2 Recording Business Transactions

Learning Objectives/ Success Keys

1 Explain accounts, journals, and ledgers as they relate to recording transactions and describe common accounts

2 Define debits, credits, and normal account balances. Use double entry accounting and T-accounts

3 List the steps of the transaction recording process

4 Journalize and post sample transactions to the ledger

**5** Prepare the trial balance from the T-accounts

Sherman Lawn Service and Greg's Groovy Tunes are now up and running. Both businesses are buying supplies, earning revenues, collecting cash, and paying expenses. The owners, Hannah Sherman and Greg Moore, naturally want to know how they are doing.

In Chapter 1 Sherman and Moore learned about the income statement and the balance sheet—two financial statements that help them measure progress. Sherman and Moore also learned to record transactions in terms of the accounting equation. That procedure works well for a handful of transactions. But even small businesses, such as Sherman Lawn Service or Greg's Groovy Tunes, would need a huge Excel spreadsheet to record all their transactions with the accounting equation. Fortunately, there is a better way.

In this chapter we show how accounting is actually done in business. This may be the most important chapter of the whole book. After you master this material, you will have a foundation for learning accounting.

The following diagram summarizes the accounting process covered in this chapter.

Record transactions in the journal → Copy (post) to the ledger → Prepare the trial balance
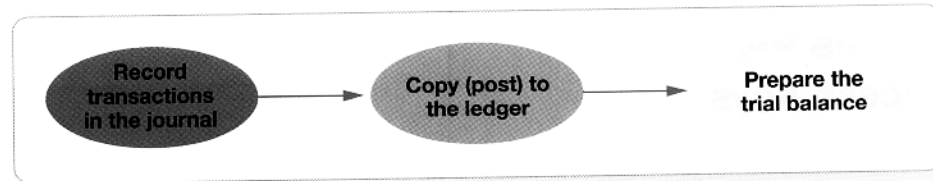
The Account, the Journal, and the Ledger

1 Explain accounts, journals, and ledgers as they relate to recording transactions and describe common accounts

The basic summary device of accounting is the account. An **account** is the detailed record of all the changes that have occurred in a particular asset, liability, or owner's equity during a specified period. As we saw in Chapter 1, business transactions cause the changes.

Accountants record transactions first in a **journal**, which is the chronological record of transactions. Accountants then copy (post) the data to the book of accounts called the **ledger**. A list of all the ledger accounts and their balances is called a **trial balance**.

Take a moment to memorize these important terms. You will be using them over and over again.

- **Account**—the detailed record of the changes in a particular asset, liability, or owner's equity
- **Ledger**—the book holding all the accounts
- **Journal**—the chronological record of transactions
- **Trial balance**—the list of all the accounts with their balances

Accounts are grouped in three broad categories, according to the accounting equation:

$$\text{Assets} = \text{Liabilities} + \text{Owner's equity}$$

Assets

Assets are economic resources that will benefit the business in the future, or simply, something the business owns that has value. Most firms use the following asset accounts:

Cash

The Cash account is a record of the cash effects of transactions. Cash includes money, such as a bank balance, paper currency, coins, and checks. Cash is the most pressing need of start-up businesses, such as Sherman Lawn Service and Greg's Groovy Tunes.

Accounts Receivable

Most businesses sell goods or services in exchange for a promise of future cash receipts. Such sales are made on credit ("on account"), and Accounts receivable is the account that holds these amounts. Most sales in the United States and in other developed countries are made on account.

Notes Receivable

A business may sell goods or services and receive a **note receivable** or *promissory note*. A note receivable is a written pledge that the customer will pay a fixed amount of money by a certain date.

Prepaid Expenses

A business often pays certain expenses, such as rent and insurance, in advance. A **prepaid expense** is an asset because the prepayment provides a future benefit. Prepaid rent, Prepaid insurance, and Office supplies are separate prepaid expense accounts. Your college tuition is an asset to you.

Land

The Land account shows the cost of land a business holds for use in operations. Land held for sale is different. Its cost is an investment.

Building

The cost of buildings—an office or a warehouse—appears in the Buildings account. **Frito-Lay** and **The Coca-Cola Company** own buildings around the world, where they make chips and drinks.

Equipment, Furniture, and Fixtures

A business has a separate asset account for each type of equipment—Computer equipment, Office equipment, and Store equipment, for example. The Furniture account shows the cost of this asset. Similarly, the Fixtures account shows the cost of light fixtures and shelving, for example.

Liabilities

Recall that a *liability* is a debt, that is, something you owe. A business generally has fewer liability accounts than asset accounts.

Accounts Payable

Accounts payable is the opposite of Accounts receivable. The promise to pay a debt arising from a credit purchase is an Account payable. Such a purchase is said to be made on account. All companies from Greg's Groovy Tunes to **Coca-Cola** to **eBay**, have Accounts payable.

Notes Payable

Notes payable is the opposite of Notes receivable. Notes payable represents debts the business owes because it signed promissory notes to borrow money or to purchase something.

Accrued Liabilities

An **accrued liability** is a liability for which the business knows the amount owed, but the bill has not been paid. Taxes payable, Interest payable, and Salary payable are accrued liability accounts.

Owner's Equity

The owners' claim to the assets of the business is called *owner's equity*. A company has separate accounts for the various elements of owner's equity.

Capital

The capital account represents the net investment of the owner in the business. It holds the accumulation of owner investment, withdrawals, and net income (loss) of the business over the life of the business. In other words, capital is the net worth invested in the business by an owner.

Withdrawals

The owner may withdraw cash or other assets at any time from the company. This represents a return of his or her capital investment, as well as a distribution of earnings from the company.

Revenues

The increase in equity created by delivering goods or services to customers is called *revenue*. The ledger contains as many revenue accounts as needed. Smart Touch Learning, for example, needs a Service revenue account for amounts earned by providing e-learning services. If Smart Touch lends money to an outsider, it needs an Interest revenue account for the interest earned on the loan. If the business rents out a building to a tenant, it needs a Rent revenue account.

Expenses

Expenses use up assets or create liabilities in the course of operating a business. Expenses have the opposite effect of revenues. Expenses *decrease* equity. A business needs a separate account for each type of expense, such as Salary expense, Rent expense, Advertising expense, and Utilities expense. Businesses strive to minimize their expenses in order to maximize net income—whether that business is General Electric, Smart Touch Learning, or Sherman Lawn Service.

Exhibit 2-1 shows how asset, liability, and owner's equity accounts can be grouped in the ledger.

Chart of Accounts

The ledger contains the accounts grouped under these headings:

- Assets, Liabilities, and Owner's Equity
- Revenues and Expenses

Companies use a **chart of accounts** to list all their accounts along with the account numbers. Account numbers are just shorthand versions of the account names. One number equals one account name—just like your social security number is unique to you.

EXHIBIT 2-1	The Ledger—Asset, Liability, and Owner's Equity Accounts
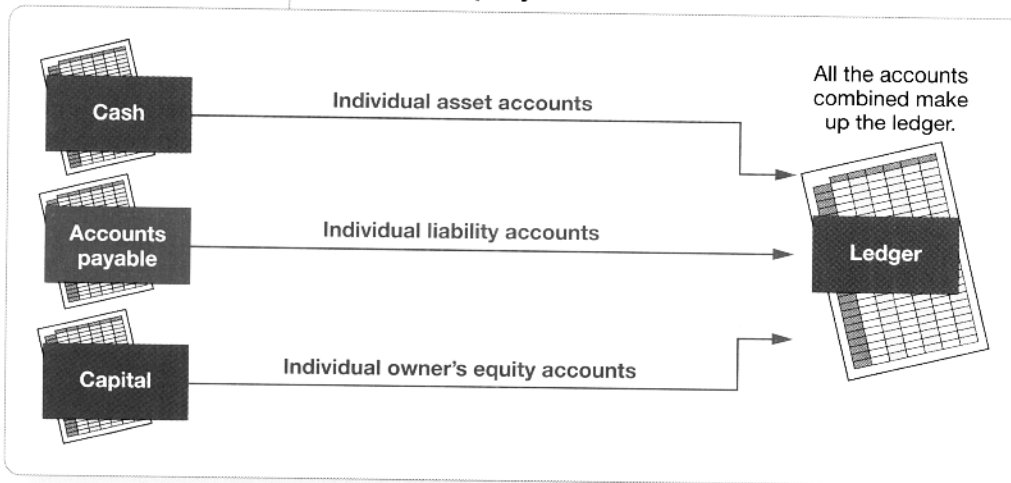
Account numbers usually have two or more digits. Assets are often numbered beginning with 1, liabilities with 2, owner's equity with 3, revenues with 4, and expenses with 5. The second and third digits in an account number indicate where the account fits within the category. For example, if Sheena Bright is using three digit account numbers, cash may be account number 101, the first asset account. Accounts receivable may be account number 111, the second asset. Accounts payable may be number 201, the first liability. When numbers are used, all accounts are numbered by this system. However, each company chooses its own account numbering system.

The chart of accounts for Smart Touch Learning appears in Exhibit 2-2. Notice the gap in account numbers between 121 and 141. Bright may need to add another asset account in the future. For example, she may start selling some type of inventory and want to use account number 131 for Inventory.

EXHIBIT 2-2	Chart of Accounts— Smart Touch Learning

Balance Sheet Accounts

Assets	Liabilities	Owner's Equity
101 Cash	201 Accounts payable	301 Sheena Bright, Capital
111 Accounts receivable	211 Salary payable	311 Sheena Bright, Withdrawals
121 Notes receivable	221 Interest payable	
141 Supplies	231 Notes payable	
151 Furniture		
171 Building		
191 Land		

Income Statement Accounts
(Part of Owner's Equity)

Revenues	Expenses
401 Service revenue	501 Rent expense, Computer
411 Interest revenue	502 Rent expense, Office
	505 Salary expense
	510 Depreciation expense
	520 Utilities expense
	530 Advertising expense
	540 Supplies expense

The back inside covers of this book give expanded, unnumbered charts of accounts that we hope you will find helpful throughout this course. The first chart lists the typical accounts of a *service* business, such as Smart Touch Learning. The second chart is for a *merchandising* business, which sells a product rather than a service. The third chart lists the accounts for a *manufacturing* company. You will use the manufacturing accounts in Chapters 15–23. Study the proprietorships now, and refer to the other charts of accounts as needed later. This will help you to learn the names of commonly used accounts.

Debits, Credits, and Double-Entry Accounting

2 Define debits, credits, and normal account balances. Use double entry accounting and T-accounts

As we saw in Chapter 1, accounting is based on transaction data, not on mere whim or opinion. Each business transaction has dual effects:

- The receiving side
- The giving side

For example, in the $30,000 cash receipt by Smart Touch Learning in Chapter 1, the business:

- Received cash of $30,000
- Gave $30,000 of capital

Accounting uses the double-entry system, which means that we record the dual effects of each transaction. As a result, every transaction affects at least two accounts. It would be incomplete to record only the giving side, or only the receiving side, of a transaction.

Consider a cash purchase of supplies. What are the dual effects? A cash purchase of supplies:

1. Increases supplies (you received supplies)
2. Decreases cash (you gave cash)

Similarly, a credit purchase of equipment (a purchase on account):

1. Increases equipment (you received equipment)
2. Increases accounts payable (you gave your promise to pay in the future)

The T-Account

The most widely used form of account is called the **T-account** because it takes the form of the capital letter *T*. The vertical line divides the account into its left and right sides, with the title at the top. For example, the Cash account appears as follows.

Cash	
(Left side) Debit	(Right side) Credit

The left side of the account is called the **Debit** side, and the right side is called the **Credit** side. To become comfortable using these terms, remember that:

Debit = Left	Credit = Right

The terms *debit* and *credit* are deeply entrenched in business.[1] They are abbreviated as follows:

DR = Debit	CR = Credit

Increases and Decreases in the Accounts

The account category (asset, liability, equity) governs how we record increases and decreases. For any given account, increases are recorded on one side, and decreases are recorded on the opposite side. The following T-accounts provide a summary:

Assets		Liabilities and Owner's Equity	
Increase = Debit	Decrease = Credit	Decrease = Debit	Increase = Credit

These are the *rules of debit and credit*. In your study of accounting, forget the bank's usage of credit and debit because the bank is talking about its books. We will focus on how accounting uses these terms.

Whether an account is increased or decreased by a debit or a credit depends on the type of account. Debits are not "good" or "bad." Neither are credits. Debits are not always increases or decreases—neither are credits.

In a computerized accounting system, the computer interprets debits and credits as increases or decreases, based on the account type. For example, a computer reads a debit to Cash as an increase, because it is an asset account. The computer reads a debit to Accounts payable as a decrease, because it is a liability account.

Exhibit 2-3 shows the relationship between the accounting equation and the rules of debit and credit.

EXHIBIT 2-3 | **The Accounting Equation and the Rules of Debit and Credit**
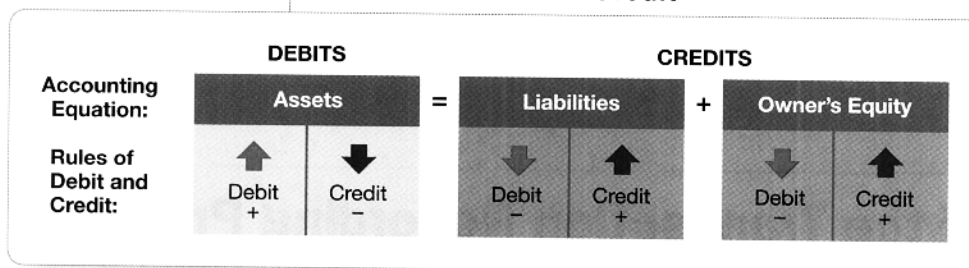
To illustrate the ideas diagrammed in Exhibit 2-3, let us look at the first transaction from Chapter 1 again. Smart Touch Learning received $30,000 cash and gave capital to Sheena Bright. Which accounts of the business are affected?

The answer: The business's assets and equity would increase by $30,000, as the T-accounts show.

ASSETS	=	LIABILITIES	+	OWNER'S EQUITY

Cash		Sheena Bright, Capital	
Debit for increase, 30,000			Credit for increase, 30,000

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[1] The words *debit*; and *credit* abbreviate the Latin terms *debitum* and *creditum*. Luca Pacioli, the Italian monk who wrote about accounting in the fifteenth century, popularized these terms.

The amount remaining in an account is called its *balance*. The first transaction gives Cash a $30,000 debit balance and Sheena Bright, Capital a $30,000 credit balance.

The second transaction is a $20,000 purchase of land. Exhibit 2-4 illustrates the accounting equation after Smart Touch Learning's first two transactions. After transaction 2, Cash has a $10,000 debit balance, Land has a debit balance of $20,000, and Capital has a $30,000 credit balance.

We create accounts as needed. The process of creating a new account is called *opening the account*. For transaction 1, we opened the Cash account and the Capital account. For transaction 2, we opened the Land account.

EXHIBIT 2-4 | **The Accounting Equation after the First Two Transactions of Smart Touch Learning**
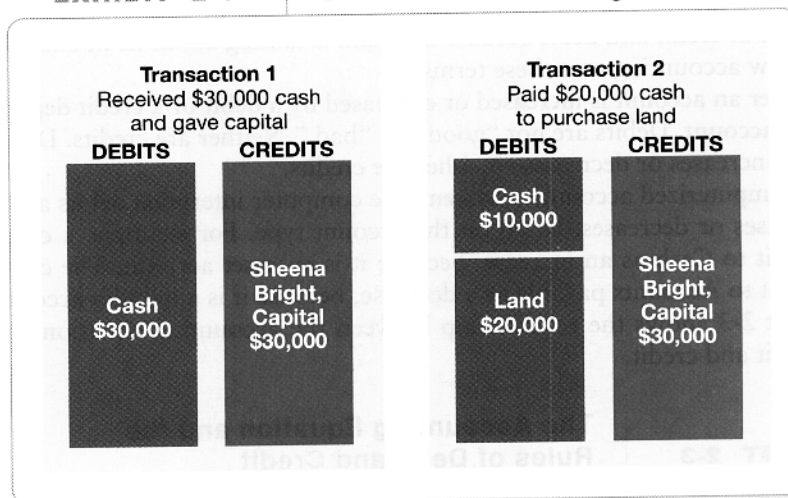
List the Steps of the Transaction Recording Process

3 List the steps of the transaction recording process

In practice, accountants record transactions in a *journal*. The journalizing process has three steps:

1. Identify each account affected and its type (asset, liability, or owner's equity).

2. Determine whether each account is increased or decreased. Use the rules of debit and credit.

3. Record the transaction in the journal, including a brief explanation. The debit side of the entry is entered first. Total debits should always equal total credits. This step is also called "making the journal entry" or "journalizing the transaction."

These steps are the same whether done by computer or manually.

Let us journalize the first transaction of Smart Touch Learning—the receipt of $30,000 cash and investment of capital.

> STEP 1: The accounts affected by the receipt of cash and issuance of stock are *Cash* and *Sheena Bright, Capital*. Cash is Capital.

STEP 2: Both accounts increase by $30,000. Assets increase with debits. Therefore, we debit Cash because it is an asset. Equity increases in the business because of the owner investment. To increase equity, we credit. Therefore, we credit Capital.

STEP 3: The journal entry is

Journal				Page 1
Date	Accounts and Explanation		Debit	Credit
Apr 1[a]	Cash[b] (A+)		30,000[b]	
	Sheena Bright, Capital[c] (Q+)			30,000[c]
	Owner investment.[d]			

Footnotes a, b, c, and d are explained as follows. The journal entry includes four parts:

a. Date of the transaction

b. Title of the account debited, along with the dollar amount

c. Title of the account credited, along with the dollar amount

d. Brief explanation of the transaction

Dollar signs are omitted because it is understood that the amounts are in dollars.

The journal entry presents the full story for each transaction. To help reinforce your learning of the account types and how they increase or decrease, we will indicate after each account in the journal what type of account it is and whether it is increasing or decreasing. For example, Assets increasing will be shown as (A+), Capital (Equity) increasing will be shown as (Q+), and so on. Exhibit 2-5 shows how Journal Page 1 looks after the business has recorded the first transaction.

EXHIBIT 2-5 | **The Journal Page**

Journal				Page 1
Date	Accounts and Explanation		Debit	Credit
Apr 1	Cash (A+)		30,000	
	Sheena Bright, Capital (Q+)			30,000
	Owner investment.			

Posting (Copying Information) from the Journal to the Ledger

Journalizing a transaction records the data only in the journal—but not in the ledger. The data must also be copied to the ledger. The process of copying from the journal to the ledger is called **posting**. We *post* from the journal to the ledger.

Debits in the journal are posted as debits in the ledger and credits as credits—no exceptions. The first transaction of Smart Touch Learning is posted to the ledger in Exhibit 2-6.

EXHIBIT 2-6	Making a Journal Entry and Posting to the Ledger

Journal Entry:

		Accounts and Explanation	Debit	Credit
Apr 1		Cash (A+)	30,000	
		Michael Moe, Capital (Q+)		30,000
		Owner investment.		

Posting to the Ledger:

Cash	Michael Moe, Capital
30,000	30,000

Expanding the Rules of Debit and Credit: Revenues and Expenses

As we have noted, *revenues* are increases in equity that result from providing goods or services for customers. *Expenses* are decreases in equity that result from using up assets or increasing liabilities in the course of operations. Therefore, we must expand the accounting equation. There are several elements of owner's equity.

Exhibit 2-7 shows revenues and expenses under owner's equity because they directly affect equity.

EXHIBIT 2-7	The Accounting Equation Includes Revenues and Expenses

Assets = Liabilities + Owner's equity

+ Capital
+ Revenues – Expenses
– Withdrawals
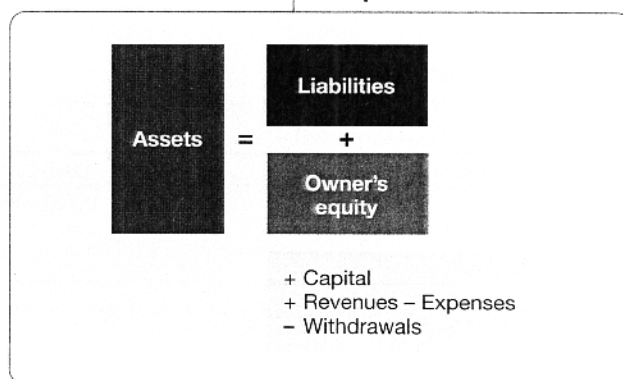
We can now express the rules of debit and credit in final form as shown in Exhibit 2-8. Note that the accounting equation now includes revenues and expenses.

EXHIBIT 2-8 | **Final Rules of Debit and Credit**

Assets =	Liabilities +				Owner's equity					
Assets =	Liabilities +	Capital +	Revenues −	Expenses −	Withdrawals
DR | CR	DR | CR	DR | CR	DR | CR	DR | CR	DR | CR
+ | −	− | +	− | +	− | +	+ | −	+ | −

The Normal Balance of An Account

An account's **normal balance** appears on the side—debit or credit—where we record an *increase*. For example, assets normally have a debit balance, so assets are *debit-balance accounts*. Liabilities and equity accounts normally have the opposite balance, so they are *credit-balance accounts*. Expenses and Withdrawals are equity accounts that have debit balances—unlike the other equity accounts. They have debit balances because they decrease equity. Revenues increase equity, so a revenue's normal balance is a credit.

As we have seen, Owner's equity includes:

Capital—a credit-balance account

Withdrawals—a debit-balance account

A debit account may occasionally have a credit balance. That indicates a negative amount of the item. For example, Cash will have a credit balance if the business overdraws its bank account. Also, the liability Accounts payable—a credit balance account—will have a debit balance if the entity overpays its account. In other cases, an odd balance indicates an error. For example, a credit balance in Office supplies, Furniture, or Buildings is an error because negative amounts of these assets make no sense.

Stop & Think...

The terms debit and credit really just mean left and right. A way to remember what normal account balance a particular account has is to associate the accounts with the accounting equation. Assets are on the LEFT so they have a normal Debit balance. Liabilities are on the RIGHT so they have a normal Credit balance, and so on. So think of debit as left and credit as right when remembering normal balance of accounts.

Now let us put your new learning into practice. Let us account for the early transactions of Smart Touch Learning.

Exhibit 2-9 summarizes the flow of data through the accounting system. In the pages that follow, we record Smart Touch Learning's early transactions. Keep in mind that we are accounting for the e-learning business. We are *not* accounting for Sheena Bright's personal transactions because of the entity concept we learned in Chapter 1.

EXHIBIT 2-9   **Flow of Accounting Data from the Journal to the Ledger**
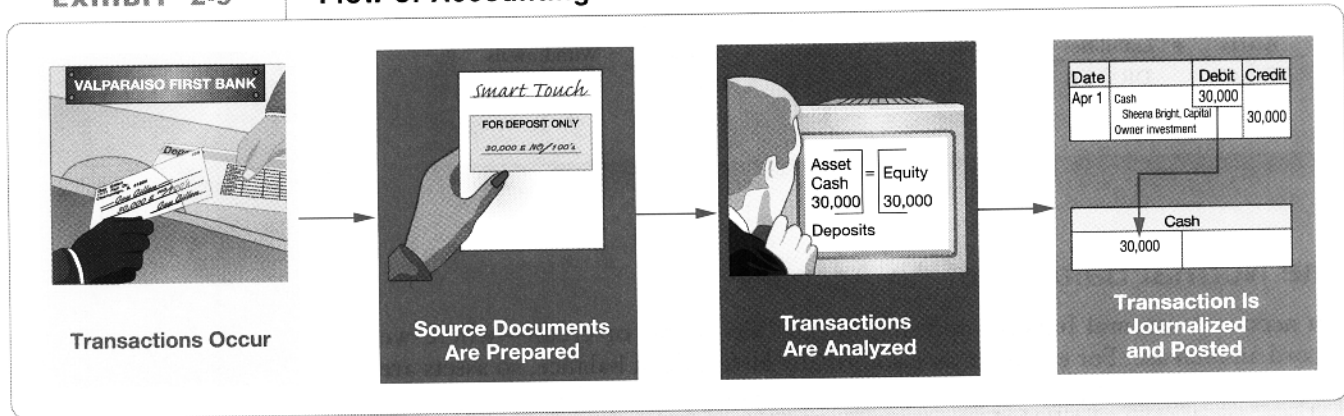
Source Documents—The Origin of the Steps

Accounting data come from source documents, as shown in the second segment of Exhibit 2-9. In that exhibit, Smart Touch Learning received $30,000 and gave capital to Sheena Bright. The *bank deposit ticket* is the document that shows the amount of cash received by the business. Based on these documents, Bright can see how to record this transaction in the journal.

When the business buys supplies on account, the vendor sends Smart Touch an invoice requesting payment. The *purchase invoice* is the source document that tells the business to pay the vendor. The invoice shows what Smart Touch purchased and how much it cost—telling the business how to record the transaction.

Smart Touch may pay the account payable with a *bank check*, another source document. The check and the purchase invoice give the business the information it needs to record the cash payment accurately.

When Smart Touch provides education services for a client, the business faxes a sales invoice to the client. Smart Touch's *sales invoice* is the source document that tells the business how much revenue to record.

There are many different types of source documents in business. In the transactions that follow, we illustrate some of the more common types of documents that Smart Touch Learning uses in its business.

Journalizing Transactions and Posting to the Ledger

Practice Journalizing with Specific Examples

Transaction 1

Smart Touch Learning received $30,000 cash on April 1 from Sheena Bright and gave her capital in the business. The business deposited the money in its bank account, as proved by the following deposit ticket:

⊢ DEPOSIT TICKET ⊢		

CASH	CURRENCY	
	COIN	
LIST CHECKS SEPARATELY	30,000	00
TOTAL FROM OTHER SIDE		
TOTAL	30,000	00
LESS CASH RECEIVED		
NET DEPOSIT	30,000	00

Smart Touch Learning
281 Wave Ave
Niceville, FL 32578

DATE _____ *April 1* _____ , 2010

VALPARAISO FIRST BANK
John Sims Pkwy
Valparaiso, FL

⑆ 1 2 2000 66 ⑆ 1400 ⑈ 0 38 5 7

The business increased cash, which is an asset, so we debit Cash. The business also increased owner's equity, so we credit Sheena Bright, Capital.

Journal Entry

Apr 1	Cash (A+)	30,000
	Sheena Bright, Capital (Q+)	30,000
	Owner investment.	

Ledger Accounts

Cash		Sheena Bright, Capital	
Apr 1 30,000			Apr 1 30,000

Transaction 2

On April 2, Smart Touch paid $20,000 cash for land. The purchase decreased cash. Therefore, we credit Cash. The asset, land, increased, so we debit the Land account.

Journal Entry

Apr 2	Land (A+)	20,000
	Cash (A–)	20,000
	Paid cash for land.	

Ledger Accounts

Cash		Land	
Apr 1 30,000	Apr 2 20,000	Apr 2 20,000	

Transaction 3

Smart Touch purchased $500 of office supplies on account on April 3, as shown on this purchase invoice.

INVOICE (purchase)

WHOLESALE OFFICE SUPPLY
500 HENDERSON ROAD
DESTIN, FL 32540

Date: April 3, 2010
Terms: 30 days
Sold to: **Smart Touch Learning**
281 Wave Ave
Niceville, FL 32578

Quantity	Item	Price	Total
38	Laser paper	$10	$380.00
8	Desk calendars	15	120.00
	Total amount due:		**$500.00**

The supplies will benefit Smart Touch in future periods, so they are an asset to the company until they are used. (We will talk about accounting for using the supplies in Chapter 3.)

The asset office supplies increased, so we debit Office supplies. The liability accounts payable increased, so we credit Accounts payable.

Journal Entry		Apr 3	Office supplies (A+)		500	
			Accounts payable (L+)			500
			Purchased supplies on account.			

Ledger Accounts	Office supplies		Accounts payable	
	Apr 3	500	Apr 3	500

Transaction 4

On April 8, Smart Touch collected cash of $5,500 for service revenue that the business earned by providing e-learning services for clients. The source document is Smart Touch's sales invoice on the following page.

INVOICE (sale)

Smart Touch Learning
281 Wave Ave.
Niceville, FL 32578

Date: April 8, 2010
Sold to: **Allied Energy**
                 325 Brooks Street

                                          PAID

Invoice No: **15**
Service: **1000 DVD0503**

Total amount due: $5,500

All accounts are due and payable within 30 days.

The asset cash increased, so we debit Cash. Revenue increased, so we credit Service revenue.

Journal Entry	Apr 8	Cash (A+)		5,500	
		Service revenue (R+)			5,500
		Performed service and received cash.			

Ledger Accounts	Cash				Service revenue		
	Apr 1	30,000	Apr 2	20,000		Apr 8	5,500
	Apr 8	5,500					

In Chapter 1 we listed service revenue and expenses under Capital. Here we record the revenues and the expenses directly in their own accounts. There is no contradiction because revenues and expenses affect Capital, as we will see in Chapter 4.

Transaction 5

On April 10, Smart Touch performed service for clients and let them pay later. The business earned $3,000 of service revenue on account.

This transaction increased Accounts receivable, so we debit this asset. Service revenue is increased with a credit.

Journal Entry	Apr 10	Accounts receivable (A+)		3,000	
		Service revenue (R+)			3,000
		Performed service on account.			

Ledger Accounts	Accounts receivable			Service revenue		
	Apr 10	3,000			Apr 8	5,500
					Apr 10	3,000

Notice the differences and the similarities between transactions 4 and 5. In both transactions, Service revenue was increased because in both cases the company had earned revenue. However, in transaction 4, the company was paid at the time of service. In transaction 5, on the other hand, the company will receive cash later (Accounts receivable). This is key, because the amount of earnings is not determined by when the company receives cash. Earnings (Revenue) are recorded when the company does work, or earns revenue.

Transaction 6

Smart Touch paid the following cash expenses on April 15: Rent expense on a computer, $600; Office rent, $1,000; Salary expense, $1,200; Utilities expense, $400. We need to debit each expense account to record its increase and credit Cash for the total decrease.

Journal Entry	Apr 15	Rent expense, computer (E+)	600	
		Rent expense, office (E+)	1,000	
		Salary expense (E+)	1,200	
		Utilities expense (E+)	400	
		Cash (A–)		3,200
		Paid cash expenses.		

Note: In practice, the business would record these expenses in four separate journal entries. Here we show them together to illustrate a **compound journal entry**.

Ledger Accounts

	Cash					Rent expense, computer			Rent expense, office	
Apr 1	30,000	Apr 2	20,000		Apr 15	600		Apr 15	1,000	
Apr 8	5,500	Apr 15	3,200							

	Salary expense			Utilities expense	
Apr 15	1,200		Apr 15	400	

Transaction 7

On April 21, Smart Touch paid $300 on the account payable created in transaction 3. The paid check is Smart Touch's source document, or proof, for this transaction.

		6283
Smart Touch Learning		
281 Wave Ave.		88-894/1119
Niceville, FL 32578	Date 4-21-10	02
Pay to the Order of _Wholesale Office Supply_	$	300.00
Three hundred and no/100	Dollars	
VALPARAISO FIRST BANK		
Box 1739 Terminal Annex		
Valparaiso, FL		
For _Payment on account_	_Sheena Bright_	
⑆122000661⑆1400⑈03857		

The payment decreased cash, so we credit Cash. The payment decreased Accounts payable, so we debit that liability.

Journal Entry	Apr 21	Accounts payable (L–)		300	
		Cash (A–)			300
		Paid cash on account.			

Ledger Accounts

	Cash				Accounts payable		
Apr 1	30,000	Apr 2	20,000	Apr 21	300	Apr 3	500
Apr 8	5,500	Apr 15	3,200				
		Apr 21	300				

Transaction 8

Sheena Bright remodeled her home with personal funds. This is not a transaction of the business, so there is no entry on the business's books (based on the entity concept).

Transaction 9

On April 22, Smart Touch collected $2,000 cash from the client in transaction 5. Cash is increased, so we debit Cash. Accounts receivable is decreased, so we credit Accounts receivable.

Journal Entry	Apr 22	Cash (A+)		2,000	
		Accounts receivable (A–)			2,000
		Received cash on account.			

Note: This transaction has no effect on revenue; the related revenue was recorded in transaction 5.

Ledger Accounts

	Cash				Accounts receivable		
Apr 1	30,000	Apr 2	20,000	Apr 10	3,000	Apr 22	2,000
Apr 8	5,500	Apr 15	3,200				
Apr 22	2,000	Apr 21	300				

Transaction 10

On April 24, Smart Touch sold a parcel of land owned by the business. The sale price, $9,000, equaled the cost. Cash increased, so we debit Cash. Land decreased, so we credit Land.

Journal Entry	Apr 24	Cash (A+)		9,000	
		Land (A–)			9,000
		Sold land at cost.			

Ledger Accounts

	Cash				Land		
Apr 1	30,000	Apr 2	20,000	Apr 2	20,000	Apr 24	9,000
Apr 8	5,500	Apr 15	3,200				
Apr 22	2,000	Apr 21	300				
Apr 24	9,000						

Transaction 11

On April 30, Smart Touch received a telephone bill for $100 and will pay this expense next month. There is no cash payment now. The Utilities expense increased, so we debit this expense. The liability accounts payable increased, so we credit Accounts payable.

Journal Entry	Apr 30	Utilities expense (E+)		100	
		Accounts payable (L+)			100
		Received utility bill.			

Ledger Accounts		Accounts payable				Utilities expense	
	Apr 21	300	Apr 3	500	Apr 15	400	
			Apr 30	100	Apr 30	100	

Transaction 12

Also on April 30, Sheena Bright withdrew $2,000. Withdrawals decrease the entity's cash, so we credit Cash. The withdrawal also decreased total owner's equity. Decreases in equity that result from withdrawals are debited to the Withdrawals account, so we debit that account.

Journal Entry	Apr 30	Sheena Bright, Withdrawals (W+)		2,000	
		Cash (A–)			2,000
		Owner withdrawal.			

Ledger Accounts		Cash			Sheena Bright, Withdrawals (W+)	
	Apr 1	30,000	Apr 2	20,000	Apr 30	2,000
	Apr 8	5,500	Apr 15	3,200		
	Apr 22	2,000	Apr 21	300		
	Apr 24	9,000	Apr 30	2,000		

Each journal entry posted to the ledger is keyed by date or by transaction number. In this way, any transaction can be traced back and forth between the journal and the ledger. This helps locate any information you may need.

The Ledger Accounts After Posting

We next show the accounts of Smart Touch Learning after posting. The accounts are grouped under their headings in Exhibit 2-10.

Each account has a balance. An account balance is the difference between the account's total debits and its total credits. For example, the $21,000 balance in the Cash account is the difference between:

- Total debits, $46,500 ($30,000 + $5,500 + $2,000 + $9,000)
- Total credits, $25,500 ($20,000 + $3,200 + $300 + $2,000)

We set a balance apart from the transaction amounts by a horizontal line. The final figure, below the horizontal line, is denoted as the balance (Bal).

EXHIBIT 2-10 | **Ledger Accounts After Posting**

ASSETS		LIABILITIES		OWNER'S EQUITY*		REVENUE		EXPENSES	
Cash		**Accounts payable**		**Sheena Bright, Capital**		**Service revenue**		**Rent expense, computer**	
Apr 1 30,000	Apr 2 20,000	Apr 21 300	Apr 3 500		Apr 1 30,000		Apr 8 5,500	Apr 15 600	
Apr 8 5,500	Apr 15 3,200		Apr 30 100		Bal 30,000		Apr 10 3,000	Bal 600	
Apr 22 2,000	Apr 21 300		Bal 300				Bal 8,500		
Apr 24 9,000	Apr 30 2,000			**Sheena Bright, Withdrawals**				**Rent expense, office**	
Bal 21,000								Apr 15 1,000*	
Accounts receivable				Apr 30 2,000				Bal 1,000	
Apr 10 3,000	Apr 22 2,000*			Bal 2,000					
Bal 1,000								**Salary expense**	
Office supplies								Apr 15 1,200	
Apr 3 500								Bal 1,200	
Bal 500									
								Utilities expense	
Land								Apr 15 400	
Apr 2 20,000	Apr 24 9,000							Apr 30 100	
Bal 11,000								Bal 500*	

*These values are intentionally different than those presented in Chapter 1.

Stop & Think...

Have you ever walked along the beach and gathered sea shells? Maybe you had more than one bucket and you put all the sand dollars in one, all the hermit crabs in another, and so on. That separation is essentially what happens in posting. All we are doing is gathering transactions that affect the same account (for example, all the transactions to Cash) and putting them in the T-account. They are placed either on the left or right side of the T-account based on whether they were on the left or right side of the journal entry. Posting is merely a sorting process—no change to debits or credits occurs from transaction to posting.

Preparing the Trial Balance from the T-Accounts

A **trial balance** summarizes the ledger by listing all the accounts with their balances—assets first, followed by liabilities, and then owner's equity. In a manual accounting system, the trial balance provides an accuracy check by showing whether total debits equal total credits. In all types of systems, the trial balance is a useful summary of the accounts and their balances because it shows the balances on a specific date for all

5 Prepare the trial balance from the T-accounts

accounts in a company's accounting system. Exhibit 2-11 is the trial balance of Smart Touch Learning at April 30, 2010, the end of the first month of operations.

A warning: Do not confuse the trial balance with the balance sheet. A trial balance is an internal document used only by company insiders. The public never sees a trial balance. Outsiders get only the company's financial statements.

EXHIBIT 2-11 | **Trial Balance**

	SMART TOUCH LEARNING Trial Balance April 30, 2010		
		Balance	
	Account Title	**Debit**	**Credit**
	Cash	$21,000	
	Accounts receivable	1,000	
	Office supplies	500	
	Land	11,000	
	Accounts payable		$ 300
	Sheena Bright, Capital		30,000
	Sheena Bright, Withdrawals	2,000	
	Service revenue		8,500
	Rent expense, computer	600	
	Rent expense, office	1,000	
	Salary expense	1,200	
	Utilities expense	500	
	Total	$38,800	$38,800

Correcting Trial Balance Errors

Throughout the accounting process, total debits should always equal total credits. If they do not, there is an error. Computerized accounting systems eliminate many errors because most software will not let you make a journal entry that does not balance. But computers cannot *eliminate* all errors because humans can input the wrong data.

Errors can be detected by computing the difference between total debits and total credits on the trial balance. Then perform one or more of the following actions:

1. Search the trial balance for a missing account. For example, suppose the accountant omitted Withdrawals from the trial balance in Exhibit 2-11. Total debits would then be $36,800 ($38,800 – $2,000). Trace each account from the ledger to the trial balance, and you will locate the missing account.

2. Divide the difference between total debits and total credits by 2. A debit treated as a credit, or vice versa, doubles the amount of error. Suppose the accountant posted a $500 credit as a debit. Total debits contain the $500, and total credits omit the $500. The out-of-balance amount is $1,000. Dividing the difference by 2 identifies the $500 amount of the transaction. Then search the trial balance for a $500 transaction and trace it to the account affected.

3. Divide the out-of-balance amount by 9. If the result is evenly divisible by 9, the error may be a *slide* (example: writing $1,000 as $100 or writing $100 as $1000) or a *transposition* (example: treating $1,200 as $2,100). Suppose, for example, that the accountant printed the $2,000 Withdrawals as $20,000 on the trial balance. This is a slide-type error. Total debits would differ from total credits by $18,000 ($20,000 – $2,000 = $18,000). Dividing $18,000 by 9 yields $2,000, the correct amount of withdrawals. Trace $2,000 through the ledger until you reach the Withdrawals account. You have then found the error.

Details of Journals and Ledgers

In practice, the journal and the ledger provide details to create a "trail" through the records. Suppose a supplier bills us twice for an item that we purchased. To show we have already paid the bill, we must prove our payment. That requires us to use the journal and the ledger.

Details in the Journal

Exhibit 2-12 illustrates a transaction and then shows the journal with these details:

- The *transaction date*, April 1, 2010
- The *accounts* debited and credited, along with their dollar amounts
- The *posting reference*, abbreviated Post. Ref.

EXHIBIT 2-12 | **Details of Journalizing and Posting**

Journal Entry

Page 1

Date	Accounts and Explanation	Post Ref.	Debit	Credit
2010				
Apr 1	Cash (A+)	101	30,000	
	Sheena Bright, Capital (Q+)	311		30,000
	Owner investment.			

Ledger

				CASH			Account No. 101
Date	Item	Jrnl. Ref.	Debit	Date	Item	Jrnl. Ref.	Credit
2010							
Apr 1		J.1.	30,000				

			SHEENA BRIGHT, CAPITAL			Account No. 311	
Date	Item	Jrnl. Ref.	Debit	Date	Item	Jrnl. Ref.	Credit
				2010			
				Apr 1		J.1.	30,000

Details in the Ledger

Posting means copying information from the journal to the ledger. But how do we handle the details? Exhibit 2-12 illustrates the steps, denoted by arrows:

Arrow **1**—Post the transaction **date** from the journal to the ledger.

Arrow **2**—Post the debit, **$30,000**, from the journal as a debit to the Cash account in the ledger.

Arrow **3**—Likewise, post the credit, **$30,000**, from the journal to the Capital account in the ledger. Now the ledger accounts have correct amounts.

Arrow 4—Post the account numbers (**101** and **311**) from the ledger back to the journal. This step shows that the debit and the credit have both been posted to the ledger. **Post. Ref.** is the abbreviation for Posting Reference.

Arrow 5—Post the page number from the journal to the ledger. **Jrnl. Ref.** means Journal Reference, and **J.1** refers to Journal Page **1**. This step shows where the data came from, in this case Journal Page 1.

The Four-Column Account: An Alternative to the T-Account

The ledger accounts illustrated thus far appear as T-accounts, with the debit on the left and the credit on the right. The T-account clearly separates debits from credits and is used for teaching, where there is not much detail. Another account format has four amount columns, as illustrated in Exhibit 2-13.

EXHIBIT 2-13 | **Account in Four-Column Format**

CASH   Account No. 101

					Balance	
Date	Item	Jrnl. Ref.	Debit	Credit	Debit	Credit
2010						
Apr 1		J.1	30,000		30,000	
Apr 2		J.1		20,000	10,000	
Apr 8		J.1	5,500		15,500	
Apr 15		J.1		3,200	12,300	
Apr 21		J.1		300	12,000	
Apr 22		J.1	2,000		14,000	
Apr 24		J.1	9,000		23,000	
Apr 30		J.1		2,000	21,000	

The first pair of Debit/Credit columns is for transaction amounts posted to the account from the journal, such as the $30,000 debit. The second pair of amount columns shows the balance of the account as of each date. For this reason, the four-column format is used more often in practice than the T-account. In Exhibit 2-13, Cash has a debit balance of $30,000 after the first transaction and a $10,000 balance after the second transaction. Notice that the balance after the last transaction on April 30 is $21,000, which is the same balance calculated in the T-account in Exhibit 2-10.

Decision Guidelines

ANALYZING AND RECORDING TRANSACTIONS

Suppose Greg Moore, in the chapter's opening story, opens a small office and needs an accountant to keep his books.
    Moore interviews you for the job. The pay is good. Can you answer Moore's questions, which are outlined in the Decision Guidelines? If so, you may get the job.

Decision	Guidelines
• Has a transaction occurred?	If the event affects the entity's financial position and can be recorded reliably—*Yes*
	If either condition is absent—*No*
• Where to record the transaction?	In the *journal*, the chronological record of transactions
• What to record for each transaction?	Increases and/or decreases in all the accounts affected by the transaction
• How to record an increase/decrease in a (an)	Rules of debit and credit:

	Debit	Credit
Asset	+	−
Liability	−	+
Capital	−	+
Withdrawal	+	−
Revenue	−	+
Expense	+	−

Decision	Guidelines
• Where to store all the information for each account?	In the *ledger*, the record holding all the accounts
• Where to list all the accounts and their balances?	In the *trial balance*
• Where to report the results of operations?	In the income statement
	Revenues − Expenses = Net income or Net loss
• Where to report financial position?	In the balance sheet
	Assets = Liabilities + Owner's equity

Summary Problem

The trial balance of Harper Service Center on March 1, 2009, lists the entity's assets, liabilities, and equity on that date.

		Balance	
	Account Title	Debit	Credit
	Cash	$26,000	
	Accounts receivable	4,500	
	Accounts payable		$ 2,000
	Marc Harper, Capital		28,500
	Total	$30,500	$30,500

During March, the business engaged in the following transactions:

a. Borrowed $45,000 from the bank and signed a note payable in the name of the business.
b. Paid cash of $40,000 to acquire land.
c. Performed service for a customer and received cash of $5,000.
d. Purchased supplies on credit, $300.
e. Performed customer service and earned revenue on account, $2,600.
f. Paid $1,200 on account.
g. Paid the following cash expenses: salaries, $3,000; rent, $1,500; and interest, $400.
h. Received $3,100 on account.
i. Received a $200 utility bill that will be paid next week.
j. Owner withdrew $1,800.

Requirements

1. Open the following accounts, with the balances indicated, in the ledger of Harper Service Center. Use the T-account format.
   - **Assets**—Cash, $26,000; Accounts receivable, $4,500; Supplies, no balance; Land, no balance
   - **Liabilities**—Accounts payable, $2,000; Note payable, no balance
   - **Owners equity** —Marc Harper, Capital, $28,500; Withdrawals, $0
   - **Revenues**—Service revenue, no balance
   - **Expenses**—(none have balances) Salary expense, Rent expense, Utilities expense, Interest expense
2. Journalize each transaction. Key journal entries by transaction letter.
3. Post to the ledger.
4. Prepare the trial balance of Harper Service Center at March 31, 2009.

Solution

Requirement 1

ASSETS	LIABILITIES	OWNER'S EQUITY	EXPENSES
Cash	Accounts payable	Marc Harper, Capital	Salary expense
Bal 26,000	Bal 2,000	Bal 28,500	

Accounts receivable	Note payable	Marc Harper, Withdrawals	Rent expense
Bal 4,500			

Supplies			Utilities expense

		REVENUE	
Land		Service revenue	Interest expense

Requirement 2

a. Journal Entry		Cash (A+)	45,000	
		Note payable (L+)		45,000
		Borrowed cash on note payable.		
b. Journal Entry		Land (A+)	40,000	
		Cash (A–)		40,000
		Purchased land.		
c. Journal Entry		Cash (A+)	5,000	
		Service revenue (R+)		5,000
		Performed service and received cash.		
d. Journal Entry		Supplies (A+)	300	
		Accounts payable (L+)		300
		Purchased supplies on account.		
e. Journal Entry		Accounts receivable (A+)	2,600	
		Service revenue (R+)		2,600
		Performed service on account.		
f. Journal Entry		Accounts payable (L–)	1,200	
		Cash (A–)		1,200
		Paid on account.		
g. Journal Entry		Salary expense (E+)	3,000	
		Rent expense (E+)	1,500	
		Interest expense (E+)	400	
		Cash (A–)		4,900
		Paid expenses.		
h. Journal Entry		Cash (A+)	3,100	
		Accounts receivable (A–)		3,100
		Received cash on account.		
i. Journal Entry		Utilities expense (E+)	200	
		Accounts payable (L+)		200
		Received utility bill.		
j. Journal Entry		Marc Harper, Withdrawals (W+)	1,800	
		Cash (A–)		1,800
		Owner withdrawal.		

Requirement 3

ASSETS

Cash

Bal	26,000	(b)	40,000
(a)	45,000	(f)	1,200
(c)	5,000	(g)	4,900
(h)	3,100	(j)	1,800
Bal	31,200		

Accounts receivable

Bal	4,500	(h)	3,100
(e)	2,600		
Bal	4,000		

Supplies

(d)	300	
Bal	300	

Land

(b)	40,000	
Bal	40,000	

LIABILITIES

Accounts payable

(f)	1,200	Bal	2,000
		(d)	300
		(i)	200
		Bal	1,300

Note payable

	(a)	45,000
	Bal	45,000

OWNER'S EQUITY

Marc Harper, Capital

	Bal	28,500

Marc Harper, Withdrawals

(j)	1,800	
Bal	1,800	

REVENUE

Service revenue

	(c)	5,000
	(e)	2,600
	Bal	7,600

EXPENSES

Salary expense

(g)	3,000	
Bal	3,000	

Rent expense

(g)	1,500	
Bal	1,500	

Interest expense

(g)	400	
Bal	400	

Utilities expense

(i)	200	
Bal	200	

Requirement 4

HARPER SERVICE CENTER
Trial Balance
March 31, 2009

Account Title	Balance Debit	Balance Credit
Cash	$31,200	
Accounts receivable	4,000	
Supplies	300	
Land	40,000	
Accounts payable		$ 1,300
Note payable		45,000
Marc Harper, Capital		28,500
Marc Harper, Withdrawals	1,800	
Service revenue		7,600
Salary expense	3,000	
Rent expense	1,500	
Interest expense	400	
Utilities expense	200	
Total	$82,400	$82,400

Review Recording Business Transactions

Accounting Vocabulary

Account (p. 64)
The detailed record of the changes in a particular asset, liability, or owner's equity during a period. The basic summary device of accounting.

Accrued liability (p. 65)
A liability for which the business knows the amount owed but the bill has not been paid.

Chart of Accounts (p. 66)
A list of all the accounts with their account numbers.

Compound journal entry (p. 78)
Same as a journal entry, except this entry is characterized by having multiple debits and/or multiple credits. The total debits still equal the total credits in the compound journal.

Credit (p. 68)
The right side of an account.

Debit (p. 68)
The left side of an account.

Journal (p. 64)
The chronological accounting record of an entity's transactions.

Ledger (p. 64)
The record holding all the accounts.

Normal Balance (p. 73)
The balance that appears on the side of an account—debit or credit—where we record increases.

Notes Payable (p. 65)
Represents debts the business owes because it signed promissory notes to borrow money or to purchase something.

Note Receivable (p. 65)
A written promise for future collection of cash.

Posting (p. 71)
Copying amounts from the journal to the ledger.

Prepaid expenses (p. 65)
Expenses paid in advance of their use.

T-account (p. 68)
Summary device that is shaped like a capital "T" with debits posted on the left side of the vertical line and credits on the right side of the vertical line.

Trial Balance (p. 64)
A list of all the accounts with their balances.

Quick Check

1. Which sequence correctly summarizes the accounting process?
   a. Post to the accounts, journalize transactions, prepare a trial balance
   b. Journalize transactions, prepare a trial balance, post to the accounts
   c. Journalize transactions, post to the accounts, prepare a trial balance
   d. Prepare a trial balance, journalize transactions, post to the accounts

2. The left side of an account is used to record:
   a. Increases
   b. Debits
   c. Credits
   d. Debit or credit, depending on the type of account

3. Suppose Frazier has receivables of $63,000, furniture totaling $198,000, and cash of $45,000. The business has a $108,000 note payable and owes $84,000 on account. How much is Frazier's owner's equity?
   a. $114,000
   b. $192,000
   c. $24,000
   d. $306,000

4. Your business purchased supplies of $1,000 on account. The journal entry to record this transaction is:

   a.
   | Supplies | 1,000 | |
   | Accounts receivable | | 1,000 |

   b.
   | Accounts payable | 1,000 | |
   | Supplies | | 1,000 |

c.

Inventory	1,000	
Accounts payable		1,000

d.

Supplies	1,000	
Accounts payable		1,000

5. Which journal entry records your payment for the supplies purchase described in Quick Check question 4?

a.

Accounts payable	1,000	
Cash		1,000

b.

Cash	1,000	
Accounts payable		1,000

c.

Accounts payable	1,000	
Accounts receivable		1,000

d.

Supplies	1,000	
Cash		1,000

6. Posting a $1,000 purchase of supplies on account appears as follows:

a.

Supplies		Accounts receivable	
1,000			1,000

b.

Cash		Supplies	
	1,000	1,000	

c.

Supplies		Accounts payable	
1,000			1,000

d.

Supplies		Accounts payable	
	1,000	1,000	

7. You paid $500 for supplies and purchased additional supplies on account for $700. Later you paid $400 of the accounts payable. What is the balance in your Supplies account?

a. $1,200

b. $1,600

c. $500

d. $800

8. Quick Copies recorded a cash collection on account by debiting Cash and crediting Accounts payable. What will the trial balance show for this error?

a. Too much for expenses

b. Too much for liabilities

c. The trial balance will not balance

d. Too much for cash

9. Michael Daigle, Attorney, began the year with total assets of $122,000, liabilities of $71,000, and owner's equity of $51,000. During the year the business earned revenue of $109,000 and paid expenses of $36,000. The owner also withdrew $68,000. How much is the business's equity at year-end?

a. $56,000

b. $104,000

c. $160,000

d. $124,000

10. Wayne Robichaud, Attorney, began the year with total assets of $127,000, liabilities of $78,000, and owner's equity of $49,000. During the year the business earned revenue of $107,000 and paid expenses of $37,000. The owner also withdrew $67,000. How would Wayne Robichaud record expenses paid of $37,000?

a.
| Expenses | 37,000 | |
| Accounts payable | | 37,000 |

b.
| Accounts payable | 37,000 | |
| Cash | | 37,000 |

c.
| Cash | 37,000 | |
| Expenses | | 37,000 |

d.
| Expenses | 37,000 | |
| Cash | | 37,000 |

Answers are given after Apply Your Knowledge (p. 122).

Assess Your Progress

▪ Short Exercises

S2-1 **(L. OBJ. 1) Using accounting vocabulary [5 min]**
Tighten your grip by filling in the blanks to review some key accounting definitions.

Rita Bowden is describing the accounting process for a friend who is a philosophy major. Rita states, "The basic summary device in accounting is the _____. The left side is called the _____ side, and the right side is called the _____ side. We record transactions first in a _____. Then we post (copy the data) to the _____. It is helpful to list all the accounts with their balances on a _____."

S2-2 **(L. OBJ. 1) Using accounting vocabulary [10 min]**
Accounting has its own vocabulary and basic relationships.

Requirement

1. Match the accounting terms on the left with the corresponding definitions on the right. (Challenge)

_____ 1. Equity	A. Record of transactions
_____ 2. Debit	B. An asset
_____ 3. Expense	C. Left side of an account
_____ 4. Net income	D. Side of an account where increases are recorded
_____ 5. Ledger	E. Copying data from the journal to the ledger
_____ 6. Posting	F. Using up assets in the course of operating a
_____ 7. Normal balance	business
_____ 8. Payable	G. Always a liability
_____ 9. Journal	H. Revenues – Expenses = _____
_____ 10. Receivable	I. Book of accounts
	J. Assets – Liabilities = _____