

## Chapter 2

### Measurement Concepts: Recording

#### Business Transactions

##### Learning Objectives

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1. *Explain how the concepts of recognition, valuation, and classification apply to business transactions.*
2. *Explain the double-entry system and the usefulness of T accounts in analyzing business transactions.*
3. *Demonstrate how the double-entry system is applied to common business transactions.*
4. *Prepare a trial balance and describe its value and limitations.*
5. *Record transactions in the general journal, and post transactions to the ledger.*
6. *Explain why ethical financial reporting depends on proper recording of business transactions.*
7. *Show how the timing of transactions affects cash flows and liquidity.*

##### Section 1: Concepts

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##### Concepts

- Recognition
- Valuation
- Classification

### Lecture Outline

- I. Three measurement issues must be resolved before a business transaction is recorded.
  - A. Recognition issue—When should the transaction be recorded?
  - B. Valuation issue—What dollar amount should be recorded?
  - C. Classification issue—Which accounts are affected?
- II. A sale is recognized when title passes to the buyer (recognition point).
- III. Transactions should be recorded at their original cost (historical cost).
  - A. The fair value is the exchange price, which results from an agreement between the buyer and seller that can be verified by evidence at the time of the transaction.
  - B. Assets normally remain on the books at their initial fair value or cost until they are sold, expired, or consumed. Only for certain classes of assets will an adjustment be made if there is evidence that the fair value has changed.
- IV. Transactions must be classified according to the appropriate categories or accounts.

## Summary

Before recording a **business transaction** (economic events that should be recorded in the accounting records), the accountant must determine three things:

1. When the transaction occurred (the **recognition** issue)
2. What value to place on the transaction (the **valuation** issue)
3. How the components of the transaction should be categorized (the **classification** issue)

A sale is recognized (entered in the accounting records) when the title to merchandise passes from the supplier to the purchaser, regardless of when payment is made or received. This is called the *recognition point*.

**Valuation** is the process of assigning a monetary amount to business transactions and the resulting assets and liabilities. Generally accepted accounting principles state that all business transactions should be valued at fair value when they occur. **Fair value** is the exchange price of an actual or potential business transaction between market participants. Recording transactions at the exchange price at the point of recognition is called the **cost principle**.

Every business transaction is classified by means of categories called *accounts*. Each asset, liability, stockholders' equity, revenue, and expense has a separate account.

Recognition, valuation, and classification are important factors in ethical financial reporting. These guidelines are intended to help managers meet their obligations to the company's stockholders and to the public.

### *Relevant Examples and Exhibits*

- Exhibit 1 Concepts Underlying Business Transactions
- International Perspective: The Challenge of Fair Value Accounting

## Teaching Strategy

Many students approach the topic of measurement (as well as accounting itself) as though it is fairly cut-and-dried. Nevertheless, they must realize that there are often several ways to approach the recognition, valuation, and classification issues but only one typically follows GAAP. Emphasize that the recognition problem is not always easily solved and that the historical cost principle is somewhat controversial.

Explain why a business transaction cannot be recorded until the three measurement issues have been addressed.

Emphasize that as a user of financial statements, it is important to understand that the balance sheet does not aim to show what a business is worth. Give an example using land or a building, which generally increases in value over time.

Mention some exceptions to the basic recognition rule of recording transactions only when title transfers. Short Exercise 3 in the text illustrates this learning objective. You may also present a basic journal entry and ask students to point out the portion of the journal entry that refers to recognition, valuation, and classification. Short Exercise 2 provides an excellent opportunity for students to integrate recognition, valuation, and classification issues.

## **Section 2: Accounting Applications**

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### **Accounting Applications**

- Record business transactions
- Prepare the trial balance

### **Lecture Outline**

- I. Describe the nature of the double-entry system of accounting.
  - A. Principle of duality
- II. Accounts are the basic storage units for accounting data and are used to accumulate amounts from similar transactions.
- III. Chart of accounts
  - A. An account is the basic storage unit for accounting data.
  - B. An account occupies its own page in the general ledger.
  - C. A chart of accounts lists all the accounts in the ledger.
  - D. Discuss typical asset accounts, such as Cash, Accounts Receivable, Notes Receivable, Supplies, Inventory, Prepaid Expenses, Land, Buildings, and Equipment.
  - E. Discuss typical liability accounts, such as Accounts Payable, Notes Payable, Wages Payable, Income Taxes Payable, Rent Payable, Interest Payable, and Unearned Revenue.
- IV. A T account (the simplest form of an account) has three parts.
  - A. A title expressing the name of the asset, liability, etc.
  - B. A debit (left) side
  - C. A credit (right) side
- V. Demonstrate how account balances are determined.
- VI. State the rules of double entry.
  - A. Increases in assets are debited.
  - B. Decreases in assets are credited.
  - C. Increases in liabilities and stockholders' equity are credited.
  - D. Decreases in liabilities and stockholders' equity are debited.
  - E. Increases in revenues are credited.
  - F. Increases in expenses are debited.
- VII. The normal balance of an account is what it takes (debit or credit) to increase the account.
- VIII. Discuss typical stockholders' equity accounts, such as Common Stock, Retained Earnings, Dividends, and how Revenues and Expenses affect Stockholders' Equity.
- IX. There are six steps in the accounting cycle:
  - A. Analyze transactions from source documents to decide which account(s) to debit and which account(s) to credit.
  - B. Record/Journalize transactions.
  - C. Post entries to the ledger, and prepare an adjusted trial balance.
  - D. Make end-of-period adjustments, and prepare an adjusted trial balance.
  - E. Prepare financial statements.
  - F. Close the accounts, and prepare a post-closing trial balance.
- X. Explain the five-step process for analyzing and applying transactions.
  - A. State the transaction.
  - B. Analyze the transaction to determine which accounts are affected and how (increased or decreased).

- C. Apply the rules of double-entry accounting using T accounts to show how the transaction affects the accounting equation.
  - D. Show the transaction in journal form.
  - E. Provide a comment that will help you apply the rules of double-entry accounting.
- XI. A trial balance tests the equality of debits and credits in the ledger before the financial statements are prepared. A three-step process is followed.
- A. List each ledger account that has a balance with its debit or credit balance.
  - A. Add each column.
  - B. Compare the column totals.
- II. If the trial balance does not balance, one or more of the following has occurred:
- A. A debit was entered as a credit, or vice versa.
  - B. A balance was computed incorrectly.
  - C. A balance was carried to the trial balance incorrectly. For example, transposing two digits when transferring an amount.
  - D. The trial balance was summed incorrectly.
  - E. Recording an account as a credit when it usually carries a debit balance, or vice versa, causes the trial balance to be out of balance by an amount divisible by 2.
  - F. Transposing two digits when transferring an amount to the trial balance. This error causes the trial balance to be out of balance by an amount divisible by 9.
- XIII. Recording and Posting Transactions
- A. Transactions are initially recorded in a journal (simplest and most flexible kind is the general journal).
  - B. Every journal entry contains five components.
    - 1. The date
    - 2. The account names
    - 3. The dollar amounts debited and credited
    - 4. An explanation
    - 5. The account identification number or checkmark, as appropriate after posting
  - C. The general ledger is used to update each account.
    - 1. Uses the T account form.
    - 2. Journal entries are posted (transferred) to the general ledger when convenient (usually daily).
      - a. In the ledger, locate the debit account named in the journal entry.
      - b. Enter the date of the transaction in the ledger and, in the Post. Ref. column, the journal page number from which the entry comes.
      - c. In the Debit column of the ledger account, enter the amount of the debit as it appears in the journal.
      - d. Calculate the account balance and enter it in the appropriate Balance column.
      - e. Enter in the Post. Ref. column of the journal the account number to which the amount has been posted.
    - 3. Rules and customs regarding ruled lines, dollar signs, commas, and periods should be followed.

## Summary

The **double-entry system** of accounting requires that each transaction be recorded with at least one debit and one credit, and that the total dollar amount of the debits must equal the total amount of the credits.

**Accounts** are the basic storage units for accounting data and are used to accumulate amounts from similar transactions. All of a company's accounts are contained in a book called the **general ledger**, or simply the *ledger*. In a manual system, each account appears on a separate

page, and the accounts generally are in the following order: assets, liabilities, stockholders' equity, revenues, and expenses. A listing of the accounts with their respective account numbers, called a **chart of accounts**, is presented at the beginning of the ledger for easy reference.

Although the accounts used by companies vary, some are common to most businesses. Typical asset accounts are Cash, Accounts Receivable, Notes Receivable, Prepaid Expenses, Land, Buildings, and Equipment. Typical liability accounts are Accounts Payable and Notes Payable.

An account in its simplest form, a **T account**, has three parts:

1. A title, which identifies the asset, liability, or stockholders' equity account
2. A left side, which is called the **debit** side
3. A right side, which is called the **credit** side

At the end of an accounting period, the accountant must determine the **account balance** in each account to prepare the financial statements. Three steps are followed to determine account balances:

1. Foot (add up) the debit entries. The **footing** (total) should be written in small numbers beneath the last entry.
2. Foot the credit entries.
3. Subtract the smaller total from the larger. A debit balance exists when total debits exceed total credits; a credit balance exists when the opposite is the case.

To determine which accounts are debited and which are credited in a given transaction, the accountant uses the following rules:

1. Increases in assets are debited.
2. Decreases in assets are credited.
3. Increases in liabilities and stockholders' equity are credited.
4. Decreases in liabilities and stockholders' equity are debited.
5. Revenues increase stockholders' equity and are therefore credited.
6. Expenses decrease stockholders' equity and are therefore debited.

When more increases than decreases have been recorded for an account (the usual case), its balance (debit or credit) is referred to as its **normal balance**. For example, assets have a normal debit balance. Typical Stockholders' equity accounts are Common Stock, Retained Earnings and Dividends. A separate account is kept for each type of revenue and expense. The exact revenue and expense accounts used vary depending on the type of business and the nature of its operations.

The steps in the **accounting cycle** are as follows:

1. Analyze business transactions from source documents.
2. Record the entries in the journal.
3. Post the entries to the ledger, and prepare a trial balance.
4. Adjust the accounts, and prepare an adjusted trial balance.
5. Prepare financial statements.
6. Close the accounts and prepare a post-closing trial balance.

Analyzing and applying transactions is a five-step process:

7. State the transaction.
2. Analyze the transaction to determine which accounts are affected. Information about transactions comes from **source documents**, such as invoices, checks, receipts, and contracts.
3. Apply the rules of double-entry accounting by using T accounts to show how the transaction affects the accounting equation.
4. Show the transaction in **journal form**. In journal form, the date, the debit account, and the debit amount are recorded on one line and the credit account (indented) and credit amount are recorded on the next line.
5. Provide a comment that will help you apply the rules of double-entry accounting. The following journal entries are introduced in this

section:

Cash	XX (amount invested)
Common Stock	XX (amount invested)
Stockholder(s) invested cash in the business	
Prepaid Rent	XX (amount paid)
Cash	XX (amount paid)
Paid rent in advance	
Office Supplies	XX (amount paid)
Accounts Payable	XX (amount paid)
Purchase of office supplies on credit	
Office Equipment	XX (purchase price)
Cash	XX (amount paid)
Accounts Payable	XX (amount to be paid)
Purchased office equipment with partial payment	
Accounts Payable	XX (amount paid)
Cash	XX (amount paid)
Made partial payment on a liability	
Cash	XX (amount received)
Design Revenue	XX (amount earned)
Received payment for services rendered	
Accounts Receivable	XX (amount to be received)
Design Revenue	XX (amount earned)
Rendered service on credit	
Cash	XX (amount received)
Unearned Design Revenue	XX (amount to be earned)
Received payment for services to be performed	
Cash	XX (amount received)
Accounts Receivable	XX (amount received)
Received payment for services previously performed	

Wages Expense	XX (amount incurred)
Cash	XX (amount paid)
Paid wages for the period	
Utilities Expense	XX (amount incurred)
Accounts Payable	XX (amount to be paid)
Received utility bill to be paid later	
Dividends	XX (amount withdrawn)
Cash	XX (amount paid)
Cash payments to stockholders	

Assets may be paid for partly in cash and partly on credit. A journal entry in which more than two accounts are involved is called a **compound entry** because a portion of the entry is properly classified in two or more accounts.

Before financial statements are prepared, the accountant must double-check the equality of the debits and credits in the accounts. This is done formally by means of a **trial balance**. If the trial balance does not balance, one or more errors have been made in the journal, ledger, or trial balance. Once the errors have been located and the trial balance is in balance, the financial statements can be prepared. It is possible, however, to make errors that do not cause the trial balance to be out of balance (that is, errors that are not detected through the trial balance).

As transactions occur, they (**journal entries**) are recorded initially and chronologically in a book called the **journal**. The **general journal** is the simplest and most flexible type of journal. Each transaction **journalized** (recorded) in the general journal contains (1) the date, (2) the account names, (3) the dollar amounts debited and credited, (4) an explanation, and (5) the account identification numbers or checkmarks, as appropriate after posting. A line should be skipped between each journal entry, and more than one debit or credit may be entered for a single transaction.

In the construction of a ledger in practice, the **ledger account form**, rather than the T account form, is used. The four-column type is illustrated in the text.

All journal entries must be posted to the ledger accounts. **Posting** is a transferring process that results in an updated balance for each account. Not only must the dates and amounts be transferred and new account balances computed, but the Post. Ref. columns must also be used for cross-referencing between the journal and the ledger.

Ruled lines appear in financial reports before each subtotal, and a double line is customarily placed below the final amount. Although dollar signs are required in financial statements, they are omitted in journals and ledgers. On ruled paper, commas and periods are omitted, and a dash is customarily used to designate zero cents.

#### **Relevant Examples and Exhibits**

- Exhibit 2 Chart of Accounts for a Small Business
- Exhibit 3 Normal Account Balances of Major Account Categories
- Exhibit 4 Relationships of Stockholders' Equity Accounts
- Exhibit 5 Overview of the Accounting Cycle
- Business Perspective: No Dollar Amount: How Can That Be?
- Exhibit 6 Summary of Transactions of Blue Design Studio, Inc.
- Exhibit 7 Trial Balance
- Exhibit 8 The General Journal
- Exhibit 9 Accounts Payable in the General Ledger

- Exhibit 10 Posting from the General Journal to the Ledger
- Exhibit 11 Formatting Guidelines
- Exhibit 12 Transaction Effects on Accounting Equation

### Teaching Strategy

Students will wonder why the rules of debit and credit are as they are. Simply state they are an arbitrary set of rules whose careful interrelationships make them work. In addition, students need to dispel any preconceived notions as to what debit and credit imply (good, bad, and so on). One way to accomplish this is to make an imaginary T account of the classroom. Students are assigned roles (debit or credit) depending on which side of the room they are seated. Ask the debits if they like being debits or would they rather be credits. If a student indicates a preference, ask why. It may indicate a misconception about what debit and credit really mean. Tell students who work in a bank to reverse what they have learned about debits and credits. Finally, explain the beauty of the double-entry system.

Refer students to Exhibit 2, stressing that the chart of accounts is merely a table of contents to the ledger. Point out the traditional order of accounts (the same as in the ledger) and the need for flexibility in the numbering scheme. In addition, state the restrictive nature of the accounts— that is, students must use the exact titles that have been established and cannot use phrases for account names (such as “cash paid” or “equipment purchased”).

It may be useful to again define asset, liability, and stockholders' equity before discussing the individual accounts. While you discuss the accounts, emphasize that establishing account names for a business is a flexible process (and that similar items are frequently “lumped together” into one account). Students often do not distinguish accounts from transactions at this point. Clarify the difference.

Students need to know that transactions are not recorded in T accounts in practice, but T accounts are used by accountants to analyze complex transactions.

Memorization and repetition are the keys to mastering the rules of debit and credit. Drill students until they know the rules perfectly. The double-entry rules do not require as much memorization as students often think. Point out that if they know the accounting equation and that assets are increased with debits, they can reason through the rest of it. For example, liabilities and stockholders' equity must be increased with credits because they are on the opposite side of the equation. Accounts that increase stockholders' equity (e.g., revenues) have the same rules, whereas accounts that decrease stockholders' equity (e.g., expenses, withdrawals) have the opposite rules.

Lead students through the process of determining account balances. Point out that negative balances do not exist. The balance in an account is simply the absolute difference between the debits and credits. Exercise 3A is excellent for reinforcing account terminology, classification, and normal balances.

Use Exhibit 5 to review the steps in the accounting cycle.

Tell students they must answer (at least in their minds) the following questions before preparing a journal entry:

1. What is the transaction in words?
2. Which accounts are involved, and how are they classified (asset, liability, etc.)?
3. Is each account increased or decreased?
4. Based on the foregoing answers, which rules of debit and credit apply,

and what is the correct journal entry?

## Chapter 2: Measurement Concepts: Recording Business Transactions Instructor's

Writing out the answers to these four questions for every transaction analyzed is helpful at first. Short Exercises 5 and 6 and Exercise 4A or 6A are helpful to quickly illustrate transaction analysis. Analyzing the transactions in Problems 2, 3, 4, 5, 7, and 10 in terms of debits and credits is helpful for driving home the point.

Students need to know that a trial balance is not a financial statement to be published and that it is prepared only at the end of the accounting period. They also need to know that it tests the equality of the ledger before financial statement preparation and that, even if it balances, it may show an incorrect balance.

Point out that the accounts are listed in Exhibit 7 in the same order in which they are listed in the ledger. Emphasize that only account balances are entered, not footings. Tell students that if a zero balance exists, the account need not be listed in the trial balance.

Short Exercise 7 and Exercises 10A and 12A give students the opportunity to prepare a trial balance and to recognize which errors cause it to be out of balance. Assigning Problem 5 or 10 is an excellent way to tie all the concepts together.

It is assumed that students have read the entire chapter and thus have knowledge of a journal and a ledger. Point out how difficult, if not impossible, it would be to prepare financial statements directly from the journal (that is, without the use of a ledger). In effect, a ledger is merely a filing system in which each account occupies its own page. Pass around a general ledger from a manual system and a printout from a computerized system.

At this point, students may be confused about the proper order of procedure. Explain that, even though the financial statements and ledger were introduced before the journal, the correct order of procedure at this point is (1) analyze the transactions, (2) enter transactions into the general journal, (3) post from the journal to the ledger, and (4) prepare the trial balance.

Students need to be shown the formatting conventions normally employed with the general journal (such as proper use of the amount columns, placement of all debits first, indentation of credits, skipping of a space between entries, and so on). They will worry about what exactly to include in the explanation. Exercise 8A and Problems 5 and 10 provide good practice in preparing journal entries.

Contrast the general journal form (Exhibit 8) with the general ledger form (Exhibit 9). Acknowledge that transactions are recorded twice.

Suggest to students that we do away with the journal and just keep a ledger. What would be missing? Then suggest we do away with the ledger. What information would be lacking? A helpful analogy is to have them picture the general journal as a bagful of mail and the general ledger as several slots into which the mail (journal entries) is sorted.

Point out that posting is not difficult. All of the analysis has already been done. Posting is a clerical process. Explain that journalizing and posting occur simultaneously in a computerized system.

Common errors that students make regarding the ledger are to skip a line between postings and to make use of the Item column when it is normally ignored.

When posting, students may either forget to use or be confused about the Post. Ref. columns in the general journal and ledger. In addition, they need to know how to compute an account balance (that is, how to add a debit to a debit balance, to add a credit to a credit balance, and to subtract with a debit-credit combination). Refer to Exhibit 10 as you explain the posting procedure.

## Section 3: Business Applications

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### Business Applications

- Ethics
- Cash flows
- Liquidity

### Lecture Outline

- I. Remind students that three measurement issues must be resolved before a business transaction is recorded.
  - A. *Recognition* issue—When should the transaction be recorded?
    1. A sale is recognized when title passes to the buyer (recognition point).
  - A. *Valuation* issue—What dollar amount should be recorded?
    1. Transactions should be recorded at their original cost (historical cost).
  - A. *Classification* issue—Which accounts are affected?
    1. Transactions must be classified according to the appropriate categories or accounts.
  - D. Recognition, valuation, and classification are important factors in ethical financial reporting.
- II. Discuss the importance of maintaining good liquidity.
- III. Discuss the timing of cash flows in maintaining a company's adequate liquidity to pay bills.

### Summary

Before recording a business transaction, the accountant must determine three things:

1. When the transaction occurred (the *recognition* issue)
2. What value to place on the transaction (the *valuation* issue)
3. How the components of the transaction should be categorized (the *classification* issue)

A sale is recognized (entered in the accounting records) when the title to merchandise passes from the supplier to the purchaser, regardless of when payment is made or received. This is called the **recognition point**.

Prior to the recognition point, there has not been an economic event that should be recorded as a business transaction. Examples of events that should not be recorded as business transactions are:

- A customer inquires about the availability of a product
- A company hires a new employee
- A company signs a contract to provide a service in the future.

The dollar value of any item involved in a business transaction is its original **cost** (also called **historical cost**).

Every business transaction is classified by means of categories called **accounts**. Each asset, liability, stockholders' equity, revenue, and expense has a separate account. By the simple violation of the guidelines for classification, companies have recorded as assets their expenditures that should have been classified as expenses, thus understating expenses and overstating income.

Recognition, valuation, and classification are important factors in ethical financial reporting. These guidelines are intended to help managers meet their obligations to the company's owners and to the public.

Because the timing of cash flows is critical to maintaining adequate liquidity to pay bills, users of financial information must understand the difference between transactions that generate cash and those that do not. To maintain liquidity, the management of a company must carefully plan the company's needs for cash.

***Relevant Examples and Exhibits***

- Business Perspective: Accounting Policies: Where Do You Find Them?
- Exhibit 13 Transactions of Blue Design Studio, Inc.

**Teaching Strategy**

Reinforce the importance of recognition, valuation, and classification – concepts first discussed in Chapter 1.<sup>1</sup>

Many students approach the topic of measurement (as well as accounting itself) as though it is fairly cut-and-dried. Nevertheless, they must realize that there are often several ways to approach the recognition, valuation, and classification issues, only one of which typically follows GAAP. Emphasize that the recognition problem is not always easily solved and that the historical cost principle is somewhat controversial.

Explain why a business transaction cannot be recorded until the three measurement issues have been addressed.

Emphasize that as a user of financial statements, it is important to understand that the balance sheet does not aim to show what a business is worth. Give an example using land or a building, which generally increases in value over time.

Mention some exceptions to the basic recognition rule of recording transactions only when title transfers. Short Exercise 3, Exercises 1A and 15A, or Cases 1 and 7 illustrate the recognition point. You may also present a basic journal entry and ask students to point out the portion of the journal entry that refers to recognition, valuation, and classification. Short Exercise 2 provides an excellent opportunity for students to integrate recognition, valuation, and classification issues.

Walk students through Exhibit 13, stressing the roles of Accounts Receivable and Accounts Payable in managing cash flows and liquidity. Then assign Exercise 16A and use Case 4 for class discussion.

**Student Engagement Tactics**

1. Use a Jeopardy game format to reinforce student comprehension of account classifications and normal balances. At least one class prior to the game, let students know about the game and the learning objectives to be covered.
  2. Students could form their own teams between classes. Specify team size. (Three is recommended.) Remind teams that they must sit together in class. The first group member to class picks team seats, which have been labeled by the instructor with tags showing large-print numbers. Students wear tags during the game to make scoring easier.
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3. Using information from exercise 3A (and elsewhere), prepare a list of account items, such as "accounts payable classification" or "inventory normal balance." Responses could be in *Jeopardy* form, such as "What is a liability?" or "What has a normal debit balance?" Particularly tough questions could be identified as Double Jeopardy items worth double points—for example, having to answer both account classification and normal balance within the timelimit.
4. As a preliminary round, call out an account and have each group member write the classification and/or normal balance on a piece of paper. Each individual score will be treated as part of a team grade. Emphasize that answers must be legible so that another team can grade it. If an answer can't be read, it will be counted as incorrect. If you want to make it tougher, make the time limit to answer ten seconds or less. A stopwatch is helpful.
5. To determine who moves on to the final round, have Team 1 give its answer sheet to Team 2, Team 2 to Team 3, etc., until the last team gives its answer sheet to Team 1. Each correct answer wins one point. Double Jeopardy answers are worth two points.
6. The teams with the highest scores for round one move to the final round. Assign team names or keep the same team numbers. Tags with the group name/number should be easily visible from the scorers' viewpoint. Ask one or two trusted students to keep score.
7. In the final round, ask one team at a time a different question to be answered within five seconds. A limited use of recycled questions is okay as long as the same team does not get the same question. This process continues for a stated number of rounds. "Sudden death" could be played if more than one team remains.
8. Consider performance-based rewards. For example, the members of the team with the highest score could be granted bonus quiz points or have a quiz waived. Additionally, you could honor winners as reigning team champions, presenting them with first-place ribbons.