expense accounts, then summarized and evaluated against those of a prior year.

The design of accounting records and documents is another important means to provide financial information. Financial data is entered and summarized in records and transmitted by documents. A good system of internal control requires that these records and documents be prepared at the time a transaction takes place or as soon as possible afterward, since they become less credible and the possibility of error increases with the passage of time. The documents should also be consecutively pre-numbered, to indicate whether there may be missing documents.

Internal control also promotes the protection of assets. Cash is particularly vulnerable to misuse. A good system of internal control for cash should provide adequate procedures for protecting cash receipts and cash payments (commonly referred to as cash disbursements). Procedures to achieve control over cash vary from company to company and depend upon such variables as company size, number of employees, and cash sources. However, effective cash control generally requires the following:

- Separation of duties: People responsible for handling cash should not be responsible for maintaining cash records. By separating the custodial and record-keeping duties, theft of cash is less likely.
- Same-day deposits: All cash receipts should be deposited daily in the company's bank account. This prevents theft and personal use of the money before deposit.
- Payments made using non-cash means: Cheques or electronic funds transfer (EFT) provide a separate external record to verify cash disbursements. For example, many businesses pay

their employees using electronic funds transfer because it is more secure and efficient than using cash or even cheques.

Two forms of internal control over cash will be discussed in this chapter: the use of a petty cash account and the preparation of bank reconciliations.

7.2 Petty Cash Watch video

LO2 – Explain and journalize petty cash transactions.

The payment of small amounts by cheque may be inconvenient and costly. For example, using cash to pay for postage on an incoming package might be less than the total processing cost of a cheque. A small amount of cash kept on hand to pay for small, infrequent expenses is referred to as a **petty cash fund**.

Establishing and Reimbursing the Petty Cash Fund

To set up the petty cash fund, a cheque is prepared for the amount of the fund. The custodian of the fund cashes the cheque and places the coins and currency in a locked box. Responsibility for the petty cash fund should be delegated to only one person, who should be held accountable for its contents. Cash payments are made by this petty cash custodian out of the fund as required when supported by receipts. When the amount of cash has been reduced to a pre-determined level, the receipts are compiled and submitted for entry into the accounting system. A cheque is then issued to reimburse the petty cash fund. At any given time, the petty cash amount should consist of cash and supporting receipts, all totalling the petty cash fund amount. To demonstrate the management of a petty cash fund, assume that a $200 cheque is issued for the purpose of establishing a petty cash fund.

The journal entry is:

General Journal				
Date	Account/Explanation	PR	Debit	Credit
	Petty Cash		200	
	Cash			200
	To establish the $200 petty cash fund.			

Petty Cash is a current asset account. When reporting Cash on the financial statements, the balances in Petty Cash and Cash are added together and reported as one amount.

Assume the petty cash custodian has receipts totalling $190 and $10 in coin and currency remaining in the petty cash box. The receipts consist of the following: delivery charges $100, $35 for postage, and office supplies of $55. The petty cash custodian submits the receipts to the accountant who records the following entry and issues a cheque for $190.

General Journal				
Date	Account/Explanation	PR	Debit	Credit
	Delivery Expense		100	
	Postage Expense		35	
	Office Supplies Expense[1]		55	
	Cash			190
	To reimburse the petty cash fund.			

The petty cash receipts should be cancelled at the time of reimbursement in order to prevent their reuse for duplicate reimbursements. The petty cash custodian cashes the $190 cheque. The $190 plus the $10 of coin and currency in the locked box immediately prior to reimbursement equals the $200 total required in the petty cash fund.

Sometimes, the receipts plus the coin and currency in the petty cash locked box do not equal the required petty cash balance. To demonstrate, assume the same information above except that the coin and currency remaining in the petty cash locked box was $8. This amount plus the receipts for $190 equals $198 and not $200, indicating a shortage in the petty cash box. The entry at the time of reimbursement reflects the shortage and is recorded as:

General Journal				
Date	Account/Explanation	PR	Debit	Credit
	Delivery Expense		100	
	Postage Expense		35	
	Office Supplies Expense		55	
	Cash Over/Short Expense		2	
	Cash			192
	To reimburse the petty cash fund and account for the $2.00 shortage.			

Notice that the $192 credit to Cash plus the $8 of coin and currency remaining in the petty cash box immediately prior to reimbursement equals the $200 required total in the petty cash fund.

Assume, instead, that the coin and currency in the petty cash locked box was $14. This amount plus the receipts for $190 equals $204 and not $200, indicating an overage in the petty cash box. The entry at the time of reimbursement reflects the overage and is recorded as:

[1] An expense is debited instead of Office Supplies, an asset, because the need to purchase supplies through petty cash assumes the immediate use of the items.

General Journal				
Date	Account/Explanation	PR	Debit	Credit
	Delivery Expense		100	
	Postage Expense		35	
	Office Supplies Expense		55	
	Cash Over/Short Expense			4
	Cash			186
	To reimburse the petty cash fund and account for the $4.00 overage.			

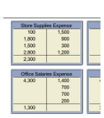
Again, notice that the $186 credit to Cash plus the $14 of coin and currency remaining in the petty cash box immediately prior to reimbursement equals the $200 required total in the petty cash fund.

What happens if the petty cash custodian finds that the fund is rarely used? In such a case, the size of the fund should be decreased to reduce the risk of theft. To demonstrate, assume the petty cash custodian has receipts totalling $110 and $90 in coin and currency remaining in the petty cash box. The receipts consist of the following: delivery charges $80 and postage $30. The petty cash custodian submits the receipts to the accountant and requests that the petty cash fund be reduced by $75. The following entry is recorded and a cheque for $35 is issued.

General Journal				
Date	Account/Explanation	PR	Debit	Credit
	Delivery Expense		80	
	Postage Expense		30	
	Petty Cash			75
	Cash			35
	To reimburse the petty cash fund and reduce it by $75.			

The $35 credit to Cash plus the $90 of coin and currency remaining in the petty cash box immediately prior to reimbursement equals the $125 new balance in the petty cash fund ($200 original balance less the $75 reduction).

In cases when the size of the petty cash fund is too small, the petty cash custodian could request an increase in the size of the petty cash fund at the time of reimbursement. Care should be taken to ensure that the size of the petty cash fund is not so large as to become a potential theft issue. Additionally, if a petty cash fund is too large, it may be an indicator that transactions that should be paid by cheque are not being processed in accordance with company policy. Remember that the purpose of the petty cash fund is to pay for infrequent expenses; day-to-day items should not go through petty cash.



An exploration is available on the Lyryx site. Log into your Lyryx course to run Petty Cash.

7.3 Cash Collections and Payments Watch video

LO3 – Explain the purpose of and prepare a bank reconciliation, and record related adjustments.

The widespread use of banks facilitates cash transactions between entities and provides a safeguard for the cash assets being exchanged. This involvement of banks as intermediaries between entities has accounting implications. At any point in time, the cash balance in the accounting records of a particular company usually differs from the bank cash balance of that company. The difference is usually because some cash transactions recorded in the accounting records have not yet been recorded by the bank and, conversely, some cash transactions recorded by the bank have not yet been recorded in the company's accounting records.

The use of a bank reconciliation is one method of internal control over cash. The reconciliation process brings into agreement the company's accounting records for cash and the **bank statement** issued by the company's bank. A bank reconciliation explains the difference between the balances reported by the company and by the bank on a given date.

A bank reconciliation proves the accuracy of both the company's and the bank's records, and reveals any errors made by either party. The bank reconciliation is a tool that can help detect attempts at theft and manipulation of records. The preparation of a bank reconciliation is discussed in the following section.

The Bank Reconciliation

The bank reconciliation is a report prepared by a company at a point in time. It identifies discrepancies between the cash balance reported on the bank statement and the cash balance reported in a business's Cash account in the general ledger, more commonly referred to as the *books*. These discrepancies are known as *reconciling items* and are added or subtracted to either the book balance or bank balance of cash. Each of the reconciling items is added or subtracted to the business's cash balance. The business's cash balance will change as a result of the reconciling items. The cash balance prior to reconciliation is called the *unreconciled* cash balance. The balance after adding and subtracting the reconciling items is called the *reconciled* cash balance. The following is a list of potential reconciling items and their impact on the bank reconciliation.

Book reconciling items	*Bank reconciling items*
Collection of notes receivable (added)	Outstanding deposits (added)
NSF cheques (subtracted)	Outstanding cheques (subtracted)
Bank charges (subtracted)	
Book errors (added or subtracted, depending on the nature of the error)	Bank errors (added or subtracted, depending on the nature of the error)

Book Reconciling Items

The collection of notes receivable may be made by a bank on behalf of the company. These collections are often unknown to the company until they appear as an addition on the bank statement, and so cause the general ledger cash account to be understated. As a result, the collection of a notes receivable is added to the unreconciled book balance of cash on the bank reconciliation.

Cheques returned to the bank because there were not sufficient funds (NSF) to cover them appear on the bank statement as a reduction of cash. The company must then request that the customer pay the amount again. As a result, the general ledger cash account is overstated by the amount of the NSF cheque. NSF cheques must therefore be subtracted from the unreconciled book balance of cash on the bank reconciliation to reconcile cash.

Cheques received by a company and deposited into its bank account may be returned by the customer's bank for a number of reasons (e.g., the cheque was issued too long ago, known as a stale-dated cheque, an unsigned or illegible cheque, or the cheque shows the wrong account number). Returned cheques cause the general ledger cash account to be overstated. These cheques are therefore subtracted on the bank statement, and must be deducted from the unreconciled book balance of cash on the bank reconciliation.

Bank service charges are deducted from the customer's bank account. Since the service charges have not yet been recorded by the company, the general ledger cash account is overstated. Therefore, service charges are subtracted from the unreconciled book balance of cash on the bank reconciliation.

A business may incorrectly record journal entries involving cash. For instance, a deposit or cheque may be recorded for the wrong amount in the company records. These errors are often detected when amounts recorded by the company are compared to the bank statement. Depending on the nature of the error, it will be either added to or subtracted from the unreconciled book balance of cash on the bank reconciliation. For example, if the company recorded a cheque as $520 when the correct amount of the cheque was $250, the $270 difference would be added to the unreconciled book balance of cash on the bank reconciliation. Why? Because the cash balance reported on the books is understated by $270 as a result of the error. As another example, if the company recorded a deposit as $520 when the correct amount of the deposit was $250, the $270 difference would be subtracted from the unreconciled book balance of cash on the bank reconciliation. Why? Because the cash balance reported on the books is overstated by $270 as a result of the error. Each error requires careful analysis to determine whether it will be added or subtracted in the unreconciled book balance of cash on the bank reconciliation.