



CHAPTER 2

Approaching College Reading and Developing a College-Level Vocabulary

CHAPTER OBJECTIVES

In this chapter you will learn the answers to these questions:

- What do I need to know about the reading process?
- How can I improve my reading?
- Why should I make predictions as I read?
- How can I monitor my comprehension while I read?
- What do I need to know about adjusting my reading rate?
- How can I develop a college-level vocabulary?
- What are denotations and connotations?
- What is figurative language?

SKILLS

Understanding the Reading Process**Improving Your Reading**

- Predicting as You Read
- Monitoring Your Comprehension
- Adjusting Your Reading Rate

Developing a College-Level Vocabulary

- Using Context Clues
- Using Word-Structure Clues
- Using a Dictionary Pronunciation Key
- Understanding Denotations and Connotations of Words
- Understanding Figurative Language

CREATING YOUR SUMMARY

Developing Chapter Review Cards

READINGS

Selection 2-1: (*Mass Communication*)

“Music Revolution: Napster and Recording in the Digital Age” from *The Dynamics of Mass Communication: Media in the Digital Age* by Joseph R. Dominick

Selection 2-2: (*Literature*)

“The Yellow Ribbon”
by Pete Hamill

Selection 2-3: (*Biology*)

“A Whale of a Survival Problem” from *The Nature of Life*
by John Postlethwait and Janet Hopson

To read without reflecting is like eating without digesting.

Edmund Burke

The difference between the almost-right word and the right word is really a large matter—it's the difference between the lightning bug and the lightning.

Mark Twain

UNDERSTANDING THE READING PROCESS

Understanding the reading process can make you a better reader and help you study more effectively. You should be aware of these important points about reading:

- 1. Reading is a form of thinking.** It is your brain that does the reading, not your eyes. Your eyes merely transmit images to the brain for it to interpret. (To understand this, consider a blind person reading Braille: in this case, the fingertips transmit input to the brain.) Therefore, improving your reading means improving your thinking. Remember that meaning resides in the reader's mind, not in symbols printed on a page. It is the readers who construct meaning by associating their knowledge and experience with what is on the printed page.
- 2. Reading requires no unique mental or physical abilities.** The processes you typically use when you read are the same processes of vision, reasoning, and memory that you use in other areas of your daily life.
- 3. The reading process includes three stages.** The three stages of reading are *preparing yourself to read*, *processing information*, and *reacting to what you read*. These stages overlap, but all three are needed for the reading process to be complete. In Chapter 3, this process will be explained as it applies to college reading.
- 4. Effective reading is active and interactive.** Effective reading requires that you interact with the material you are reading. One way to interact with an author's ideas is to mentally ask yourself questions as you read and then seek answers to these questions. Another way to interact with material you are reading is by relating your own experience and knowledge to the author's ideas. Reading actively also means being aware of how the material is organized. Finally, active reading means that you *monitor your comprehension* as you read and that you take steps to correct the situation when you are not comprehending. (Monitoring your comprehension will be discussed later in this chapter.)
- 5. Comprehension problems often result from a reader's lack of background knowledge.** Many comprehension problems are not strictly reading comprehension problems but instead are more general comprehension problems that occur when the reader lacks sufficient background knowledge. To put it another way, comprehension problems occur when a reader does not possess enough information about a subject to understand what an author is saying about it. This means that if you are having difficulty

Developing strong reading and vocabulary skills will make you more successful in college.



understanding new or unfamiliar material, you may need to increase your background knowledge. (For example, you could read a simplified explanation in an encyclopedia first.) Finding out more about an unfamiliar topic can often clear up this kind of problem. It stands to reason that the greater the amount of background knowledge you have, the more things you can understand. Every bit of information you acquire can help you learn new information more efficiently and easily.

6. **Comprehension, background knowledge, and reading rate are interrelated.** The more you know about a topic and the better you understand the material, the faster you can read it. Conversely, if you know very little about a topic, you must reduce your reading rate. For this reason, it is meaningless to try to improve your reading rate by artificial means, such as moving your eyes or hand down the page in a certain manner. Reading rate is a by-product of comprehension. To be precise, the goal is to *comprehend* more rapidly (efficiently). This is the work of the brain and does not depend on special eye or hand movements.
7. **Your reading strategies should fit your purpose for reading.** You read for many different purposes, and your reason for reading any particular material affects the way you approach it. (For example, your approach to reading a newspaper article or a letter from a friend will be different from your approach to reading and studying a college textbook.) You should choose reading strategies that fit your purpose.

With these things in mind, let's look at general ways you can improve your reading and your reading rate.

IMPROVING YOUR READING

KEY TERM
predicting

Anticipating what is coming next as you read.

Predicting as You Read

Predicting means anticipating or making educated guesses about what is coming next as you read. Predicting is a natural part of reading, but you may not always do it when you are reading college textbooks. As you read an assignment, you should make a conscious effort to anticipate not only what is coming next, but also the author's writing pattern. (Chapter 7 discusses authors' writing patterns.)

Of course, when you preview a chapter or reading selection, you are predicting in a general way what it will be about and how the material is organized. (The title or heading usually tells you or gives you a clue.) However, when you actually read and study it carefully, you should continue to make predictions as you read. For example, if an author presents one side of an issue, you might predict that he or she is going to discuss the other side as well. If a paragraph in a psychology textbook begins with the question "Why do people have nightmares?" you would expect the author to explain the reason or reasons.

Predicting helps you concentrate and comprehend; it focuses your attention because it makes you want to keep reading to see if your prediction is correct. In other words, predicting helps you stay involved with the material you are reading.

Instead of passively waiting to see what comes up next when you are reading, try to anticipate what the author will say or present. You will discover that making predictions helps you become a more active and effective reader.

Monitoring Your Comprehension**KEY TERM**
monitoring your comprehension

Evaluating your understanding as you read and correcting the problem whenever you realize that you are not comprehending.

Monitoring your comprehension means periodically evaluating your understanding as you read and correcting the problem whenever you realize that you are not comprehending. You should monitor your comprehension whenever you read and study college textbooks. If you are reading a difficult textbook or section, you may need to monitor your comprehension paragraph by paragraph. At other times, you may need to stop and monitor at the end of each section.

To monitor your comprehension, follow this procedure:

- First, ask yourself, "*Am I understanding what I am reading?*"
- If you do not understand what you are reading, ask yourself, "*Why don't I understand?*"
- Once you determine why you are not comprehending, do whatever is necessary to correct the situation.

Specific types of comprehension problems and strategies for correcting them are listed in the box on page 78. Strive to make monitoring your comprehension a habit. After all, unless you comprehend what you are reading, you are not really reading.

COMPREHENSION MONITORING: STRATEGIES FOR CORRECTING COMMON COMPREHENSION PROBLEMS

Problems	Solutions
<p><i>I am not understanding because the subject is completely new to me. I do not have enough background knowledge.</i></p> <p>College reading frequently introduces you to subjects you have not learned about before. Textbooks frequently contain a great deal of new information.</p>	<ul style="list-style-type: none"> • Keep reading to see if the material becomes clearer. • Ask for a brief explanation from someone who is knowledgeable about the topic. • Read supplemental material or simpler material on the same topic (perhaps an encyclopedia, another textbook, or a book from the library) in order to build background knowledge.
<p><i>I am not understanding because there are too many words I do not know.</i></p> <p>College material contains unfamiliar words and specialized or technical vocabulary that you must learn. Also, college textbooks in general are written at a higher level than other materials.</p>	<ul style="list-style-type: none"> • Try to use the context (the rest of the sentence or paragraph) to figure out the meaning of an unfamiliar word. • Look up unfamiliar words in a dictionary or in the glossary at the back of the textbook. (Online dictionaries make this simple to do.) • Ask someone the meaning of unfamiliar words.
<p><i>I am not understanding because I am not concentrating as I read. I am allowing distractors to interfere with my concentration.</i></p> <p>Your mind may sometimes wander while you are reading long or difficult passages.</p>	<ul style="list-style-type: none"> • Identify what is bothering you. Is it a <i>physical distraction</i> (such as a noisy room or being tired), or is it a <i>psychological distraction</i> (such as being worried or daydreaming)? • Take some action that will help you deal with environmental distractions. For example, close the door or move to a quiet room. Turn off the television. Turn off the music. Don't answer your phone. • If you are worrying about finding time for other important tasks or errands, jot the items down on a To Do list. Then, after studying, tackle your To Do list. If you are worrying about a personal problem, tell yourself, "I'll address this after I finish studying." The point is to take some action to prevent distractors from interfering with your concentration as you are studying. • Make a conscious decision to concentrate on what you are reading. Concentration does not happen automatically.

Adjusting Your Reading Rate

Have you ever been asked, "What's your reading rate?" The fact is that each reader has, or should have, *several* reading rates. Reading everything at the same rate is a sign of poor reading. "Reading" at any rate without comprehending, even if the rate is a fast one, isn't really reading.

Having a range of reading rates is an important skill. You will find it helpful to begin developing flexibility in your reading rates right away. The information below provides a brief introduction to adjusting your reading rate. A range of reading rates and when to use each are presented in the box below.

Factors Influencing Reading Rate: Purpose and Difficulty

In order to be a flexible, efficient reader you must adjust your reading rate according to two factors: your *purpose* for reading and *how difficult* the material is for you.

Obviously, you read for many different purposes. For instance, your purpose in reading a textbook chapter may be to understand and learn the material thoroughly and study for a test. Or there may be some specific bit of information you are searching for, such as the definition of a term in a textbook, a name in an index, or the starting time of a movie in a newspaper listing. Sometimes, of course, you read a magazine or a book just for pleasure.

What determines how difficult material will be for you to read? Actually, there are several factors, such as vocabulary level, writing style, and “idea density.” The most important factor, however, is your background knowledge, or *how much you already know about the subject*. If you are reading about computers, for instance, and you already know a great deal about them, then you will easily understand the terms and concepts you encounter. The information will make much more sense to you than it would to someone who knows nothing about computers.

**FLEXIBLE READING:
INFORMATION-GATHERING RATES AND READING RATES**

	Approximate rate (wpm)	Uses
Information-gathering rates:		
Scanning	1,500 words per minute (wpm) or more	To find a particular piece of information (such as a name, date, or phone number)
Skimming	800–1,000 wpm	To get an overview of the highlights of the material
Reading rates:		
Rapid reading	300–500 wpm	For relatively easy material; when you want only important facts or ideas; for leisure reading

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	Approximate rate (wpm)	Uses
Reading rates:		
Average reading	200–300 wpm	For textbooks, complex magazines and journals, and literature
Study reading	50–200 wpm	For new vocabulary, complex concepts, technical material, and retaining details (such as legal documents, material to be memorized and material of great interest or importance)

When you are assigned to read a textbook chapter, you should preview it first. (The techniques that comprise previewing are presented in Chapter 3.) Ask yourself why you are reading it and how much you already know about the subject. If the material is new to you, then you will need to read more slowly. If you are very familiar with the subject, you can probably read at a much faster rate. The point is to read flexibly, adjusting your rate as needed.

Often, you must adjust your rate *as* you are reading. How can you tell when you should slow down and when you should speed up? The following lists describe situations in which you should do each.

When to Slow Down

Here are some situations in which you should slow down your reading:

- You know little or nothing about the topic.
- It is complicated or technical material that you need to learn.
- There are details you need to remember.
- There is new or difficult vocabulary in the selection.
- There are directions that you must follow.
- The material includes charts or graphs to which you must shift your attention as you read.
- The material requires you to visualize something in your mind (for example, visualizing a heart valve as you read a section in your biology text).
- Beautiful, artistic, descriptive, or poetic writing that invites you to linger and enjoy each word. (You may want to read such material aloud to yourself.)
- The material contains ideas you want to consider carefully (such as two sides of an argument) or “words to live by” (such as philosophical, religious, or inspirational writing).

When to Speed Up

Here are some situations in which you can speed up your reading:

- The whole passage is easy; there are no complicated sentences, no complex ideas, and no difficult terms.
- There is an easy passage within a longer, more difficult section.
- A passage gives an example of something you already understand, or merely explains it in different words.
- You are already knowledgeable about the topic.
- You want only main ideas and are not concerned about details.
- The material is not related to your purpose for reading (for example, a section of a magazine article that does not pertain to the topic you are researching).

Here is a technique for increasing your reading rate on leisure reading material:

1. Practice regularly with easy, interesting material, such as a newspaper, a magazine (like *Reader's Digest*), or a short, easy novel.
2. Read for 15 minutes each day, pushing yourself to read at a rate that is slightly too fast for you—in other words, a rate that is slightly uncomfortable. Once it becomes comfortable, push yourself a little more.
3. Strive for good concentration. If you are momentarily distracted, return immediately to your reading.
4. Keep track of the number of pages or articles you read each day.

As you continue to practice, you will find that you are able to read more in the same amount of time. You will also find that you can usually understand many of the important points in a passage even though you are reading it at a faster rate. There is another bonus: as you read each day, you will be adding to your background knowledge. This will enable you to read related material more effectively in the future.

DEVELOPING A COLLEGE-LEVEL VOCABULARY

Developing a powerful vocabulary is a process that takes time, but every time you read, you have an opportunity to expand your vocabulary. The more you read, the better your vocabulary can become—if you develop a real interest in words and their meanings. Remember that writers take special care to select words that convey precisely what they want to say.

Improving your vocabulary will make your college work easier, and your speech and your writing will become more interesting and more precise. If all that is not enough, your increased vocabulary may ultimately lead to an increased salary. Research tells us that the size of a person's vocabulary correlates with his or her income. Thinking of each word you learn as “money in the bank” may be an incentive for you to pay attention to new words and add them

to your vocabulary! And, needless to say, a broad vocabulary helps create a favorable impression in a job interview.

Here are three techniques that you can use to develop and expand your vocabulary as you read:

1. **Use context clues.** This means that you reason out the meaning of an unfamiliar word from clues provided by the surrounding words and sentences.
2. **Use word-structure clues.** That is, determine a word's meaning on the basis of its parts (prefix, root, and suffix).
3. **Use a dictionary.** Use a dictionary to determine a word's meaning (and perhaps pronunciation) as it is used in the passage you are reading.

The vocabulary exercises that follow each of the reading selections in *Opening Doors* will give you ongoing opportunities to use context clues and practice pronouncing words correctly.

KEY TERM context clues

Words in a sentence or paragraph which help the reader deduce (reason out) the meaning of an unfamiliar word.

Comprehension Monitoring Question for Vocabulary in Context

Are there clues within the sentence or surrounding sentences that can help me deduce the meaning of an unfamiliar word?

Using Context Clues

Writers want you to understand what they have written. When they use words that they think might be unfamiliar to their readers, they often help the reader by offering various clues in the rest of the sentence so that the reader can deduce (reason out) the meaning of the word. Such clues are called **context clues**. (The word *context* refers to the sentence and the paragraph in which the word appears.) Since context clues can help you figure out the meaning of an unfamiliar word, think of them as gifts the writer is giving you to make your job easier.

How can you take advantage of these “gifts”? You can do so by reading the sentence carefully and by paying attention to the words and other sentences surrounding the unfamiliar word. The most common types of context clues are summarized in the box below.

USING CONTEXT CLUES TO DETERMINE THE MEANING OF UNFAMILIAR WORDS

Example	Type of Clue	What to Ask Yourself	What to Look For
The psychological term inferiority is defined as a tendency toward looking within during middle age.	Definition clue	Are there <i>definition clues</i> and a definition?	Phrases that introduce a definition, such as: <i>is defined as, is called, is, is known as, that is, refers to, means, the term</i> ; a term that is in bold print, italics, or color; or certain punctuation marks that set off a definition or a term. (See page 381.)

Example	Type of Clue	What to Ask Yourself	What to Look For
The garden was redolent , or <i>fragrant</i> , with the scent of roses.	Synonym clue	Is there a <i>synonym</i> for the unfamiliar word? That is, is the meaning explained by a word or phrase that has a <i>similar meaning</i> ? The synonym may be set off by commas, parentheses, a colon, dashes or brackets. (See page 382.)	Phrases that introduce synonyms, such as: <i>in other words, or, that is to say, also known as, by this we mean, that is.</i>
I did the physical therapy exercises incorrectly and, <i>instead of helping</i> my back, they were actually deleterious .	Contrast clue	Is there an <i>antonym</i> for the unfamiliar word? That is, is the unfamiliar word explained by a contrasting word or phrase with the <i>opposite meaning</i> ?	Words and phrases that indicate opposites: <i>instead of, but, in contrast, on the other hand, however, unlike, although, even though.</i>
The campers <i>were warned that hiking up that steep mountain trail</i> would enervate even the fittest members of their group.	Experience clue	Can you draw on your <i>experience and background knowledge</i> to help you deduce (reason out) the meaning of the unfamiliar word?	A sentence that includes a <i>familiar experience</i> (or information you already know) can help you figure out the meaning of the new word.
He enjoys aquatic sports <i>such as swimming, scuba diving, and water skiing</i> .	Example clue	Are there <i>examples</i> that illustrate the meaning of the unfamiliar word?	Words that introduce examples of the meaning of the unfamiliar word: <i>for example, such as, to illustrate, like.</i>
When studying for his final exams, the student was told to eschew television. “ <i>Just give TV up!</i> ” was his roommate’s advice.	Clue from another sentence	Is there <i>another sentence</i> in the paragraph that explains the meaning of the unfamiliar word?	<i>Additional information in another sentence</i> that may help explain the unfamiliar word.

KEY TERM**word-structure clue**

Roots, prefixes, and suffixes that help you determine a word’s meaning.

Word-structure clues are also known as *word-part clues*.

Using Word-Structure Clues

Although context clues will be your greatest aid in determining the meaning of unknown words, **word-structure clues** or *word-part clues* can help you determine meanings. They can also help you confirm the educated guess you made based on context clues. A list of important and useful word parts appears in Appendix 3.

To use word-structure clues, examine an unfamiliar word to see if it has any of the following word parts:

- **Root:** Base word that has a meaning of its own.
- **Prefix:** Word part attached to the beginning of a root that adds its meaning to the meaning of the root.
- **Suffix:** Word part attached to the end of a root word.

Prefixes and suffixes are also called *affixes*, since they are “fixed” (attached or joined) to a root or base word. Words may consist of a:

- Root only (such as the word *graph*)
- Prefix and root (such as the word *telegraph*)
- Root and suffix (such as the word *graphic*)
- Prefix, root, and suffix (such as the word *telegraphic*)

Learning about prefixes and suffixes not only increases your vocabulary but can help you improve your spelling as well. For instance, if you know the meaning of the prefix *mis* (“bad” or “wrong”), then you will understand why the word *misspell* has two *s*’s: one is in the prefix (*mis*) and one in the root word (*spell*).

KEY TERM

root

Base word that has a meaning of its own.

Roots are powerful vocabulary-building tools because whole “families” of words in English come from the same root. For example, if you know that the root *aud* means “to hear,” then you will understand the connection between *audience* (people who come to *hear* something or someone), *auditorium* (a place where people come to *hear* something), *audit* (enrolling in a course just to *hear* about a subject, rather than taking it for credit), *auditory* (pertaining to *hearing*, as in auditory learner), and *audiologist* (a person trained to evaluate *hearing*). Knowing the meaning of a word’s root also makes it easier to remember the meaning of the word.

KEY TERM

prefix

Word part attached to the beginning of a root word that adds its meaning to that of the base word.

Prefixes change the meaning of a root by adding their meaning to the meaning of the root. For example, adding the prefix *tele* (“distant” or “far”) to the root word *scope* (“to see”) creates the word *telescope*, a device that lets you *see* things that are *far* away. Try adding the prefixes *pre* (“before”) and *re* (“back”) to the root *cede* (“to go” or “to move”). *Precede* means “to go before” something or someone else; *recede* means “to move back.”

Think of roots and prefixes as parts of a puzzle that can often help you figure out the meaning of an unfamiliar word. Remember, however, that although a word may begin with the same letters as a prefix, it does not necessarily contain that prefix. The words *malt*, *mall*, *male*, and *mallard* (a type of duck), for example, have no connection with the prefix *mal* (“wrong” or “bad”) as in words such as *malnourished* or *maladjusted*.

KEY TERM

suffix

Word part attached to the end of a root word.

Suffixes are word parts that are attached to the end of a root word. Some add their meaning to a root. Other suffixes change a word’s part of speech or inflection. For example, consider these forms of the word *predict*: *prediction*, *predictability*, *predictor* (nouns); *predictable* (adjective); *predictably* (adverb). Examples of suffixes that serve as inflectional endings include adding *s* to make a word plural or *ed* to make a verb past tense.

Suffixes are not as helpful as roots or prefixes in determining the meaning of unfamiliar words because many suffixes have similar or even the same meanings. Also, some root words change their spelling before a suffix is added. For instance, when suffixes are added to *happy* the *y* becomes an *i*: *happier*, *happiness*, *happily*.

The most common and helpful roots, prefixes, and suffixes in English come from Latin and ancient Greek. These Latin and Greek word parts not only help

Comprehension

Monitoring Question for Word-Structure Clues

Are there roots, prefixes, or suffixes that give me clues to the meaning of an unfamiliar word?



you figure out the meaning of a word, but also serve as built-in memory aids that make it easy to recall the meaning.

Spanish, French, Italian, Portuguese, and Romanian are called *romance languages* because they draw so heavily on Latin. (Latin was the “Roman” language because it was spoken in ancient Rome.) Although English is not one of the romance languages (it is a Germanic language), English still has many words derived from Latin and ancient Greek. In particular, a considerable number of terms in science, medicine, and technology are derived from Latin and Greek, so learning word parts from these two older languages can be useful to you if you are considering a career in one of those fields.

KEY TERM
etymology

The origin and history of a word.

A word’s **etymology** (origin and history) indicates whether it contains Latin or Greek word parts. Because a word’s etymology can help you understand and remember a word’s meaning, dictionaries typically give the etymology of a word in brackets [] before or after the definition. When you look up a word in the dictionary, take an extra minute to check its etymology for word parts that you might recognize. This technique of checking a word’s etymology will also help you learn and remember the meaning of many roots and affixes.

Take time to familiarize yourself with the common roots, prefixes, and suffixes in Appendix 2. Then watch for them in new words you encounter. Use word-structure clues whenever possible to help you determine the meaning of an unfamiliar word or confirm an “educated guess” you based on context clues.

Using a Dictionary Pronunciation Key

Most college students already know how to locate a word in the dictionary efficiently and accurately, and how to determine which definition is appropriate for their needs. But, like many students, you may still not be proficient at or feel confident using a dictionary pronunciation key. Being able to use a pronunciation key is important, because when you need to remember words, one of the most helpful things you can do is say them aloud. Checking and then practicing a word’s pronunciation takes only a moment or two.

A complete pronunciation key appears at the beginning of a dictionary. Most of them look similar to the example shown in the box on page 86.

DICTIONARY PRONUNCIATION KEY

A list of pronunciation symbols used in this dictionary is given below in the column headed **AHD** [*American Heritage Dictionary*]. The column headed **Examples** contains words chosen to illustrate how the **AHD** symbols are pronounced. The letters that correspond in sound to the **AHD** symbols are shown

in boldface. The third column, headed **IPA** (International Phonetic Alphabet), gives the equivalent transcription symbols most often used by scholars. Although similar, the **AHD** and **IPA** symbols are not precisely the same because they were conceived for different purposes.

Examples	AHD	IPA
pat	ă	æ
pay	ā	e
care	âr	ɛ r, er
father	ă	ɑː, ɑ
bib	b	b
church	ch	tʃ
deed, milled	d	d
pet	ě	ɛ
bee	ē	i
fife, phase, rough	f	f
gag	g	g
hat	h	h
which	hw	hw (also ʍ)
pit	ĭ	ɪ
pie, by	ī	aɪ
pier	îr	ɪr, ir
judge	j	dʒ
kick, cat, pique	k	k
lid, needle*	l (nēd'1)	l, l̥ ['nidl]
mum	m	m
no, sudden*	n (sūd'n)	n, ŋ ['sʌdn]
thing	ng	ŋ
pot	ō	ɑ
toe	ō	o
caught, paw,	ô	ɔ
noise	oi	ɔɪ
took	ōō	u
boot	ōō	u
out	ou	aʊ

Examples	AHD	IPA
pop	p	p
roar	r	ɹ
sauce	s	s
ship, dish	sh	ʃ
tight, stopped	t	t
thin	th	θ
this	th	ð
cut	ŭ	ʌ
urge, term, firm	Ūr	ɜː, ɜr
word, heard		
valve	v	v
with	w	w
yes	y	j
zebra, xylem	z	z
vision, pleasure, garage	zh	ʒ
about, item, edible,	ə	ə
gallop, circus		
butter	ər	ə˞
Foreign	AHD	IPA
<i>French feu</i>		ø
<i>German schön</i>	œ	
<i>French œuf</i>		œ
<i>German zwölf</i>		
<i>French tu</i>	ü	y
<i>German über</i>		
<i>German ich</i>		ç
<i>German ach</i>	kh	
<i>Scottish loch</i>		x
<i>French bon**</i>	Ń (bôn)	~ [bõ]

*In English the consonants *l* and *n* often constitute complete syllables by themselves.

The IPA symbols show nasality with a diacritic mark over the vowel, whereas the dictionary uses **Ń to reflect that the preced-

ing vowel is nasalized. In French four nasalized vowels occur, as in the phrase *un bon vin blanc*: **AHD** (œ:n bôn vãn blãn), **IPA** | œ bõ vãn blã̃].

In most dictionaries an *abridged* (shortened) *pronunciation key*, showing only vowel sounds and the more unusual consonant sounds, appears at or near the bottom of each page. It looks something like this:

Pronunciation Key: ă pat ā pay âr care ä father ɛ pet ē be ĩ pit
 ī tie îr pier ǒ pot ō toe ô paw oi noise ou out oō took
 oo boot ǔ cut yoo abuse ûr urge th thin th this hw which
 zh vision ə about *Stress mark:* '

Your instructor can give you guidance in using a dictionary pronunciation key. In *Opening Doors*, you will have numerous opportunities to practice this skill since the pronunciation is given for each term in the vocabulary quizzes that accompany the reading selections. To help you interpret the symbols, an abridged pronunciation key is repeated in each vocabulary section.

Understanding Denotations and Connotations of Words

The literal, explicit meaning of a word—its dictionary definition—is called its **denotation**. But many words also have connotations. A **connotation** is an additional, nonliteral meaning associated with a word. For example, the two words *weird* and *distinctive* have similar denotations (both of them describe something that is different or out of the ordinary). It is their connotations that cause us to choose one of these words instead of the other when describing someone or something. You might describe the traits of someone you admire as *distinctive* but those of someone you dislike as *weird*, because *distinctive* has a positive connotation and *weird* has a negative one. Most people, for example, would rather be thought of as having *distinctive* clothes than *weird* clothes. *Distinctive* and *weird* have opposite connotations. *Distinctive* is associated with positive qualities; *weird* is associated with negative ones.

As explained above, many words have positive or negative connotative meanings that are very different from their more neutral denotative meanings. The first column in the chart below presents a sentence containing an italicized word whose denotation is neutral. In the other two columns, the italicized word has been replaced by other words that have a similar denotation, but have a positive or negative connotation.

KEY TERMS

denotation

Literal, explicit meaning of a word—its dictionary definition.

connotation

Additional, nonliteral meaning associated with a word.

EXAMPLES OF DENOTATIONS AND CONNOTATIONS

Denotation (Neutral)	Similar Word with Positive Connotation	Similar Word with Negative Connotation
Sofia has <i>different</i> tastes.	Sofia has <i>distinctive</i> tastes.	Sofia has <i>weird</i> tastes.
When I was younger, I was <i>thin</i> .	When I was younger, I was <i>slender</i> .	When I was younger, I was <i>skinny</i> .
I purchased a <i>used</i> car.	I purchased a <i>preowned</i> car.	I purchased a <i>secondhand</i> car.
She's a computer <i>expert</i> .	She's a computer <i>whiz</i> .	She's a computer <i>nerd</i> .
His behavior was <i>abnormal</i> .	His behavior was <i>unusual</i> .	His behavior was <i>peculiar</i> .
She <i>wants</i> power.	She <i>desires</i> power.	She <i>lusts</i> for power.
Doris spent time in <i>jail</i> .	Doris spent time in a <i>correctional facility</i> .	Doris spent time in a <i>penitentiary</i> .
Hector has joined a <i>club</i> .	Hector has joined an <i>association</i> .	Hector has joined a <i>gang</i> .
The patient <i>died</i> .	The patient <i>passed on</i> .	The patient <i>croaked</i> .



Comprehension Monitoring Question for Connotative Meaning

Is there a positive or negative association in addition to the literal meaning of a word?

KEY TERM figurative language

Words that create unusual comparisons or vivid pictures in the reader's mind.

Figurative expressions are also known as *figures of speech*.

Careful readers ask themselves, “Does this word have a connotation as well as a denotation?” That is, “Is there a positive or negative association in addition to the word’s literal meaning?”

Understanding Figurative Language

Figurative language is language that uses imagery—unusual comparisons or vivid words that create certain effects—to paint a picture in the reader’s or listener’s mind. Figurative expressions are also called *figures of speech*. You use figurative language every day, although you may not know it by that name. Whenever you say something such as “That chemistry test was a monster” or “My mother is a saint,” you are using figurative language.

Because figures of speech do not literally mean what the words say, the reader or listener must *interpret* their meaning. If you say, “My landlord is a prince,” you do not actually or literally mean that he is a member of a royal family. You expect your listener to interpret your words to mean that you appreciate your landlord, perhaps because he is cooperative and pleasant. If you say, “My landlord is a rat,” you do not literally mean that he is a rodent. You expect your listener to interpret your words to mean that you dislike your landlord, perhaps because he has proved to be untrustworthy or unfair.

Four common figures of speech are *metaphor*, *simile*, *hyperbole*, and *personification*. Let’s look at each of these.

KEY TERM
metaphor

Figure of speech suggesting a comparison between two essentially dissimilar things, usually by saying that one of them *is* the other.

KEY TERM
simile

Figure of speech presenting a comparison between two essentially dissimilar things by saying that one of them is *like* the other.

KEY TERMS
hyperbole

Figure of speech using obvious exaggeration for emphasis and effect.

personification

Figure of speech in which nonhuman or nonliving things are given human traits or attributes.

Comprehension
Monitoring Question for
Figurative Language

Should these words or this expression be interpreted figuratively?

Metaphors and similes both make comparisons. A **metaphor** is an implied comparison between two things that seem very different from each other on the surface yet are alike in some significant way. A metaphor usually states that one thing is something else. The author assumes that readers will not take his or her words literally, but instead will understand that it is figurative language. (That is, the sentence is to be taken figuratively, not literally.) For example, in the sentence “Mae’s garden is a rainbow,” the writer is making a comparison between a garden and a rainbow to help the reader envision the colorful array of flowers in the garden. To interpret this metaphor correctly, the reader must compare a garden and a rainbow and determine what they might have in common: a multitude of colors. (The author does not mean that the garden was literally a rainbow.) Another example of a metaphor would be “Joe’s desk was a mountain of paper.” It creates a vivid image of how high (“a mountain”) the paper was stacked on the desk. As noted, a metaphor usually states that one thing is something else (in these cases, that a garden *is* a rainbow or that a stack of papers was a mountain).

A **simile** is also a comparison between two essentially dissimilar things, but instead of saying that one thing *is* something else, the author says that one thing is *like* something else. In fact, a simile is usually introduced by the words *like* or *as*. “Nancy felt *like a lottery winner* when she received the scholarship” and “The marine stood at attention *as rigid as an oak tree*” are examples of similes. In the first sentence, receiving a scholarship is compared to winning a lottery. The author wants us to understand that receiving the scholarship made Nancy feel as excited as if she had won a great deal of money in the lottery. In the second example, a marine, because of his stiff posture, is compared to an oak tree. To repeat: a simile says that one thing is *like* another. To understand a simile, you must determine which things are being compared and the important way in which the author considers them to be similar.

Another type of figurative language is **hyperbole** (pronounced hī pĕr’ bə lē), in which obvious exaggeration is used for emphasis. “My parents will explode if I get one more speeding ticket!” is an example of hyperbole. The parents would not literally “explode,” but the exaggeration conveys how angry they would be.

In **personification**, nonliving or nonhuman things are given human characteristics or qualities. “My car groaned, coughed, and wheezed, then crawled to a stop” gives human attributes to an automobile to suggest that the car made strange noises and then quit running. Cars, of course, cannot groan, cough, wheeze, and crawl in the same sense that a person would do these things. That’s what makes it personification.

Careful readers ask themselves, “Is the author using figurative language?” “What things are being compared, and how are they alike?” “What exaggeration is being made, and why? What human traits are being given to a nonliving thing?”

The chart on page 90 summarizes metaphor, simile, hyperbole, and personification and presents examples of each.

FOUR TYPES OF FIGURATIVE LANGUAGE

Figures of Speech**Examples****Metaphor**

Implied comparison between two essentially dissimilar things, usually using the word *is* or *was*.

My grandfather's face is a raisin.
 TV was my babysitter, my teacher, and my friend.
 Shyness was my prison.
 One person's trash is another person's treasure.
 The midnight sky was diamonds on black velvet.
 He believes losing his old job turned out to be a great gift.

Simile

Stated comparison between two essentially dissimilar things, usually introduced by the word *like* or *as*.

Roberto's garden is like a supermarket.
 After the party, Ted's apartment looked as if it had been hit by a tornado.
 Monica's closet is like a shoe store.
 The ice hockey player looked as if he'd gone ten rounds in a boxing ring—and lost.
 My allergies made my head feel like a block of wood.
 The sleet hit our faces like tiny knives.

Hyperbole

Obvious exaggeration for emphasis and effect.

I'm so hungry I could eat a horse!
 Smoke came out of the coach's ears when the penalty was called.
 My grandmother's biscuits are so light they float off the plate.
 I'm buried in homework this weekend.
 My backpack weighs a ton.

Personification

Attribution of human characteristics or qualities to nonhuman or nonliving things.

The ATM machine ate my debit card!
 The old house looked tired and unhappy until it received a face-lift.
 The mystery hooked me on the opening page and then reeled me in.
 When the theater lights dimmed, the cell phones couldn't wait to begin screaming.
 Even though it seemed far away and unlikely, a college degree beckoned me.

Understanding figurative language can help you grasp an author’s message exactly, and it also makes material more interesting and enjoyable to read.

Here are some examples of figurative language by famous authors or well-known people. There are also some proverbs. On the lines beside each one, interpret the meaning of the figure of speech.

Metaphor

What is the meaning of the figurative language?

“Time is money.”

Edward Bulwer-Lytton

“Money is a good servant but a bad master.”

Sir Francis Bacon

“Debt is a bottomless sea.”

Thomas Carlyle

Simile

“What happens to a dream deferred?
Does it dry up like a raisin in the sun?”

Langston Hughes, “Harlem”

“Being president is like riding a tiger.”

Harry S. Truman

“The water from the spring,” she said, “is heavy as gold, sweet as honey, but clear as glass. If you look into the pool, you can see your face, just like in a mirror.”

Amy Tan, *The Kitchen God’s Wife*

Hyperbole

“Here once the embattled farmers stood,
And fired the shot heard round the world.”

Ralph Waldo Emerson, “Concord Hymn”

“Everybody had made a ton of money in
the last few years and expected to make a
ton more.”

Richard Ford, *Independence Day*

“He had a big mustache yellowed by eight
million Pall Malls.”

Richard Ford, *Independence Day*

Personification

“Misery loves company.”

English proverb

“When money speaks, the truth is silent.”

Russian proverb

DEVELOPING CHAPTER REVIEW CARDS



Student CD-ROM
 Go to Chapter 2.
 Select Flashcards or Test.

Review cards, or summary cards, are an excellent study tool. They are a way to select, organize, and review the most important information in a textbook chapter. The process of creating review cards helps you organize information in a meaningful way and, at the same time, transfer it into long-term memory. The cards can also be used to prepare for tests (see Part Three). The review card activities in this book give you structured practice in creating these valuable study tools. Once you have learned how to make review cards, you can create them for textbook material in your other courses.

Now, complete the eight review cards for Chapter 2 by answering the questions or following the directions on each card. When you have completed them, you will have summarized important information about: (1) the reading process, (2) predicting as you read, (3) monitoring your comprehension, (4) adjusting your reading rate, (5) using context clues to determine the meaning of unfamiliar words, (6) using word-structure clues, (7) interpreting figurative language, and (8) monitoring your understanding of vocabulary.

Understanding the Reading Process

List seven important points about the reading process. (See pages 75–76.)

- 1.
- 2.
- 3.
- 4.
- 5.
- 6.
- 7.

Card 1 Chapter 2: Approaching College Reading and Developing a College-Level Vocabulary

Predicting As You Read

1. What is predicting? (See page 77.)

2. Why is predicting helpful? (See page 77.)

Card 2 Chapter 2: Approaching College Reading and Developing a College-Level Vocabulary

Monitoring Your Comprehension

1. What does monitoring your comprehension mean? (See page 77.)

2. Describe the three-part procedure for monitoring your comprehension as you read. (See page 77.)

First:

Second:

Third:

Card 3 Chapter 2: Approaching College Reading and Developing a College-Level Vocabulary

Adjusting Your Reading Rate

Efficient readers adjust their rate according to two factors. List them. (See page 79.)

Factor 1:

Factor 2:

List several situations in which it is appropriate to *slow down* your reading rate. (See page 80.)

List several situations in which it is appropriate to *speed up* your reading rate. (See page 81.)

Card 4 Chapter 2: Approaching College Reading and Developing a College-Level Vocabulary

Using Context Clues to Determine Meanings of Words

What are *context clues*? (See page 82.)

Describe six types of context clues. (See the box on pages 82–83.)

1. Definition:

2. Synonym:

3. Contrast:

4. Experience:

5. Example:

6. Clue from another sentence:

Card 5 Chapter 2: Approaching College Reading and Developing a College-Level Vocabulary.

Using Word-Structure Clues

Define the following terms. (See pages 83–85.)

Word-structure clues:

Root:

Prefix:

Suffix:

Etymology:

Card 6 Chapter 2: Approaching College Reading and Developing a College-Level Vocabulary

Four Types of Figurative Language

Define the following terms. (See pages 88–89.)

Figurative language:

Metaphor:

Simile:

Hyperbole:

Personification:

Card 7 Chapter 2: Approaching College Reading and Developing a College-Level Vocabulary

Monitoring Your Understanding of Vocabulary

1. What question should you ask yourself in order to take advantage of context clues? (See page 82.)

2. What question should you ask yourself in order to take advantage of word-structure clues? (See page 84.)

3. What question should you ask yourself in order to understand the connotation of a word? (See page 88.)

4. What question should you ask yourself in order to understand figurative language? (See page 89.)

Card 8 Chapter 2: Approaching College Reading and Developing a College-Level Vocabulary

SELECTION 2-1

**Mass
Communication**

**MUSIC REVOLUTION: NAPSTER AND RECORDING
IN THE DIGITAL AGE**

From *The Dynamics of Mass Communication: Media in the Digital Age*

By Joseph R. Dominick

Prepare Yourself to Read

Directions: Do these exercises before you read Selection 2-1.

1. First, read and think about the title. What do you already know about Napster?

2. Next, complete your preview by reading the following:

Introduction (in *italics*)

Headings

All of the first paragraph (paragraph 1)

First sentence of each of the other paragraphs

On the basis of your preview, what three aspects of Napster and digital recording does the selection seem to be about?

SELECTION 2-1

**Mass
Communication***(Continued)***Apply Comprehension Skills**

Directions: Do the Annotation Practice Exercises *as you read* Selection 2-1. Apply three skills from this chapter:

Adjust your reading rate. On the basis of your preview and your prior knowledge of Napster and digital recording, do you think you should read Selection 2-1 slowly or more rapidly?

Develop a college-level vocabulary. Did you notice any unfamiliar words while you were previewing Selection 2-1? If so, list them here.

Predict as you read. As you read Selection 2-1, make predictions about what the author will discuss next. Write your predictions in the blanks provided.

MUSIC REVOLUTION: NAPSTER AND RECORDING IN THE DIGITAL AGE

“For the recording industry, the future got here fast. Sometimes big ideas start in small places. Shawn Fanning was a 19-year-old freshman at Northeastern University in Boston who was interested in music, computers, and the Internet. In his dorm room one night, he developed Napster, a file-sharing program that made it ridiculously easy for users to download music for free over the Internet. Not surprisingly, Fanning’s creation caused a major upheaval in the recording industry. . . . Napster threatened to change the way recordings are packaged, marketed, and distributed. Not surprisingly, the music industry reacted by filing a lawsuit against Napster for copyright infringement. In February 2001, a Federal Court of Appeals ruled in favor of the industry and ordered Napster to remove copyrighted material from its system, a move that would effectively cripple the service.” (p. 198) An agreement was reached, and in October 2003, Napster became a legal music source. Users now pay to download songs and CDs.

The Impact of Napster

- 1 Explaining to an audience of college students how a file-sharing program such as Napster worked is like explaining the Super Bowl to a bunch of pro football players—both groups are already up to speed. For those who were not Napster users, here’s a brief explanation of how it worked: People can download music from the Internet because of a technique called MP3, short for Motion Pictures Engineering Group Audio Layer 3, that takes digital audio (the kind that’s encoded on CDs) and shrinks it into small packages that can be stored on a computer’s hard drive, downloaded from the Internet, or sent via e-mail. A CD purchased at the local retail store can easily be converted to MP3 files.
- 2 Once an individual downloaded the free Napster program, he or she sent a request to Napster to search for a song or artist. The program then searched the hard drives of every online Napster user and displayed a list of all those users that had the song, and even reported the size of the file and the source member’s connection speed. The user double-clicked on one of the locations where the song was stored, and the music was copied onto the user’s hard drive. Once copied, the music could be played over the computer’s speakers or on an MP3 player, or “burned” on a recordable CD. Total cost to the user—nothing. The music was free.
- 3 Napster’s quick rise in popularity was phenomenal. It took just a year for Napster to reach 20 million users. In contrast, it took AOL about 10 years (and lots of dollars in promotions and free disks) to reach 23 million subscribers. Downloading MP3 files became one of the most popular activities on the Web. Many universities banned Napster because students were downloading so many Napster files, they were clogging up the university’s computer system.

Prediction Exercises

Directions: At each of the points indicated below, answer the question, “What do you predict will be discussed next?”

Prediction Exercise

What do you predict will be discussed in this section?

4 Napster raised many issues, some of them legal, some of them ethical, some of them economic, and some that go to the core of the business model used by the recording industry almost since its inception. Traditionally, record companies made their money by controlling the production and distribution of music. They decided what acts to record and what songs would go on a tape or CD, produced physical copies of the music on tape or plastic compact disks, and then shipped those products to retail stores. The recording company, the artist, and the retailer received revenue from the sales of the physical product. When the music is liberated from the physical tape or CD and distributed digitally from one hard drive to another, as happened with Napster, there are no revenues for the recording company, the artist, or the retailer. Obviously, the recording industry was upset.

New Business Models

5 The first line of defense for the recording companies was the courtroom, and they were successful in getting Napster to remove copyrighted material. Many experts, however, believe that this is a temporary victory and that many Napster clones will take its place and some of these clones might be located outside the United States, where U.S. copyright law matters little. Once the genie is out of the bottle, it's hard to put it back in.

6 A more promising approach might be to rethink how music is marketed and sold, and some record companies are doing just that. Two big recording companies, Sony and Universal, have plans to sell music over the Internet. A post-law-suit Napster figures in the plans of another big company. Bertelsmann has signed an agreement with Napster to use the service to distribute music by Bertelsmann's artists. Subscribers would pay a monthly fee for the right to download as many of the company's songs as they want.

7 Recording companies could also follow the radio model. Radio stations offer listeners "free" music and make money from selling ads; a site that offers downloadable music for free might do the same. Many advertisers would love to reach an audience of young people. The companies and their artists would receive income from the fees paid by advertisers who want to place ads on the site. Note, however, that although these plans create revenue streams for the record companies, they don't do much for the retail stores where tapes and CDs are currently sold.

Prediction Exercise

What do you predict will be discussed in this section?

More Diversity?

- 8 Once again, the availability of digital music on the Internet is an example of disintermediation. (*Disintermediation* refers to the process whereby access to a product or a service is given directly to the consumer, thus eliminating the intermediary, or “middleman,” who might typically supply the product or service.) Recording artists can bypass the record companies and sell directly to the consumer. MP3.com, for example, operates a site where new artists can post their music for free. In late 2000, about 470,000 different songs were available for download. Of course, this increased diversity comes with a price. The really bad bands can post music just as easily as the really good ones. Garage bands have equal standing with Metallica. It will take substantial energy for consumers to find the good music.
- 9 Keep in mind that while all this is going on, some 19-year-old somewhere is probably working on a new piece of software that might shake everything up once again.

Prediction Exercise

What do you predict will be discussed in this section?

SELECTION 2-1

**Mass
Communication***(Continued)***Reading Selection Quiz**

This quiz has three parts. Your instructor may assign some or all of them.

Comprehension

Directions: Items 1–10 test your comprehension (understanding) of the material of this selection. These questions are the type a content area instructor (such as a communications professor) would ask on a test over this material. You should be able to answer these questions after studying this selection. For each comprehension question below, use information from the selection to determine the correct answer. Refer to the selection as you answer the questions. Write your answer in the space provided.

- _____ 1. MP3 is a technology that can be used in the process of
- sharing audiotapes.
 - improving the quality of CDs.
 - downloading music from the Internet.
 - deleting files from a computer hard drive.
- _____ 2. For Napster to attain 20 million users took
- 1 year.
 - 3 years.
 - 10 years.
 - 23 years.
- _____ 3. When Napster was first created, its major appeal was the fact that
- it enabled users to acquire music free.
 - it was quick to use.
 - the downloaded music could be stored.
 - the music could be played on computer speakers.
- _____ 4. Music downloaded from the Internet through Napster can be
- stored on a computer's hard drive.
 - sent via e-mail.
 - burned on a CD.
 - all of the above.
- _____ 5. In response to Napster, the recording industry
- created software to block Napster users.
 - sued all of the individuals who had downloaded music.
 - shut down Napster and its clones.
 - developed some new ways to market and sell music.

- _____ 6. At MP3.com,
- consumers can easily locate music by good bands.
 - users are prohibited from downloading music.
 - new artists can post their music for free.
 - consumers can choose from a relatively small number of songs.
- _____ 7. In the radio model, fees are paid by
- advertisers.
 - radio stations.
 - recording companies.
 - recording artists.
- _____ 8. Sony and Universal are two companies that plan to
- sue people who download their companies' songs.
 - have Napster distribute music by their artists.
 - sell music over the Internet.
 - create revenue streams for retail stores that sell tapes and CDs.
- _____ 9. Napster is a type of
- compression program.
 - file-sharing program.
 - storage program.
 - e-mail program.
- _____ 10. Most college students
- confuse Napster with MP3 technology.
 - are familiar with Napster.
 - prefer AOL to Napster.
 - would rather purchase sealed CDs than use Napster.

SELECTION 2-1

**Mass
Communication***(Continued)***Vocabulary in Context**

Directions: Items 11–20 test your ability to determine the meaning of the word by using context clues. *Context clues* are words in a sentence that allow the reader to deduce (reason out) the meaning of an unfamiliar word in that sentence. Context clues also enable the reader to determine which meaning the author intends when a word has more than one meaning. For each vocabulary item below, a sentence from the selection containing an important word (*italicized, like this*) is quoted first. Next, there is an additional sentence using the word in the same sense and providing another context clue. Use the context clues from *both* sentences to deduce the meaning of the italicized word. *Be sure the answer you choose makes sense in both sentences. If*

you discover that you need to use a dictionary to confirm an answer choice, remember that the meaning you select must still fit the context of *both* sentences. Write your answer in the space provided.

Pronunciation Key: ă pat ā pay âr care ä father ě pet ē be ĭ pit
 ī tie îr pier ð pot ò toe ô paw oi noise ou out ōō took
 ɔ̄ boot ŭ cut yoo abuse ûr urge th thin th this hw which
 zh vision ə about *Stress mark:* '

- _____ 11. A CD purchased at the local retail store can easily be *converted* to MP3 files. When the body takes in more calories than it can burn, excess calories are *converted* to fat and stored.
- converted** (kən vûr' təd) means:
- changed
 - linked
 - copied
 - upgraded
- _____ 12. Many universities *banned* Napster because students were downloading so many Napster files, they were clogging up the university's computer system.
- After the 9/11 terrorist attack, U.S. airlines *banned* scissors, nail files, and several other common items from passengers' carry-on luggage.
- banned** (bănd) means:
- destroyed
 - permitted
 - prohibited
 - complained about
- _____ 13. Napster raised many issues, some of them legal, some of them ethical, some of them economic, and some that go to the core of the business model used by the recording industry almost since its *inception*.
- Since its *inception*, McDonald's has grown to 30,000 restaurants in 121 countries and has sold several million hamburgers.
- inception** (in sĕp' shən) means:
- incorporation
 - purchase
 - reorganization
 - beginning

- _____ 14. The recording company, the artist, and the retailer received *revenue* from the sales of the physical product.

In order to improve its *revenue*, the clothing company introduced a new line of affordable sportswear designed to appeal to young people.

revenue (rĕv' ə nō) means:

- a. the income of a government that comes from all sources
- b. money that comes into a business from sales of goods or services
- c. income or salary received from employment
- d. total return produced by an investment in stocks

- _____ 15. When the music is *liberated* from the physical tape or CD and distributed digitally from one hard drive to another, as happened with Napster, there are no revenues for the recording company, the artist, or the retailer.

After a heart-lung transplant, my brother was *liberated* from his portable oxygen tank.

liberated (lĭb' ə r ā təd) means:

- a. removed
- b. dismissed
- c. kept
- d. no longer restricted to

- _____ 16. The first line of defense for the recording companies was the courtroom, and they were successful in getting Napster to remove *copyrighted* material.

Because textbooks are *copyrighted*, it is a violation of federal law to photocopy pages without the publisher's permission.

copyrighted (kŏp' ē rī təd) means:

- a. legally protected against unauthorized reproduction or use
- b. illegally sold in retail outlets
- c. copied previously
- d. copied correctly

- _____ 17. Many experts, however, believe that this is a temporary victory and that many Napster *clones* will take its place and some of these *clones* might be located outside the United States where U.S. copyright law matters little.

Animal *clones* are indistinguishable from the animals whose genes they were created from.

clones (klŏnz) means:

- a. temporary copies
- b. experimental copies
- c. identical copies
- d. illegal copies

- _____ 18. A more *promising* approach might be to rethink how music is marketed and sold, and some record companies are doing just that.

Although there is still not a cure for baldness, there are many *promising* new treatments.

promising (prŏm' ĭ sĭng) means:

- given as a solemn vow
- likely to turn out well or be successful
- legally agreed upon by two or more people
- safe

- _____ 19. Recording artists can *bypass* the record companies and sell directly to the consumer.

To *bypass* the lengthy, frustrating, and often expensive adoption process in the United States, many couples choose to adopt a baby from another country.

bypass (bĭ' pās) means:

- minimize or reduce
- avoid by using an alternative method
- participate with
- benefit from cooperation with

- _____ 20. Garage bands have equal *standing* with Metallica.

His *standing* in the golf tournament rose dramatically after he shot a hole in one.

standing (stān' dĭng) means:

- visibility
- reputation; position
- popularity
- press coverage

SELECTION 2-1

Mass Communication (Continued)

Reading Skills Application

Directions: Items 21–25 test your ability to *apply* certain reading skills to the material in this selection. These are the types of questions that might appear on standardized reading tests and state-mandated basic skills tests. Write your answer in the space provided.

- _____ 21. Which of the following statements represents an opinion rather than a fact?
- Recording artists can bypass the record companies and sell directly to the consumer.
 - MP3.com, for example, operates a site where new artists can post their music for free.

- c. In late 2000, about 470,000 different songs were available for download.
- d. It will take substantial energy for consumers to find the good music.
- _____ 22. Which of these is a logical conclusion that can be based on the information in the selection?
- a. Creating Napster was a bad idea.
- b. Recording companies have successfully stopped computer users from downloading music for free.
- c. The person who created Napster regrets doing so.
- d. As other new technologies are developed, additional legal, ethical, and economic issues will be raised.
- _____ 23. In paragraph 5, when the author says, “Once the genie is out of the bottle, it’s hard to put it back,” he means
- a. human beings are enchanted by anything that seems magical.
- b. once something has been done or discovered, it is difficult to prevent people from doing it again.
- c. once people have tried something illegal, the majority of them will continue the behavior.
- d. once a legal verdict has been given, it cannot be changed.
- _____ 24. The information in the first two paragraphs is organized using which of the following patterns?
- a. list
- b. cause-effect
- c. sequence
- d. comparison-contrast
- _____ 25. To support his assertion that Napster’s rise in popularity was phenomenal, the author presents
- a. the opinion of a Napster expert.
- b. two case studies of Napster.
- c. statistics and the example of universities banning Napster.
- d. his personal experience with Napster.

SELECTION 2-1

**Mass
Communication***(Continued)*

Collaboration Option

Respond in Writing

Directions: These essay-type exercises will help you bring your thoughts into the open. Refer to Selection 2-1 as needed to answer them.

Option for collaboration: It has been said that “None of us is as smart as all of us.” Adults, in particular, learn well from each other. For this reason, your instructor may direct you to work with other students, in other words, to work *collaboratively*. In that case, you should form groups of three or four students, as directed by your instructor, and work together to complete the exercises. After your group discusses each item and agrees on the answer, have a group member record it. Every member of your group should be able to explain all of your group’s answers.

1. Do you feel there was anything wrong with downloading music through Napster for free or using other free file-sharing programs? Explain why or why not.

2. Do you think Napster did, in fact, deprive artists and the recording industry of money that should rightfully have gone to them? Explain your position.

3. Napster changed the way music is distributed and the ways consumers acquire it. Describe the four examples the author gives of new ways music is legally being distributed.

4. **Overall main idea.** What is the overall main idea the authors want the reader to understand about Napster and recording in the digital age? Answer this question in one sentence. Be sure to include *Napster* and *digital music* in your overall main idea sentence.



Internet Resources

Read More about It on the World Wide Web

To learn more about the topic of this selection, visit these websites or use your favorite search engine (such as Google or Yahoo!) to discover more about this topic on your own. Whenever you go to *any* website, it is a good idea to evaluate it critically. Are you getting good information—that is, information that is accurate, complete, and up-to-date? Who sponsors the website? How easy is it to use the features of the website?

www.riaa.org/napster_legal.cfm

Contains news coverage, lawsuit information, and other information about the legal battle between the music organization and the file-sharing company.

www.napster.com

Napster's website.

www.howstuffworks.com/napster.htm

Explains how the Napster file-sharing system worked, piracy issues, and so forth.

SELECTION **2-2**
Literature

THE YELLOW RIBBON

By Pete Hamill

Prepare Yourself to Read

Directions: Do these exercises *before* you read Selection 2-2.

1. This short story is more exciting without a complete preview. For that reason, read *only* the title, the introduction (in *italics*), and the first paragraph.

What comes to your mind when you think of a yellow ribbon?

Who are the characters in the story?

What is taking place?

2. As you read the rest of the selection, try to answer these questions:

Who is Vingo?

Why is he on the bus?

Apply Comprehension Skills

Directions: Do the practice exercises as you read Selection 2-2.

Adjust your reading rate. On the basis of your preview and your prior knowledge about computers, do you think you should read Selection 2-2 slowly or more rapidly?

Develop a college-level vocabulary. Did you notice any unfamiliar words while you were previewing Selection 2-2? If so, list them here.

Predict as you read. As you read Selection 2-2, make predictions about what the author will discuss next. Write your predictions in the blanks provided.

THE YELLOW RIBBON

Perhaps you have heard the old Tony Orlando and Dawn song “Tie a Yellow Ribbon ‘Round the Old Oak Tree.” The inspiration for it undoubtedly came from this wonderful short story. Today, ribbons of different colors are often worn to show support for various causes. For Vingo, the main character in this story, yellow ribbons have a very special significance.

- 1 They were going to Fort Lauderdale, the girl remembered later. There were six of them, three boys and three girls, and they picked up the bus at the old terminal on 34th Street, carrying sandwiches and wine in paper bags, dreaming of golden beaches and the tides of the sea as the gray cold spring of New York vanished behind them. Vingo was on board from the beginning.
- 2 As the bus passed through Jersey and into Philly, they began to notice that Vingo never moved. He sat in front of the young people, his dusty face masking his age, dressed in a plain brown ill-fitting suit. His fingers were stained from cigarettes and he chewed the inside of his lip a lot, frozen into some personal cocoon of silence.
- 3 Somewhere outside of Washington, deep into the night, the bus pulled into a Howard Johnson’s, and everybody got off except Vingo. He sat rooted in his seat, and the young people began to wonder about him, trying to imagine his life: Perhaps he was a sea captain, maybe he had run away from his wife, he could be an old soldier going home. When they went back to the bus, the girl sat beside him and introduced herself.
- 4 “We’re going to Florida,” the girl said brightly. “You going that far?”
- 5 “I don’t know,” Vingo said.
- 6 “I’ve never been there,” she said. “I hear it’s beautiful.”
- 7 “It is,” he said quietly, as if remembering something he had tried to forget.
- 8 “You live there?”
- 9 “I did some time there in the Navy. Jacksonville.”
- 10 “Want some wine?” she said. He smiled and took the bottle of Chianti and took a swig. He thanked her and retreated again into his silence. After a while, she went back to the others, as Vingo nodded in sleep.
- 11 In the morning they awoke outside another Howard Johnson’s, and this time Vingo went in. The girl insisted that he join them. He seemed very shy and ordered black coffee and smoked nervously, as the young people chattered about sleeping on the beaches. When they went back on the bus, the girl sat with Vingo again, and after a while, slowly and painfully and with great hesitation, he began to tell his story. He had been in jail in New York for the last four years, and now he was going home.
- 12 “Four years!” the girl said. “What did you do?”

Prediction Exercises

Directions: At each of the points indicated below, answer the question, “What do you predict will happen next?”

Prediction Exercise

What do you predict will happen next?

13 “It doesn’t matter,” he said with quiet bluntness. “I did it and I went to jail. If you can’t do the time, don’t do the crime. That’s what they say and they’re right.”

14 “Are you married?”

15 “I don’t know.”

16 “You don’t know?” she said.

17 “Well, when I was in the can I wrote to my wife,” he said. “I told her, I said, Martha, I understand if you can’t stay married to me. I told her that. I said I was gonna be away a long time, and that if she couldn’t stand it, if the kids kept askin’ questions, if it hurt her too much, well, she could just forget me. Get a new guy—she’s a wonderful woman, really something—and forget about me. I told her she didn’t have to write me or nothing. And she didn’t. Not for three-and-a-half years.”

18 “And are you going home now, not knowing?”

19 “Yeah,” he said shyly. “Well, last week, when I was sure the parole was coming through I wrote her. I told her that if she had a new guy, I understood. But if she didn’t, if she would take me back she should let me know. We used to live in this town, Brunswick, just before Jacksonville, and there’s a great big oak tree just as you come into town, a very famous tree, huge. I told her if she would take me back, she should put a yellow handkerchief on the tree, and I would get off and come home. If she didn’t want me, forget it, no handkerchief, and I’d keep going on through.”

20 “Wow,” the girl said. “Wow.”

21 She told the others, and soon all of them were in it, caught up in the approach of Brunswick, looking at the pictures Vingo showed them of his wife and three children, the woman handsome in a plain way, the children still unformed in a cracked, much-handled snapshot. Now they were 20 miles from Brunswick and the young people took over window seats on the right side, waiting for the approach of the great oak tree. Vingo stopped looking, tightening his face into the ex-con’s mask, as if fortifying himself against still another disappointment. Then it was 10 miles, and then five and the bus acquired a dark hushed mood, full of silence, of absence, of lost years, of the woman’s plain face, of the sudden letter on the breakfast table, of the wonder of children, of the iron bars of solitude.

22 Then suddenly all of the young people were up out of their seats, screaming and shouting and crying, doing small dances, shaking clenched fists in triumph and exaltation. All except Vingo.

23 Vingo sat there stunned, looking at the oak tree. It was covered with yellow handkerchiefs, 20 of them, 30 of them, maybe hundreds, a tree that stood like a banner of welcome blowing and billowing in the wind, turned into a gorgeous yellow blur by the passing bus. As the young people shouted, the old con slowly rose from his seat, holding himself tightly, and made his way to the front of the bus to go home.

What special meaning did the yellow ribbons hold for the main character in this story?



Prediction Exercise

What do you predict will happen next?

Prediction Exercise

What do you predict will happen next?

SELECTION 2-2

Literature*(Continued)***Reading Selection Quiz**

This quiz has three parts. Your instructor may assign some or all of them.

Comprehension

Directions: Items 1–10 test your comprehension (understanding) of the material of this selection. These questions are the type a content area instructor (such as an English professor) would ask on a test over this material. You should be able to answer these questions after studying this selection. For each comprehension question below, use information from the selection to determine the correct answer. Refer to the selection as you answer each question. Write your answer in the space provided.

True or False

- _____ 1. Six young people boarded a bus for a summer vacation in Florida.
- _____ 2. Vingo told his story to a young woman on the train.
- _____ 3. The author states that Vingo's wife was foolish.
- _____ 4. Vingo was traveling to his home in Jacksonville, Florida.

Multiple-Choice

- _____ 5. Vingo's prison experience had left him
- unfeeling and uncaring.
 - feeling that he had paid his debt to society by serving his jail sentence.
 - feeling suicidal.
 - feeling that he had been imprisoned unjustly.
- _____ 6. According to the author, when Vingo saw the yellow handkerchiefs, he felt
- relieved.
 - sad
 - stunned.
 - disappointed.
- _____ 7. To Vingo, the yellow handkerchiefs tied to the oak tree meant
- an approaching holiday.
 - welcome home for returning soldiers.
 - nothing.
 - forgiveness and a new start.

- _____ 8. At the end of the story, we can conclude that Vingo's wife was
- forgiving.
 - bitter.
 - unforgiving.
 - revengeful.
- _____ 9. The six young people were traveling to Florida from
- New Jersey.
 - Philadelphia.
 - New York.
 - Washington.
- _____ 10. Perhaps the lesson the young people learned from Vingo's story is that
- despite the hardships of life, there is an opportunity for happiness if one is willing to try again.
 - Vingo's wife was justified in not allowing him to return.
 - for an ex-con, there is not much chance for happiness.
 - there are some things that no marriage can survive.

SELECTION 2-2

Literature*(Continued)***Vocabulary in Context**

Directions: Items 11–20 test your ability to determine the meaning of a word by using context clues. *Context clues* are words in a sentence that allow the reader to deduce (reason out) the meaning of an unfamiliar word in that sentence. Context clues also enable the reader to determine which meaning the author intends, when a word has more than one meaning. For each vocabulary item below, a sentence from the selection containing an important word (*italicized, like this*) is quoted first. Next, there is an additional sentence using the word in the same sense and providing another context clue. Use the context clues from *both* sentences to deduce the meaning of the italicized word. *Be sure the answer you choose makes sense in both sentences.* If you discover that you need to use a dictionary to confirm an answer choice, remember that the meaning you select must still fit the context of *both* sentences. Write your answer in the space provided.

Pronunciation Key: ă pat ā pay âr care ä father ɛ pet ē be ĩ pit
 ī tie îr pier ǒ pot ō toe ô paw oi noise ou out oŏ took
 ɔ̄ boot ǔ cut yō̄ abuse ûr urge th thin th this hw which
 zh vision ə about *Stress mark:* '

- _____ 11. There were six of them, three boys and three girls, and they picked up the bus at the old *terminal* on 34th Street.

Before the days of airplanes, every small and large town had a train *terminal*.

terminal (tûr' mənəl) means:

- a. fatal illness
- b. dock or pier
- c. bus stop
- d. station, especially one that is the final stop at either end of a railway or bus line

- _____ 12. They were dreaming of golden beaches and the tides of the sea as the gray cold spring of New York *vanished* behind them.

No one knew what happened to Mrs. Martin's diamond necklace; it simply *vanished* from her jewelry box during the dinner party.

vanished (văn' یشt) means:

- a. disappeared
- b. intensified
- c. grew smaller
- d. exploded

- _____ 13. His fingers were stained from cigarettes and he chewed the inside of his lip a lot, frozen into some personal *cocoon* of silence.

The fluffy sleeping bag provided a cozy *cocoon* for the drowsy child.

cocoon (kə kōōn') means:

- a. wool blanket
- b. pupal case spun by the larvae of moths and other insects
- c. protective covering
- d. coat

- _____ 14. He sat *rooted* in his seat, and the young people began to wonder about him, trying to imagine his life.

Connie wanted to run from the barking dog, but she was so terrified that her feet seemed *rooted* in the ground.

rooted (rōōt' əd) means:

- a. buried
- b. bored or uninterested
- c. frightened
- d. firmly anchored

- _____ 15. He smiled and took the bottle of Chianti and took a *swig*.

The hot, thirsty tennis player finished his sports drink in a single *swig*.

swig (swĭg) means:

- a. glance
- b. insult or offense
- c. large swallow or gulp
- d. taste

- _____ 16. Well, when I was in the *can*, I wrote to my wife.

Mike said that John was sentenced to 30 days in the *can* for reckless driving.

can (kăn) means:

- a. rehabilitation center
- b. jail or prison
- c. food container
- d. small town

- _____ 17. Vingo stopped looking, tightening his face into an ex-con's mask, as if *fortifying* himself against still another disappointment.

The coach spent half-time *fortifying* his team's sagging morale.

fortifying (fôr' tə fī ĭng) means:

- a. improving
- b. strengthening
- c. fooling by means of a clever trick
- d. making happy or cheerful

- _____ 18. Then it was 10 miles, and then five and the bus acquired a dark hushed mood, full of silence, of absence, of lost years, of the woman's plain face, of the sudden letter on the breakfast table, of the wonder of children, of the iron bars of *solitude*.

Because he liked *solitude*, the artist often took long walks in the early morning hours when the beach was deserted.

solitude (söl' ĭ tōd) means:

- a. isolation or being alone
- b. quietude or silence
- c. loneliness
- d. beauty

- _____ 19. Then suddenly all of the young people were up out of their seats, screaming and shouting and crying, doing small dances, shaking clenched fists in triumph and *exaltation*.

Nothing could top the *exaltation* I felt when I received my college diploma at the graduation ceremony.

exaltation (ɪɡs əl təʃ ən) means:

- a. calm, reflective mood
- b. disappointment
- c. delight or elation
- d. memory or recollection

- _____ 20. The tree was covered with yellow handkerchiefs, 20 of them, 30 of them, maybe hundreds, a tree that stood like a banner of welcome blowing and *billowing* in the wind.

When the wind came up, the sails of the boat began *billowing* like open parachutes.

billowing (bɪl' ō ɪŋ) means:

- a. folding and unfolding
- b. disintegrating
- c. swelling or surging
- d. flapping

SELECTION 2-2

Literature

(Continued)

Reading Skills Application

Directions: Items 21–25 test your ability to *apply* certain reading skills to the material in this selection. These are the types of questions that might appear on standardized reading tests and state-mandated basic skills tests. Write your answer in the space provided.

- _____ 21. The meaning of the word *unformed* as it is used in paragraph 21 is:
- a. uneducated.
 - b. blurry; out of focus.
 - c. not developed to maturity.
 - d. not having definite opinions.
- _____ 22. According to information in this selection, Vingo
- a. went to jail for robbing a bank in New York.
 - b. would not go into restaurants with the college students.
 - c. wanted to go to Florida to escape the gray, cold spring in New York.
 - d. had a wife and three children.

- _____ 23. Based on information in this selection, which of the following inferences is most reasonable?
- a. Vingo's children loved him and were excited that he was coming home.
 - b. Martha was a forgiving person.
 - c. Vingo should have been allowed to serve his jail term in Florida.
 - d. Because of Vingo's experience, yellow ribbons became a national symbol to welcome those who are returning home after a lengthy absence.
- _____ 24. For this selection, which of the following best expresses the author's intended meaning?
- a. College students can learn a great deal about life from those who have more experience.
 - b. If a person has faced the consequences of his or her actions, that person deserves to be forgiven and allowed a second chance.
 - c. Even though you have not heard from a person in several years, that person may still be glad to see you.
 - d. Children are more forgiving than adults.
- _____ 25. Which of the following conclusions may be drawn from information presented in this selection?
- a. Vingo's wife was happy that he was returning home.
 - b. Vingo's wife did not write to him in jail because she was angry with him.
 - c. Vingo had probably been a college student himself many years earlier.
 - d. Vingo stayed on the bus until it reached Fort Lauderdale.

SELECTION 2-2

Literature

(Continued)



Collaboration Option

Respond in Writing

Directions: Refer to Selection 2-2 as needed to answer the essay-type questions below.

Option for collaboration: Your instructor may direct you to work with other students or, in other words, to work collaboratively. In that case, you should form groups of three or four students as directed by your instructor and work together to complete the exercises. After your group discusses each item and agrees on the answer, have a group member record it. Every member of your group should be able to explain all of your group's answers.

- 1. Yellow ribbons are still used to welcome someone home. Can you think of some examples of whom they might be used to welcome?

Four horizontal lines for writing the answer to question 1.

- 2. Ribbons of different colors are often worn to show support for various causes. Give one or more examples. Describe the color of the ribbon and the cause.

Five horizontal lines for writing the answer to question 2.

- 3. How did you feel when you read about the "gorgeous yellow blur" that awaited Vingo?

Eight horizontal lines for writing the answer to question 3.

4. On the basis of what you learned about Vingo in this selection, do you feel he deserved to be forgiven? Explain your answer.

5. This story seems to illustrate several truths about life. What are some of the truths that the story reveals?

6. **Overall main idea.** What is the overall main idea the author wants the reader to understand? Answer this question in one sentence. Be sure to include the word *forgive*, *forgiveness*, or *forgiven* in your overall main idea sentence.



Internet Resources

Read More about It on the World Wide Web

To learn more about the topic of this selection, visit these websites or use your favorite search engine (such as Google or Yahoo!) to discover more about the topic on your own. Whenever you go to any website, it is a good idea to evaluate it critically. Are you getting good information—information that is accurate, complete, and up-to-date? Who sponsors the website? How easy is it to use the features of the website?

cjr.org/year/97/3/hamill.asp

This is the *Columbia Journalism Review* website, which presents an article about Pete Hamill, the author of the short story used as the selection.

www.yellowribbon.org/

This is the Yellow Ribbon Suicide Prevention Program site. Because of the internal nature of depression and loneliness, thousands of young people who appear to be happy are suffering silently in emotional pain. YRSPP offers a way for teens to reach out and seek help.

SELECTION **2-3**
Biology

A WHALE OF A SURVIVAL PROBLEM

From *The Nature of Life*

By John Postlethwait and Janet Hopson

Prepare Yourself to Read

Directions: Do these exercises *before* you read Selection 2-3.

1. First, read and think about the title. What kinds of things do you think threaten the survival of blue whales?

2. Next, complete your preview by reading the following:

Introduction (in *italics*)

First paragraph (paragraph 1)

First sentence of each paragraph

Words in *italics*

Diagram

All of the last paragraph (paragraph 4)

On the basis of your preview, what specific problem of blue whale survival do you think will be discussed?

Apply Comprehension Skills

Directions: Do these exercises as you read Selection 2-3.

Adjust your reading rate. On the basis of your preview and your prior knowledge of how blue whales survive, do you think you should read Selection 2-3 slowly or more rapidly?

Develop a college-level vocabulary. Did you notice any unfamiliar words while you were previewing Selection 2-3? If so, list them here.

Predict as you read. As you read Selection 2-3, make predictions about what the authors will discuss next. Write your predictions in the blanks provided.

A WHALE OF A SURVIVAL PROBLEM

Blue whales are the largest animals on earth. Unfortunately, they have been hunted almost to extinction and are now on the endangered species list. Human predators have not been their only problem, however. Their size alone presents unique challenges for survival. This textbook selection explores the biological adaptations this immense creature has had to make in order to survive.

- 1 An intrepid visitor to the perpetually frozen Antarctic could stand at the coastline, raise binoculars, and witness a dramatic sight just a few hundred meters offshore: a spout as tall and straight as a telephone pole fountaining upward from the blowhole of a blue whale (*Balaenoptera musculus*), then condensing into a massive cloud of water vapor in the frigid air. The gigantic animal beneath the water jet would be expelling stale air from its 1-ton lungs after a dive in search of food. Then, resting at the surface only long enough to take four deep breaths of fresh air, the streamlined animal would raise its broad tail, thrust mightily, and plunge into the ocean again. The observer on shore might see such a sequence only twice per hour, since the blue whale can hold its breath for 30 minutes as it glides along like a submarine, swallowing trillions of tiny shrimplike animals called krill.
- 2 It is difficult to comprehend the immense proportions of the blue whale, the largest animal ever to inhabit our planet. At 25 to 30 m (80 to 100 ft) in length, this marine mammal is longer than three railroad boxcars and bigger than any dinosaur that ever lumbered on land. It weighs more than 25 elephants or 1600 fans at a basketball game. Its heart is the size of a beetle—a Volkswagen beetle. And that organ pumps 7200 kg (8 tons) of blood through nearly 2 million kilometers (1.25 million miles) of blood vessels, the largest of which could accommodate an adult person crawling on hands and knees. The animal has a tongue the size of a grown elephant. It has 45,500 kg (50 tons) of muscles to move its 54,500 kg (60 tons) of skin, bones, and organs. And this living mountain can still swim at speeds up to 48 km (30 mi) per hour!

Prediction Exercises

Directions: At each of the points indicated below, answer the question, “What do you predict will be discussed next?”

The blue whale is the largest creature on earth.

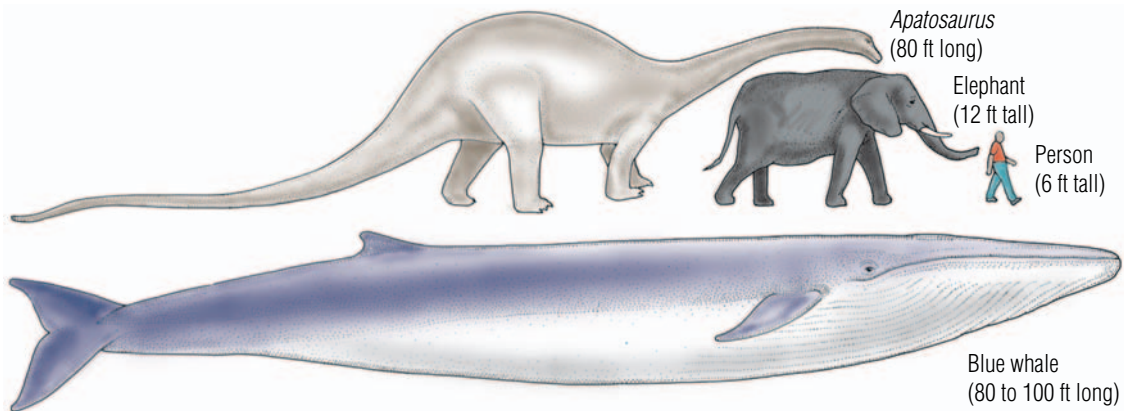


3

Leviathan proportions aside, it is difficult to grasp the enormous problems that so large an organism must overcome simply to stay alive. For starters, a blue whale is a warm-blooded animal with a relatively high metabolic rate; to stay warm and active in an icy ocean environment, it must consume and burn 1 million kilocalories a day. This it does by straining 3600 kg (8000 lb) of krill from the ocean water each day on special food-gathering sieve plates. In addition, each of the trillions of cells in the whale's organs must exchange oxygen and carbon dioxide, take in nutrients, and rid

Prediction Exercise

What do you predict will be discussed in paragraph 3?



A whale to scale. A blue whale is longer and far heavier than an elephant or even an *Apatosaurus* (formerly *Brontosaurus*), the longest land animal that ever lived.

itself of organic wastes, just as a single-celled protozoan living freely in seawater must do. Yet a given whale cell—a liver cell, let's say—can lie deep in the body, separated from the environment by nearly 2 m (6 ft) of blubber, muscle, bone, and other tissues. For this reason, the whale needs elaborate transport systems to deliver oxygen and nutrients and to carry away carbon dioxide and other wastes. Finally, the galaxy of living cells inside a whale must be coordinated and controlled by a brain, a nervous system, and chemical regulators (hormones) so that the organism can function as a single unit.

Although blue whales are the largest animals that have ever lived, they share with all other animals the same fundamental physical problems of day-to-day survival: how to extract energy from the environment; how to exchange nutrients, wastes, and gases; how to distribute materials to all the cells in the body; how to maintain a constant internal environment despite fluctuations in the external environment; how to support the body; and how to protect it from attackers or from damaging environmental conditions. Blue whales have evolved with unique adaptations of form and function that meet such challenges and leave the animals suited to their way of life.

Prediction Exercise

What do you predict will be discussed in paragraph 4?

SELECTION 2-3

Biology*(Continued)*

Student CD-ROM
Go to Chapter 2.
Select Quiz.

Reading Selection Quiz

This quiz has three parts. Your instructor may assign some or all of them.

Comprehension

Directions: Items 1–10 test your comprehension (understanding) of the material of this selection. These questions are the type a content area instructor (such as a biology professor) would ask on a test over this material. You should be able to answer these questions after studying this selection. For each comprehension question below, use information from the selection to determine the correct answer. Refer to the selection as you answer each question. Write your answer in the space provided.

True or False

- _____ 1. The blue whale expels water through its blowhole.
- _____ 2. The blue whale can hold its breath for more than 1 hour as it glides under water.
- _____ 3. The blue whale feeds daily on trillions of tiny shrimplike animals called krill.
- _____ 4. Although large, the blue whale is not the largest animal that inhabits our earth.
- _____ 5. A human adult could crawl on hands and knees through the largest blood vessels of a blue whale.

Multiple-Choice

- _____ 6. In paragraph 1, “a spout as tall and straight as a telephone pole fountaining upward from the blowhole of a blue whale” refers to
- ice.
 - saltwater.
 - fresh air.
 - stale air that has condensed into water vapor.
- _____ 7. The “living mountain” mentioned in paragraph 2 refers to
- the dinosaur.
 - 8,000 pounds of krill.
 - the blue whale.
 - a grown elephant.

- _____ 8. After diving for food, the blue whale surfaces and
- expels stale air through its blowhole, and then dives quickly again.
 - expels stale air, rests long enough to take four breaths of fresh air, and then dives again.
 - expels stale air, rests on the surface for 30 minutes, and then dives again.
 - none of the above.
- _____ 9. Which of the following problems of day-to-day survival does the blue whale share with all other animals?
- how to extract energy (food) from the environment
 - how to distribute materials to all the cells in the body
 - how to balance the internal environment with the changes in the external environment
 - all of the above
- _____ 10. Because the blue whale is a warm-blooded animal and has a relatively high metabolic rate, it must
- rid itself of organic wastes.
 - expel stale air through its blowhole.
 - consume and burn 1 million kilocalories a day in order to stay warm and active in the icy ocean.
 - take four deep breaths of fresh air before diving again for food.

SELECTION 2-3

Biology
 (Continued)

Vocabulary in Context

Directions: Items 11–20 test your ability to determine the meaning of a word by using context clues. *Context clues* are words in a sentence that allow the reader to deduce (reason out) the meaning of an unfamiliar word in that sentence. Context clues also enable the reader to determine which meaning the author intends, when a word has more than one meaning. For each vocabulary item below, a sentence from the selection containing an important word (*italicized, like this*) is quoted first. Next, there is an additional sentence using the word in the same sense and providing another context clue. Use the context clues from *both* sentences to deduce the meaning of the italicized word. *Be sure the answer you choose makes sense in both sentences.* If you discover that you need to use a dictionary to confirm an answer choice, remember that the meaning you select must still fit the context of *both* sentences. Write your answer in the space provided.

Pronunciation Key: a pat ā pay âr care ä father e pet ē be pit
 ˘ tie îr pier o pot ô toe ô paw oi noise ou out oook
 œ boot u cut yœ abuse ûr urge th thin th this hw which
 zh vision ə about Stress mark: '

- _____ 11. An *intrepid* visitor to the perpetually frozen Antarctic could stand at the coastline, raise binoculars, and witness a dramatic sight just a few hundred meters off shore.

Columbus was an *intrepid* explorer who set sail for the unknown New World.

intrepid (ɪn trɛp' ɪd) means:

- a. extremely cold
- b. fun-loving
- c. fearless; bold
- d. weary; fatigued

- _____ 12. An *intrepid* visitor to the *perpetually* frozen Antarctic could stand at the coastline, raise binoculars, and witness a dramatic sight just a few hundred meters off shore.

The Earth moves *perpetually* around the sun.

perpetually (pəɾ pɛch' ō əl lē) means:

- a. continuing forever without interruption
- b. partially
- c. erratically; unpredictably
- d. once a month

- _____ 13. An *intrepid* visitor to the perpetually frozen Antarctic could stand at the coastline, raise binoculars, and witness a dramatic sight just a few hundred meters off shore: a spout as tall and as straight as a telephone pole fountaining upward from the blow hole of a blue whale, then *condensing* into a massive cloud of water vapor in the frigid air.

When you turn on your car heater in the winter, water vapor may start *condensing* and running down the inside of the windows.

condensing (kən dɛns' ɪŋ) means:

- a. turning into steam
- b. changing from a gas into a liquid
- c. becoming colder
- d. changing from a liquid into a solid

- _____ 14. An intrepid visitor to the perpetually frozen Antarctic could stand at the coastline, raise binoculars, and witness a dramatic sight just a few hundred meters off shore: a spout as tall and as straight as a telephone pole fountaining upward from the blow hole of a blue whale, then condensing into a massive cloud of water vapor in the *frigid* air.

Snowflakes began to fall from the gray, *frigid* sky.

frigid (frīj' ĭd) means:

- smoky
- dry
- starry
- extremely cold

- _____ 15. The gigantic animal beneath the water jet would be *expelling* stale air from its 1-ton lungs after a dive in search of food.

Our college is *expelling* five students for cheating on an exam.

expelling (ĭk spēl' ĭng) means:

- maintaining
- breathing out
- forcing out or ejecting
- preventing

- _____ 16. *Leviathan* proportions aside, it is difficult to grasp the enormous problems that so large an organism must overcome simply to stay alive.

The deep-sea fishermen swore they had seen a *leviathan*—a shark so huge that it was larger than their boat.

leviathan (lə vī' ə thən) means:

- something unusually large of its kind
- measuring device
- large shark
- huge ship

- _____ 17. For starters, a blue whale is a warm-blooded animal with a *relatively* high metabolic rate; to stay warm in an icy ocean environment, it must consume and burn 1 million kilocalories a day.

Our boss is usually very talkative, but he was *relatively* quiet at the staff meeting today.

relatively (rĕl' ə tĭv lē) means:

- pertaining to family relationships
- pertaining to reality
- pertaining to a member of the family
- in comparison with something else

- _____ 18. For starters, a blue whale is a warm-blooded animal with a relatively high *metabolic* rate; to stay warm in an icy ocean environment, it must consume and burn 1 million kilocalories a day.

Exercise increases a person's *metabolic* rate.

metabolic (mĕt ə bŏl' ĭk) means:

- pertaining to the speed at which an organism moves
- pertaining to bodily physical and chemical processes that maintain life
- pertaining to breathing and respiration
- pertaining to survival

- _____ 19. For this reason, the whale needs *elaborate* transport systems to deliver oxygen and nutrients and to carry away carbon dioxide and wastes.

The plans for the queen's coronation ceremony were so *elaborate* that it took a staff of 500 people to carry out the arrangements.

elaborate (ĭ lăb' ə r ĭt) means:

- time-consuming
- very complex
- difficult to understand
- simple

- _____ 20. Finally, the *galaxy* of living cells inside a whale must be coordinated and controlled by a brain, a nervous system, and chemical regulators (hormones) so that the organism can function as a single unit.

From the dazzling *galaxy* of toys in the toy department, my young nephew finally selected a remote-controlled car.

galaxy (găl' ə k sē) means:

- stars in the universe
- collection of numerous things
- system
- display

SELECTION 2-3

Biology
(Continued)

Reading Skills Application

Directions: Items 21–25 test your ability to *apply* certain reading skills to the material in this selection. These are the types of questions that might appear on standardized reading tests and state-mandated basic skills tests. Write your answer in the space provided.

- _____ 21. The meaning of *lumbered* as it is used in paragraph 2 is:
- swam.
 - walked clumsily.
 - crawled quickly.
 - starved.

- _____ 22. Which of the following is the main idea of the second paragraph of this selection?
- It is difficult to comprehend the immense proportions of the blue whale, the largest animal ever to inhabit our planet.
 - It weighs more than 25 elephants or 1,600 fans at a basketball game.
 - Its heart is the size of a beetle—a Volkswagen beetle.
 - This living mountain can still swim at speeds up to 48 km (30 mi) per hour.
- _____ 23. The primary reason the authors wrote this selection is to:
- convince readers that blue whales are big.
 - inform readers about the size of the blue whale and the challenges its size poses for its survival.
 - encourage conservationists to protect blue whales.
 - prove that the blue whale faces unique survival problems not faced by other animals.
- _____ 24. The tone of this selection can best be described as:
- alarmed.
 - passionate.
 - humorous.
 - unemotional.
- _____ 25. According to information in the selection:
- the blue whale has a tongue the size of a telephone pole.
 - tiny, shrimplike krill are the smallest animals on earth.
 - the blue whale has 54,500 kg of skin, bones, and organs.
 - the muscles of the blue whale weigh 60 tons.

SELECTION 2-3

Respond in Writing**Biology***(Continued)*

Collaboration Option

Directions: Refer to Selection 2-3 as needed to answer the essay-type questions below.

Option for collaboration: Your instructor may direct you to work with other students or, in other words, to work *collaboratively*. In that case, you should form groups of three or four students as directed by your instructor and work together to complete the exercises. After your group discusses each item and agrees on the answer, have a group member record it. Every member of your group should be able to explain all of your group's answers.

1. Describe any three comparisons the author uses to illustrate the enormous size of the blue whale.

First comparison:

Second comparison:

Third comparison:

2. Because of its size, what are three special problems that blue whales must overcome to survive?

One problem:

Another problem:

A third problem:

3. Explain why the title of this selection is clever.

4. **Overall main idea.** What is the overall main idea the authors want the reader to understand about the survival of the blue whale? Answer this question in one sentence. Be sure to include *blue whale* and *survive* (or *survival*) in your overall main idea sentence.



Internet Resources

Read More about It on the World Wide Web

To learn more about the topic of this selection, visit these websites or use your favorite search engine (such as Google or Yahoo!) to discover more about the topic on your own. Whenever you go to *any* website, it is a good idea to evaluate it critically. Are you getting good information—information that is accurate, complete, and up-to-date? Who sponsors the website? How easy is it to use the features of the website?

www.physics.helsinki.fi/whale/

This website is part of the World Wide Web Virtual Library. It contains many interesting links related to whale watching. Click on links for research, pictures, slide shows, videos, and even interspecies communication.

unisci.com/aboutunisci.shtml

Unisci was the first science daily news site on the Web and remains the only one that selects stories on the basis of their scientific importance. For more information on whale survival, type “whale” into the archive search box.

www.encycarta.msn.com/find/Concise.asp?ti=035E4000

This part of an encyclopedia website features an overview of whales: types, anatomy, feeding habits, reproduction, intelligence, behavior, origins, etc. Blue whales are rorquals and are included in the section on baleen whales (the category of whale that obtains food by filtering out small fish and crustaceans through the giant, flexible, comblike baleen in their mouths).

www.pacificwhale.org/

This is the website of the nonprofit Pacific Whale Foundation in Maui, Hawaii. It is dedicated to saving the oceans and the life they contain, especially the species of whales that are threatened with extinction. (The organization does not focus on blue whales alone.) The foundation stresses marine research, education, and conservation.

