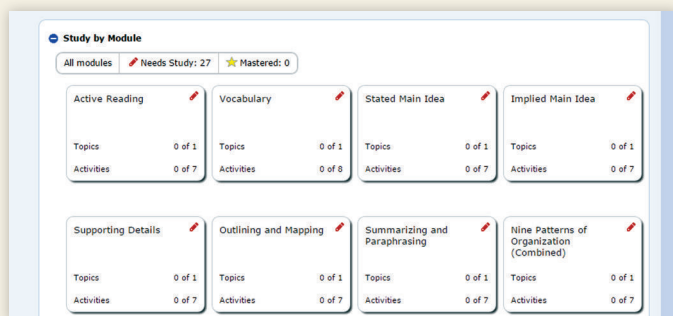


## MyReadingLab™: Improving Reading Through Personalized Learning Experiences

In an ideal world, an instructor would work with each student to help improve reading skills with consistent challenges and rewards. Without that luxury, MyReadingLab offers a way to keep students focused and accelerate their progress using comprehensive pre-assignments and a powerful, adaptive study plan.

### Flexible Enough to Fit Every Course Need

MyReadingLab can be set up to fit your specific course needs, whether you seek reading support to complement what you do in class, a way to administer many sections easily, or a self-paced environment for independent study.



### Learning in Context

In addition to distinct pre-loaded learning paths for reading/writing skills practice and reading level practice, MyReadingLab incorporates numerous activities for practice and readings from the accompanying textbook. This makes the connection between what's done in and out of the classroom more relevant to students.

## NEW! Learning Tools for Student Engagement

### Create an Engaging Classroom

**Learning Catalytics** is an interactive, student-response tool in MyReadingLab that uses students' smartphones, tablets, or laptops, allowing instructors to generate class discussion easily, guide lectures, and promote peer-to-peer learning with real-time analytics.

### Build Multimedia Assignments

**MediaShare** allows students to easily post multimodal assignments for peer review and instructor feedback. In both face-to-face and online courses, MediaShare enriches the student learning experience by enabling contextual feedback to be provided quickly and easily.

### Direct Access to MyLab

Users can link from any Learning Management System (LMS) to Pearson's MyReadingLab. Access MyLab assignments, rosters and resources, and synchronize MyLab grades with the LMS gradebook.

Visit [www.myreadinglab.com](http://www.myreadinglab.com) for more information.



# PREFACE

Across twelve editions, *College Reading and Study Skills* has demonstrated that reading and study skills are inseparable. A student must develop skills in each area in order to handle college work successfully. With this goal in mind, I have tried to provide complete coverage of both reading and study skills throughout and to show their relationship and interdependency. In doing so, my emphasis has been on direct instruction. My central aim is to teach reading and study through a how-to approach.

## NEW TO THE THIRTEENTH EDITION

The primary thrust of the revision is to create a stronger emphasis on college textbook reading and to provide a realistic and practical skill application model using a classroom textbook simulation. Specific changes include the following:

### NEW STRONGER EMPHASIS ON COLLEGE TEXTBOOK READING SKILLS.

Chapter 6, “Active Reading Strategies,” has been expanded and reorganized to include skills for before reading, during reading, and after reading. A new textbook excerpt has been added to enable students to apply skills as they learn them.

### NEW CLASSROOM SIMULATION OF TEXTBOOK READING AND WRITING

**SKILLS.** In place of the sample textbook chapter, Part Seven now features a unique classroom simulation built around a textbook chapter excerpt. The simulation integrates and applies skills taught throughout *College Reading and Study Skills* to actual textbook material. It simulates the assignments, tasks, skills, processes, and outcome assessments that students are expected to face in college classrooms. The excerpt from a sociology textbook is treated as a classroom reading assignment. Students prepare for a class lecture on the assignment, preview the assignment, evaluate its learning aids, activate their background knowledge, read the assignment, review the assignment, participate in simulated class activities, write about the assignment, take quizzes based on the assignment, and prepare for an exam on the assignment.

**NEW THEMATIC READINGS.** Part Six of the book contains nine readings, grouped according to three themes. All existing readings have been replaced with current and engaging readings. Each theme contains one textbook excerpt. Theme A, Controversies in Science, considers the following topics: designer babies, the massive concentration of plastic in oceans, and consequences of global warming. Theme B, Health Issues, addresses concerns about the marketing of human kidneys, use of the Internet by doctors to provide medical care, and patient use of the Internet to obtain self-help. Finally, Theme C, on the Internet and Communication, offers readings on what happens when kids don’t have the Internet at home, use of smartphones in developing countries, and social networking.

**REVISED USING COLLEGE TEXTBOOKS FEATURE.** Titled “Using College Textbooks,” this feature appears in every chapter and is intended to demonstrate relevance and application of chapter content to college textbooks. Using textbook excerpts from a wide range of disciplines, this feature guides students in integrating and applying the skills taught in each chapter to textbooks used in their other courses. Each feature has been revised to be more engaging and interactive.

**NEW SUCCESS WORKSHOPS.** The college classroom is changing, and students need new skills to meet the challenges they face. To meet this need, three new Success Workshops titled “Think Critically about Course Content,” “Improving Your Reading Rate and

Flexibility,” and “Working with New Course Formats: Online, Hybrid, and Flipped Courses” have been added. The workshop that covers managing stress has also been thoroughly revised.

**NEW CHAPTER REORGANIZATION.** Numerous chapters have been combined and moved forward in the book to provide a more logical progression of skills. Former Chapters 1 and 2 have been combined into a new Chapter 1 titled “First Steps to Academic Success.” Chapters 11 and 12 on vocabulary have also been combined into a new Chapter 7 titled “Expanding Your Vocabulary,” providing more efficient and unified coverage. Chapters on textbook reading and learning have been moved forward in the book as students need these skills immediately in order to be successful in the college semester. The chapter on reading rate has been dropped, and a new Success Workshop has been added to cover this content.

**ESSENTIAL SKILLS ARE PROVIDED EARLIER.** Because note taking and textbook reading skills, including highlighting, outlining, summarizing, and mapping, are essential college survival skills, the chapters have been reordered to present these skills earlier in the book.

**UPDATED TEXTBOOK SELECTIONS FOR EXERCISES.** All selections have been checked for reading level; many have been replaced with excerpts from the most up-to-date editions of textbooks.

**REVISED ANNOTATED INSTRUCTOR'S EDITION.** For instructors, the Annotated Instructor's Edition is an exact replica of the student text with answers provided on the page.

**NEW LEXILE MEASURES.** A Lexile® measure is the most widely used reading metric in U.S. schools. The reading levels of the longer selections are indicated using Lexile measures in the Annotated Instructor's Editions of all Pearson's reading books, as is the reading level of content in MyReadingLab. See the Annotated Instructor's Edition of *College Reading and Study Skills* and the Instructor's Manual for more details.

## CONTENT OVERVIEW

*College Reading and Study Skills*, Thirteenth Edition, presents the basic strategies for college success, including time management, analysis of learning style, active reading, and note taking. The text offers strategies for strengthening literal and critical comprehension, as well as improving vocabulary skills. Students also discover methods for reading and learning from textbook assignments, including outlining and summarizing, and for taking exams. The reading and study skills I have chosen to present are those most vital to students' success in college. Each unit teaches skills that are immediately usable—all have clear and direct application to students' course work.

Because I believe that critical thinking and reading skills are essential to college success, these skills are emphasized in the text. I introduce students to critical thinking skills by explaining Bloom's hierarchy of cognitive skills early and then showing their academic application throughout the text. *College Reading and Study Skills* offers direct skill instruction in critical reading and includes key topics such as making inferences, asking critical questions, analyzing arguments, and evaluating Internet sources.

The units of the text are interchangeable, which enables the instructor to adapt the material to a variety of instructional sequences.

**SUCCESS WORKSHOPS.** Appearing at the beginning of Parts One through Five, the Success Workshops use a fun, lively, and accessible format to provide students with skills that will directly and immediately contribute to their college success. Topics include

acclimating to the college environment, managing one's electronic life, strengthening concentration, improving reading rate and flexibility, thinking critically about course content, polishing one's academic image, stress management, and working with new course formats: online, hybrid, and flipped courses.

**PART ONE: BUILDING A FOUNDATION FOR ACADEMIC SUCCESS.** This section provides an introduction to the college experience and presents skills, habits, and attitudes that are essential to academic success. In Chapter 1 students learn to assess their learning style and develop active learning strategies. Chapters 2 and 3 focus on classroom skills: note taking and classroom communication. The Success Workshops in Part One are Learn About Your Courses and Your Campus Resources and Manage Your Electronic Life.

**PART TWO: USING COLLEGE TEXTBOOKS.** The chapters in this section teach students to read and learn from college textbook assignments. Chapter 4 teaches students how to identify and organize what they learn using paraphrasing, highlighting, marking, outlining, summarizing, and mapping. Chapter 5 discusses the learning and memory processes and the principles on which many of the skills presented throughout the text are based. The Success Workshops in Part Two are Working with New Course Formats: Online, Hybrid, and Flipped Courses and Strengthen Your Concentration.

**PART THREE: ESSENTIAL READING SKILLS.** This section focuses on the development of reading skills for both textbooks and other common academic reading assignments. In Chapter 6 students learn active reading strategies for before, during, and after reading. Students are shown methods of learning specialized vocabulary and discover systems for vocabulary learning in Chapter 7. Chapter 8 focuses on paragraph reading skills. Chapter 9 focuses on recognizing thought patterns. The Success Workshop in Part Three is Improving Your Reading Rate and Flexibility.

**PART FOUR: THINKING CRITICALLY AS YOU READ.** Critical thinking is the focus of the two chapters in this section. Chapter 10 emphasizes evaluation of an author's message. It includes making inferences, distinguishing between fact and opinion, recognizing tone, evaluating data and evidence, and analyzing arguments. Chapter 11 focuses on evaluating an author's techniques: connotative and figurative language, missing information, generalizations, assumptions, and manipulative language. The Success Workshop in Part Four is Think Critically About Course Content.

**PART FIVE: STRATEGIES FOR ACADEMIC ACHIEVEMENT.** The purpose of this section is to help students handle academic assignments and exams. Chapter 12 focuses on reading and evaluating academic sources such as periodicals, nonfiction, and scholarly works. In Chapters 13 and 14, students learn specific strategies for preparing for and taking objective tests, standardized tests, and essay exams, as well as for controlling test anxiety. The Success Workshops in Part Five are Polish Your Academic Image and Manage Stress.

**PART SIX: THEMATIC READINGS.** This section contains nine readings, grouped according to three themes: controversies in science, health issues, and the Internet and communication. These readings, which represent the kind of texts that may be assigned in academic courses, provide students with an opportunity to apply skills taught throughout the text.

**PART SEVEN: CLASSROOM SIMULATION: TEXTBOOK READING AND WRITING.** Finally, a textbook chapter taken from an introduction to sociology college text, titled "Race and Ethnicity," allows students to work with actual textbook material to apply skills taught throughout the text. The chapter is representative of college textbooks, of the learning aids they contain, and of classroom activities built around chapter reading assignments.

## SPECIAL FEATURES

The following features enhance the text's effectiveness and directly contribute to students' success:

- **Learning Style.** The text emphasizes individual student learning styles and encourages students to adapt their reading and study techniques to suit their learning characteristics, as well as the characteristics of the learning task.
- **Reading as a Process.** This text emphasizes reading as a cognitive process. Applying the findings from the research areas of metacognition and prose structure analysis, students are encouraged to approach reading as an active mental process of selecting, processing, and organizing information to be learned.
- **Metacognition.** Students are encouraged to establish their concentration, activate prior knowledge, define their purposes, and select appropriate reading strategies prior to reading. They are also shown how to strengthen their comprehension, monitor that comprehension, select what to learn, and organize information. They learn to assess the effectiveness of their learning, revise and modify their learning strategies as needed, and apply and integrate course content.
- **Skill Application.** Students learn to problem-solve and explore applications through case studies of academic situations included at the end of each chapter. The exercises are labeled "Applying Your Skills." "Discussing the Chapter" questions ask students to reflect on how the advice in the chapter will work in their assignments. "Analyzing a Study Situation" questions present students with mini-cases and ask them how to best approach an academic challenge. Finally, "Working on Collaborative Projects" exercises provide opportunities for group work.
- **Learning Experiments/Learning Principles.** Each chapter begins with an interactive learning experiment designed to engage students immediately in an activity that demonstrates a principle of learning that will help students learn the chapter content. The student begins the chapter by doing, not simply by beginning to read.
- **Chapter Learning Goals.** Each chapter opens with chapter learning objectives that correspond to the major headings in the chapter.
- **Interactive Assignments.** The Success Workshops, the Learning Experiments at the beginning of each chapter, and the Using College Textbooks feature engage students and function as interactive learning opportunities.
- **Writing to Learn.** The text emphasizes writing as a means of learning. Writing-to-learn strategies include paraphrasing, self-testing, outlining, summarizing, and mapping.
- **Realistic Reading Assignments.** Exercises often include excerpts from college texts across a wide range of disciplines, providing realistic examples of college textbook reading. Furthermore, "Using College Textbooks" sections guide students in making the most of their textbooks.
- **Thematic Readings.** Nine readings, grouped according to three themes, are contained in Part Six. These readings provide realistic materials on which to apply skills taught in the text. They also provide students with an essential link between in-chapter practice exercises and independent application of new techniques in their own textbooks, as well as valuable practice in synthesizing and evaluating ideas.
- **Self-Test Chapter Summaries.** Linked to the chapter's learning goals, the chapter summaries use an interactive question-answer format that encourages students to become more active learners.
- **Quick Quizzes.** A multiple-choice quick quiz is included at the end of each chapter. Each quiz assesses mastery of chapter content, provides students with feedback on their learning, and prepares students for further evaluation conducted by their instructor.
- **Visual Appeal.** The text recognizes that many students are visual learners and presents material visually, using maps, charts, tables, and diagrams.



## THE TEACHING AND LEARNING PACKAGE

### Book-Specific Ancillary Materials

- **Annotated Instructor's Edition.** This supplement is an exact replica of the student text with answers provided. ISBN: 0-13-410522-2.
- **Instructor's Manual.** This supplement, created by Mary Dubbé, contains teaching suggestions for each chapter along with numerous tests formatted for easy distribution and scoring. It includes a complete answer key, strategies for approaching individual chapters, a set of overhead projection materials, and suggestions for integrating the many Pearson ancillaries. Online only. ISBN: 0-13-411196-6.
- **Test Bank.** This supplement, created by Jeanne Jones, includes content-based chapter quizzes and mastery tests to enable students to apply skills taught in every chapter. Online only. ISBN: 0-13-411194-X.
- **Pearson MyTest.** This supplement is created from the Test Bank and is a powerful assessment generation program that helps instructors easily create and print quizzes, study guides, and exams. Select Pearson's questions and supplement them with your own questions. Available at [www.pearsonmytest.com](http://www.pearsonmytest.com). ISBN: 0-13-411193-1.
- **PowerPoint Presentations.** This supplement, created by Jeanne Jones, contains a presentation for each chapter structured around the chapter learning objectives. You can use these presentations as is or edit them to suit your lecturing style. Available for download from the Instructor Resource Center. ISBN: 0-13-411187-7.
- **Answer Key.** The Answer Key contains the solutions to the exercises in the student edition of the text. Available for download from the Instructor Resource Center. ISBN: 0-13-410506-0.

## ACKNOWLEDGMENTS

In preparing this edition, I appreciate the excellent ideas, suggestions, and advice provided by reviewers: Elizabeth Walker, Labette Community College; Cynthia Galvan, Milwaukee Area Technical College; Dina Levitre, Community College of Rhode Island; Alexis Shuler, The University of Akron; Stacey Kartub, Washtenaw Community College; Constance Yates, Missouri State University; Susan Silva, El Paso Community College; Elizabeth O'Scanlon, Santa Barbara City College; and Kathy Petroff, St. Louis Community College – Forest Park.

The editorial staff at Pearson deserve special recognition and thanks for the guidance, support, and direction they have provided. In particular I wish to thank Janice Wiggins, my development editor, for her valuable advice and assistance, Gillian Cook, senior development editor, for overseeing the project, and Eric Stano, VP and editorial director, English, for his enthusiastic support of the revision.

KATHLEEN T. MCWHORTER

# BRIEF CONTENTS

Contents viii

Preface xiii

## Part One: Building a Foundation for Academic Success 2

### **SUCCESS** WORKSHOPS

1. Learn About Your Courses and Your Campus Resources 2

2. Manage Your Electronic Life 6

Chapter 1 **First Steps to Academic Success 10**

Chapter 2 **Taking Notes in Class 43**

Chapter 3 **Communicating in the Classroom 64**

## Part Two: Using College Textbooks 78

### **SUCCESS** WORKSHOPS

3. Working with New Course Formats: Online, Hybrid, and Flipped Courses 78

4. Strengthen Your Concentration 82

Chapter 4 **Identify and Organize What to Learn 86**

Chapter 5 **Learning and Memory 128**

## Part Three: Essential Reading Skills 146

### **SUCCESS** WORKSHOP

5. Improving Your Reading Rate and Flexibility 146

Chapter 6 **Active Reading Strategies 149**

Chapter 7 **Expanding Your Vocabulary 181**

Chapter 8 **Understanding Paragraphs 209**

Chapter 9 **Following Thought Patterns 233**

## Part Four: Thinking Critically as You Read 264

### **SUCCESS** WORKSHOP

6. Think Critically About Course Content 264

Chapter 10 **Evaluating the Author's Message 268**

Chapter 11 **Evaluating Authors' Techniques 300**

## Part Five: Strategies for Academic Achievement 316

### **SUCCESS** WORKSHOPS

7. Polish Your Academic Image 316

8. Manage Stress 320

Chapter 12 **Working with Other Academic Sources 324**

Chapter 13 **Preparing for Exams 337**

Chapter 14 **Taking Exams 356**

## Part Six: Thematic Readings 378

Theme A **Controversies in Science 379**

Theme B **Health Issues 392**

Theme C **Internet and Communication 408**

## Part Seven: Classroom Simulation: Textbook Reading and Writing 422

Credits 447

Index 453

# CONTENTS

Preface xiii

## Part One: Building a Foundation for Academic Success 2

### **SUCCESS** **WORKSHOPS**

1. Learn About Your Courses and Your Campus Resources 2

2. Manage Your Electronic Life 6

### Chapter 1 **First Steps to Academic Success 10**

Establishing Goals and Managing Your Valuable Time 11

Analyzing Your Learning Style 21

Understanding Your Instructors' Teaching Styles 28

Meeting Your Instructors' Expectations 30

Developing Active Learning Strategies 31

Thinking Critically 33

#### ■ **Using College Textbooks: Keeping Up with Reading Assignments 37**

Self-Test Summary 39

*Applying Your Skills: Discussing the Chapter* 40 • *Analyzing a Study Situation* 41

• *Working on Collaborative Projects* 41

*Quick Quiz* 42

### Chapter 2 **Taking Notes in Class 43**

Sharpening Your Listening Skills 44

Preparing for a Class Lecture 44

How to Take Lecture Notes 45

How to Edit Your Notes 52

How to Study Your Notes 55

#### ■ **Using College Textbooks: Taking Notes on Textbook Readings 58**

Self-Test Summary 60

*Applying Your Skills: Discussing the Chapter* 61 • *Analyzing a Study Situation* 61

• *Working on Collaborative Projects* 62

*Quick Quiz* 63

### Chapter 3 **Communicating in the Classroom 64**

Listening Critically 65

Asking and Answering Questions 66

Participating in Class Discussions 66

Working on Collaborative Activities 69

Making Oral Presentations 70

Communicating with Your Professors 72

#### ■ **Using College Textbooks: Preparing for Class Discussions 72**

Self-Test Summary 74

*Applying Your Skills: Discussing the Chapter* 75 • *Analyzing a Study Situation* 75

• *Working on Collaborative Projects* 75

*Quick Quiz* 76



## Part Two: Using College Textbooks 78

### **SUCCESS** WORKSHOPS

3. Working with New Course Formats: Online, Hybrid, and Flipped Courses 78

4. Strengthen Your Concentration 82

### Chapter 4 **Identify and Organize What to Learn 86**

Paraphrasing 87

Highlighting 90

Marking a Textbook 97

Organizing by Outlining 100

Summarizing: Condensing Ideas 104

Mapping: A Visual Means of Organizing Ideas 111

Avoiding Plagiarism 118

#### ■ **Using College Textbooks: Knowing What Is Important and Identifying Supporting Details 120**

Self-Test Summary 124

Applying Your Skills: Discussing the Chapter 125 • Analyzing a Study Situation 125

• Working on Collaborative Projects 126

Quick Quiz 127

### Chapter 5 **Learning and Memory 128**

Forgetting 129

An Overview of the Learning and Memory Process 130

Learning Strategies 133

Review 138

#### ■ **Using College Textbooks: Deciding What to Learn 141**

Self-Test Summary 143

Applying Your Skills: Discussing the Chapter 144 • Analyzing a Study Situation 144

• Working on Collaborative Projects 144

Quick Quiz 145

## Part Three: Essential Reading Skills 146

### **SUCCESS** WORKSHOP

5. Improving Your Reading Rate and Flexibility 146

### Chapter 6 **Active Reading Strategies 149**

Previewing and Predicting Before Reading 150

Discovering What You Already Know 157

Defining Your Purposes for Reading 158

Checking Your Comprehension as You Read 161

Strengthening Your Comprehension of Text 163

Review After Reading 166

Strengthening Your Comprehension of Visual Aids 166

A Classic System for Active Reading: SQ3R 171

#### ■ **Using College Textbooks: Reading Difficult Textbooks 176**

Self-Test Summary 177

Applying Your Skills: Discussing the Chapter 178 • Analyzing a Study Situation 178

• Working on Collaborative Projects 179

Quick Quiz 180

## Chapter 7 **Expanding Your Vocabulary** 181

General Approaches to Vocabulary Expansion 182

A Strategy for Learning Unfamiliar Words 184

Using Context Clues 184

Analyzing Word Parts 191

Using Reference Sources 198

Learning Specialized Terminology 201

Systems for Learning Vocabulary 203

### ■ **Using College Textbooks: Locating Word Meanings** 204

Self-Test Summary 206

Applying Your Skills: Discussing the Chapter 207 • Analyzing a Study Situation 207

• Working on Collaborative Projects 207

Quick Quiz 208

## Chapter 8 **Understanding Paragraphs** 209

Three Essential Elements of a Paragraph 210

How to Identify the Topic 211

How to Find the Main Idea 215

Where to Find the Topic Sentence 215

Recognizing Details 218

Transitions 224

Unstated Main Ideas 225

### ■ **Using College Textbooks: Locating Main Ideas** 228

Self-Test Summary 230

Applying Your Skills: Discussing the Chapter 231 • Analyzing a Study Situation 231

• Working on Collaborative Projects 231

Quick Quiz 232

## Chapter 9 **Following Thought Patterns** 233

The Organization of Textbook Chapters 234

Types of Supporting Information 236

Recognizing Organizational Patterns 241

### ■ **Using College Textbooks: Identifying Patterns** 257

Self-Test Summary 260

Applying Your Skills: Discussing the Chapter 260 • Analyzing a Study Situation 261

• Working on Collaborative Projects 261

Quick Quiz 262

## Part Four: Thinking Critically as You Read 264



### 6. Think Critically About Course Content 264

## Chapter 10 **Evaluating the Author's Message** 268

Making Inferences as You Read 269

Evaluating Author and Source Credibility 272

Distinguishing Between Fact and Opinion 276

Identifying the Author's Purpose 278

Being Alert for Bias 280

Analyzing the Author's Tone 282

Analyzing Arguments 284

	Evaluating Data and Evidence	286
	Thinking Critically about Graphics	292
	■ <b>Using College Textbooks: Critical Thinking Questions</b>	<b>295</b>
	Self-Test Summary	296
	Applying Your Skills: Discussing the Chapter	297 • Analyzing a Study Situation 298
	• Working on Collaborative Projects	298
	Quick Quiz	299
Chapter 11	<b>Evaluating Authors' Techniques</b>	<b>300</b>
	Paying Attention to Connotative Language	301
	Examining Figurative Language	302
	Watching for Missing Information	304
	Being Alert for Generalizations	306
	Examining the Author's Assumptions	307
	Watching for Manipulative Language	309
	■ <b>Using College Textbooks: Using Critical Thinking Features</b>	<b>312</b>
	Self-Test Summary	313
	Applying Your Skills: Discussing the Chapter	314 • Analyzing a Study Situation 314
	• Working on Collaborative Projects	314
	Quick Quiz	315
 <b>Part Five: Strategies for Academic Achievement 316</b>		
	<b>SUCCESS</b> 7. Polish Your Academic Image	316
	<b>WORKSHOPS</b> 8. Manage Stress	320
Chapter 12	<b>Working with Other Academic Sources</b>	<b>324</b>
	Beyond Textbooks: Other Academic Sources	325
	Periodicals: Magazines and Scholarly Journals	326
	Nonfiction and Scholarly Books	329
	How to Read Academic Sources	330
	■ <b>Using College Textbooks: Adapting Your Learning Style by Reading Further</b>	<b>332</b>
	Self-Test Summary	334
	Applying Your Skills: Discussing the Chapter	335 • Analyzing a Study Situation 335
	• Working on Collaborative Projects	335
	Quick Quiz	336
Chapter 13	<b>Preparing for Exams</b>	<b>337</b>
	Organizing Your Study and Review	338
	Identifying What to Study	339
	Analyzing and Synthesizing Information	341
	Reviewing for Objective and Essay Exams	343
	Preparing for Self-Testing	346
	■ <b>Using College Textbooks: Using In-Chapter Self-Test Questions</b>	<b>350</b>
	Self-Test Summary	352
	Applying Your Skills: Discussing the Chapter	353 • Analyzing a Study Situation 353
	• Working on Collaborative Projects	354
	Quick Quiz	355

## Chapter 14 **Taking Exams 356**

General Suggestions for Taking Exams 357

Hints for Taking Objective Exams 359

Hints for Taking Standardized Tests 364

Hints for Taking Essay Exams 365

Controlling Test Anxiety 371

### ■ **Using College Textbooks: Using Headings to Create Practice Tests 372**

Self-Test Summary 373

Applying Your Skills: Discussing the Chapter 374 • Analyzing a Study Situation 374

• Working on Collaborative Projects 375

Quick Quiz 376

## Part Six: Thematic Readings 378

<b>THEME A</b>	<b>Controversies in Science 379</b> Shades of Grey in the Ethics of Designer Babies 379 The Ocean's Plastic Problem 382 Textbook Excerpt: Some Possible Consequences of Global Warming 385 <i>Making Connections</i> 391 • <i>What Do You Think?</i> 391
<b>THEME B</b>	<b>Health Issues 392</b> Ethical Dilemmas Surround Those Willing to Sell, Buy Kidneys on the Black Market 392 The Virtual House Call 396 Textbook Excerpt: Self-Help on the Web: Proceed with Caution 402 <i>Making Connections</i> 407 • <i>What Do You Think?</i> 407
<b>THEME C</b>	<b>Internet and Communication 408</b> What Happens When Kids Don't Have Internet at Home? 408 Don't Let Developing Countries Lag Behind in the Smartphone Revolution 413 Textbook Excerpt: Linking Up: 21st-Century Social Networking 416 <i>Making Connections</i> 421 • <i>What Do You Think?</i> 421

## Part Seven: Classroom Simulation: Textbook Reading and Writing 422

	<b>Preparing for the Lecture 422</b>
	<b>Reading the Assignment 424</b>
	<b>Sociology Chapter Excerpt: Race and Ethnicity 425</b>
	<b>Reviewing the Reading Assignment 439</b>
	<b>Attending the Lecture and Participating in Class 439</b>
	<b>Writing About the Reading 440</b>
	<b>Taking Quizzes 441</b>
	<b>Taking the Exam 444</b>

Credits 447

Index 453



## LEARN ABOUT YOUR COURSES AND YOUR CAMPUS RESOURCES

### Did You Know?

- The average graduate of a four-year college earns \$29,250 more per year than the average high school graduate.<sup>1</sup>
- Employers value a college education and are willing to contribute to their employees' tuition. Nine percent of financial aid given to undergraduates comes from employers. Twenty-two percent of graduate students and professional degree students receive assistance from their employers.<sup>2</sup>

These statistics indicate that the confusion and stress you may experience as you begin college are well worth it!

What should you do in your first week on campus? In addition to attending your classes, meeting your instructors, and getting your textbooks and supplies, you also need to familiarize yourself with the requirements of your courses as well as the resources and services that your college offers to students.

### WHAT DO YOUR COURSES REQUIRE?

During the first week of class, you will learn what your instructor expects and what you must do to earn a grade and receive credit for the course. Often, most of this information is contained in the course syllabus—a handout distributed on the first day or in the first week of class (and often available online as well). After reading and studying the syllabus, file it in a safe place so that you can refer to it later.

### WHAT INFORMATION IS INCLUDED IN A COURSE SYLLABUS?

Examine the course syllabus on the next page and make a mental note of the information it contains.

<sup>1</sup>[http://www.bls.gov/emp/ep\\_table\\_education\\_summary.htm](http://www.bls.gov/emp/ep_table_education_summary.htm)

<sup>2</sup><http://nces.ed.gov/pubs2013/2013165.pdf>



**Course Number:** BIO 201

**Instructor:** Dr. Jack Eberhardt

**Prerequisite:** BIO 102 with a grade of C or higher

**Office Location:** 322 Olympic Towers

**Office Hours:** MWF 1–3

E-mail: jeberhardt@mcc.edu

**Note:** It may take up to 48 hours to receive a response to any e-mails sent to me. Please do not send text messages; you will not receive a response.

**Course page:** BIO201-2 on BlackBoard. Note: I do not monitor the discussion board. Please do not ask me questions on the discussion board; you will not receive a response.

1. To identify the major parts of a cell and know their functions.
2. To understand the structure and function of the human organ systems.
3. To learn the types of human body tissues and understand their functions.
4. To perform laboratory activities for collection and analysis of experimental data.

**Course Grade:** Grades will be based on three multiple-choice exams and twelve weekly laboratory reports. Exam questions are based on lecture notes, textbook assignments, and the lab manual. The exams will test factual knowledge as well as critical thinking skills.

**Exams** will be held on October 17, November 15, and December 8.

**Lab manuals** will be due on Sept. 23 and 30; October 7, 14, 21, and 28; November 5, 12, 19, and 26; and December 4 and 11.

**Attendance:** Regular attendance is required for both lecture and laboratory. If you miss a class, you should get the missed material from a classmate. I will post any PowerPoint presentations that I use on the course page; however, not all lectures are accompanied by a PowerPoint presentation. You are responsible for learning the content of any material covered in the lectures, whether this material appears on the course page or not. Make-up labs will not be allowed. If you miss an exam or a lab, you must provide written documentation to explain your absence. If you fail to do so, a grade of zero will be entered.

### Tentative Lecture Schedule:

DATE	TOPIC	CHAPTER
Sept. 16	Course Introduction, The Scientific Method	1
Sept. 21	Atoms, molecules, water, Chemical bonding	1, 2

## WHAT CAN YOU LEARN FROM ONE OF YOUR SYLLABI?

Now it's your turn to analyze a syllabus from one of your classes. What did you learn about how your course will be conducted? What additional important information does your syllabus contain? Does the syllabus include any surprising or unexpected information?

Perhaps the most important information on your syllabus is the listing of assignments, exams, and due dates. Instructors expect you to manage your time wisely and meet all due dates. Take time at the beginning of each semester to enter due dates into an electronic or printed calendar/planner, refer to that calendar/planner every day, and plan your life (including work, school, and family responsibilities) to meet your due dates.

## WHAT RESOURCES AND SERVICES DOES YOUR COLLEGE OFFER?

Don't wait until you are desperate for help to learn about campus resources; be proactive and learn about them early in the semester. You will be pleasantly surprised at the number and variety of resources and services that are available to you, usually free of charge.

Now answer the following questions about your campus resources. Perhaps you can pair up with a partner and explore your campus together. You will likely find many of these answers on your school's Web site, often under a heading such as "Student Resources." Simply knowing that the resources exist is not enough; you need to know where they are and how to access them.

1. What are the hours of your college library?
2. How would you find out the last date by which you can withdraw from a course without academic penalty?
3. Where do you go or whom do you see to change from one major (or curriculum) to another?
4. What services does the student health office provide?
5. Who is your advisor and where is his or her office located on campus?
6. What assistance is available in locating part-time jobs on or off campus?
7. How would you find a tutor for a course in which you are having difficulty?
8. Where is the financial aid office and how can I see if I am qualified for scholarships or other assistance?

## WHERE CAN YOU FIND INFORMATION ON COLLEGE REGULATIONS AND POLICIES?

The college catalog is your primary source of information for staying in and graduating from college. Be sure to obtain a current edition or access it online. It is your responsibility to know and work within the college's regulations, policies, and requirements to obtain your degree. Although faculty advisors are available to provide guidance, you must be certain that you are registering for the right courses in the right sequence to fulfill the requirements for your degree. Keep the catalog that is in effect during your freshman year. It is considered the catalog of record and will be used to audit your graduation requirements. A complete catalog usually provides the following information:

<b>Academic rules and regulations</b>	Course registration policies, grading system, class attendance policies, academic dismissal policies, policies regarding cheating and plagiarism
<b>Degree programs and requirements</b>	Degrees offered and outlines of the degree requirements for each major or minor
<b>Course descriptions</b>	A brief description of each course, the number of credits, and course prerequisites (Note: Not all courses listed are offered each semester.)
<b>Student activities and special services</b>	Student organizations, clubs and sports, student governance system, and special services

## WHAT INFORMATION CAN YOU FIND ON YOUR COLLEGE'S WEB SITE?

Use your college's catalog and/or Web site to answer the following questions.

1. Does the college allow you to take courses on a Pass/Fail or Satisfactory/Unsatisfactory basis? If so, what restrictions or limitations apply?
2. On what basis are students academically dismissed from the college? What criteria apply to readmission?
3. What is the institution's policy on transfer credit?
4. What rules and regulations apply to motor vehicles on campus?
5. List five extracurricular programs or activities the college sponsors.
6. What foreign languages are offered?
7. What systems/media does the college use to notify you of on-campus emergencies or other essential information?
8. What courses are required in your major or curriculum? Are any general education courses required? If so, what are they?

## LEARN!

**L**earn about your campus resources.

**E**ngage with your instructors to learn their expectations.

**A**ccess the school's Web site to locate important information.

**R**efers to syllabi frequently throughout the term.

**N**egotiate the course schedule to plan your education and life.



## MANAGE YOUR ELECTRONIC LIFE

### Did You Know?

- Students spend an average of 101 minutes per day on Facebook.<sup>1</sup>
- Online courses are growing: 6.7 million students reported taking at least one online class in 2012.<sup>2</sup> The top three programs of study in online learning are business, health care, and computer science.<sup>3</sup>

The revolution has occurred. Technology is all around us, and it has become a powerful tool for learning. Computers, laptops, tablets, and smartphones offer convenient ways of learning, reviewing, collaborating, and studying. Learning to make these fun tools work *for you* instead of *against you* will be a key to your success in college and beyond.

### IS TECHNOLOGY AFFECTING YOUR ABILITY TO CONCENTRATE?

Is technology helping you manage your life, or is it a source of distraction? Analyze the impact of technology on your daily life by answering the following questions. You will get a sense of the type and number of electronic distractions in your life and how they affect your ability to focus.

1. How many text messages do you send and receive per day? \_\_\_\_\_ How many of these are “important”? \_\_\_\_\_ Do you stop what you are doing to check your cell phone the second a text message arrives? \_\_\_\_\_ Have you ever texted while driving? \_\_\_\_\_
2. How many e-mails do you send and receive per day? \_\_\_\_\_ How many of these are valuable in terms of communicating important information? \_\_\_\_\_ How many are purely for entertainment or socializing? \_\_\_\_\_ How much time do you spend each day on e-mail unrelated to your college work or your job? \_\_\_\_\_
3. How many calls do you receive on your cell phone each day? \_\_\_\_\_ Do you leave your cell phone on all the time? \_\_\_\_\_ Do you answer it every time it rings, even



<sup>1</sup>[http://www.huffingtonpost.com/2013/06/25/college-students-facebook-study\\_n\\_3497733.html](http://www.huffingtonpost.com/2013/06/25/college-students-facebook-study_n_3497733.html)

<sup>2</sup>Elaine Allen & Jeff Seaman. Changing Course: Ten Years of Tracking Online Education in the United States. Babson Survey Research Group, 2013. <http://files.eric.ed.gov/fulltext/ED541571.pdf>

<sup>3</sup><http://www.learninghouse.com/cic2013-report/>

when you're in class or studying? \_\_\_\_\_. Do you ever use your cell phone as a way to procrastinate? \_\_\_\_\_. How often do you play games on your cell phone or use your phone to entertain yourself, procrastinate, or pass the time? \_\_\_\_\_

4. How many hours a day do you spend surfing the Internet or posting on social networking sites like Facebook, tweeting on Twitter, or uploading pictures to photo-sharing sites like Snapchat or Instagram? \_\_\_\_\_ Do these activities affect your studying, concentration, and grades? \_\_\_\_\_ If so, how? \_\_\_\_\_

## HOW DO DISTRACTIONS INTERFERE WITH YOUR LEARNING?

Learning is a process of connecting new information with what you have already learned, which is stored in your memory. When you encounter a new piece of information while reading, your mind files it by attaching it to what you have already learned. This is an amazing process that resembles the way we physically file (store) information in folders on our computer or in a file cabinet.

If you interrupt the storage process by stopping to check a text message, then new information will be lost rather than stored (remembered). In order to store the new information, you will have to go back to your original task, refocus, figure out where you left off, and read the material again so that your brain can reset. So you can see that checking text messages while studying is not only a time-waster; it also makes your study time less productive. You learn less when you allow yourself to be interrupted.

## HOW CAN YOU MAKE TECHNOLOGY WORK FOR YOU?

How do you eliminate the distractions of technology so that you can use technology to your advantage?





**Mobile Devices.** Turn off the ringer, vibrator, and text notifications while studying and attending class. If you cannot resist the temptation to check your messages, put the device in another room while you are working at home, or leave it in your car or dorm room while you are in class.

**E-mail.** E-mail is an efficient way of communicating with your instructor or classmates when you cannot talk with them face-to-face or by phone. Be sure to check your e-mail occasionally during the day—perhaps during lunch or between classes—to make sure you are receiving important information.

**Text Messages.** Text messages have become the primary means of communication for many college students. Although text messages are quick to compose and quick to read, you should refrain from writing or reading them when you are working on your assignments at home or during class time. Make your study time a “text-free” time.

**Apps.** Many devices and phones offer applications, or “apps,” that are helpful in your studies. You can download free (or inexpensive) dictionaries, encyclopedias, grammar guides, calendars and schedulers, and a host of other apps that can help with your studies. Put these apps on your main screen, and put your social or entertainment apps (such as Facebook) on a later screen.

**Social Media and Webcams.** In some classes, you will be expected to work as a group to discuss topics or collaborate on projects. Programs like Skype make it easy for a group to “meet” when everyone is online at the same time. Leave your webcam off during all other study times. Set up a course or group study page on Facebook and use it to share information with classmates, study for exams, or exchange study tips and suggestions.

## DOES LIMITING SOCIAL TECHNOLOGY IMPROVE YOUR WORK?

Commit to following the advice in this workshop for one week. At the end of the week, assess your progress. Did you accomplish more and better-quality work? Were you more focused in class and during your study sessions? Did you get better grades on your assignments? Did you get your assignments done more quickly? Did you feel more in control of the technology in your life?

## HOW CAN I TAKE CHARGE OF TECHNOLOGY IN MY LIFE?

- Remember that technology is a tool you use, not something that controls or directs your behavior.
- Create separate zones, school and social, to allow you to use technology more effectively.
- Reserve some time each day to “unplug” and be technology free—especially before bedtime.

**CONCENTRATE!**

**C**ontrol distractions.

**O**vercome the desire to post on social media while studying.

**N**otice and manage your surroundings.

**C**reate and keep to a schedule.

**E**-mail only when necessary.

**N**arrow your concentration to focus on one thing at a time.

**T**urn off the phone.

**R**esist the temptation to procrastinate.

**A**void loud, crowded places.

**T**ext wisely.

**E**ngage with the assignment and course content.

## CHAPTER

# 1

# First Steps to Academic Success

## LEARNING GOALS

In this chapter you will learn to

- 1 Establish goals and manage your valuable time.
- 2 Analyze your learning style.
- 3 Understand instructors' teaching styles.
- 4 Meet instructors' expectations.
- 5 Use active learning strategies.
- 6 Explain and illustrate critical thinking.

## LEARNING EXPERIMENT

- 1 Study the photograph on the right for one minute.
- 2 Draw a sketch of one of the people in the photograph.
- 3 Write two or three sentences describing this person.
- 4 Compare your drawing and description with those of your classmates by quickly passing them around the room.

### The Results

No doubt, some sketches were much better than others. Some were detailed, accurate likenesses; others may have resembled stick figures. Some descriptions were detailed; others were not. You can conclude that



some students have stronger artistic ability than others. Some students have stronger verbal abilities than others. Which students do you expect will do well in an art class? Who will do better on essay exams? Who might consider a career in graphic design?

## Learning Principle: What This Means to You

You have strengths and weaknesses as a learner; you should capitalize on your strengths and strive to overcome your weaknesses. In this chapter

you will learn to identify strengths and weaknesses, manage your time, and choose study methods accordingly. You will also discover that instructors have unique teaching styles and discover how to adapt to them. Finally, you will learn what kinds of learning and thinking your instructors expect of you.

## ESTABLISHING GOALS AND MANAGING YOUR VALUABLE TIME

Like most students, you are likely dividing your time among school, family, household responsibilities, friends, and possibly a job. Finding a way to manage your time effectively will help you feel less stressed and more comfortable in all aspects of your life.

It is important to set goals and manage time because

- setting goals can keep you on track, motivate you, and help you measure your progress.
- managing your time allows you to balance your course work with family, work, and social activities.
- managing your time allows you to make steady progress on long-term projects instead of being surprised by rapidly approaching due dates.

### Goal 1

Establish goals and manage your valuable time.

## Establishing Your Goals and Priorities

One of the first steps in getting organized and succeeding in college is to set your priorities—to decide what is and what is not important to you. For most college students, finding enough time to do everything they *should* do and everything they *want* to do is nearly impossible. They face a series of conflicts over the use of their time and are forced to choose among a variety of activities. Here are a few examples:

Want to do:

- Take family to park
- Go to hockey game
- Go out with friends

Should do:

- vs. Finish psychology reading assignment
- vs. Work on term paper
- vs. Get a good night's sleep

One of the best ways to handle such conflicts is to identify your goals. Ask yourself: What is most important to me? What activities can I afford to give up? What is least important to me when I am pressured for time? For some students, studying is their first priority. For students with family or work responsibilities, caring for a child or being available for their shift might be their first priority, and attending college is next in importance.

## HOW TO DISCOVER YOUR PRIORITIES

1. **Make a list of the ten most joyous moments in your life.** A phrase or single sentence of description is all that is needed.
2. **Ask yourself: What do most or all of these moments have in common?**
3. **Try to write answers to the question above by describing why the moments were important to you—what you got out of them.** (Sample answers:

helping others, competing or winning, creating something worthwhile, proving your self-worth, connecting with nature, and so forth.)

4. **Your answers will provide a starting point for defining your life goals.**

**DEFINING GOALS BASED ON YOUR PRIORITIES** In defining your goals, be specific and detailed. Use the following guidelines.

- **Your goals should be positive (what you want) rather than negative (what you don't want).** Don't say "I won't ever have to worry about credit card balances and bill collectors." Instead, say "I will have enough money to live comfortably."
- **Your goals should be realistic.** Unless you have strong evidence to believe you can do so, don't say you want to win an Olympic gold medal in swimming. Instead, say you want to become a strong, competitive swimmer.
- **Your goals should be achievable.** Don't say you want to earn a million dollars a year; most people don't earn that much. Set more achievable, specific goals, such as "I want to buy a house by the time I am 30."
- **Your goals should be worth what it takes to achieve them.** Becoming an astronaut or a brain surgeon takes years of training. Are you willing to invest that amount of time?
- **Your goals should include a time frame.** The goal of earning a bachelor's degree in accounting should include a date by which you want to have the degree.
- **Expect your goals to change as your life changes.** The birth of a child or the loss of a loved one may cause you to refocus your life.

**Tip** *Time frame* means the length of time from the beginning to the end of an activity.

College can provide you with the self-awareness, self-confidence, knowledge, skills, practice facilities, degrees, friendships, and business contacts that can help you achieve your life goals.

You will find that clearly establishing and pursuing your goals eliminates much worry and guilt. You'll know what is important and feel that you are on target, working steadily toward the goals you have established.

## Exercise 1

**DIRECTIONS** Write a list of five to ten goals.

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## Exercise 2

**DIRECTIONS** For each of your life goals listed in Exercise 1, explain how attending college will help you achieve that goal.

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## Analyzing Your Time Commitments

To make your time commitments reflect your priorities, you must determine how much time is available and then decide how you will use it.

Let's begin by making some rough estimates to help you see where your time goes each week. Fill in the chart in Figure 1-1, making reasonable estimates. After you've completed the chart, total your hours per week and write the answer in the space marked "Total committed time per week." Next, fill in that total below and complete the subtraction.

168          hours in one week  
 \_\_\_\_\_ total committed time  
 \_\_\_\_\_ hours available

Are you surprised to see how many hours per week you have left? Now answer this question: Do you have enough time available for reading and studying? As a rule of thumb, most instructors expect you to spend two hours studying for every hour spent in class. Complete the following multiplication for your class schedule this term:

\_\_\_\_\_ hours spent in class  $\times$  2 = \_\_\_\_\_ study hours needed

Do you have this much time available each week? If your answer is no, then you are overcommitted. If you are overcommitted, ask yourself: Can I drop any activity or do it in less time? Can I reduce the number of hours I work, or can another family member split some time-consuming responsibilities with me? If you are unable to reduce your committed time, talk with your advisor about taking fewer courses.

If you are overcommitted, now is the time to develop a weekly schedule that will help you use your available time more effectively. You are probably concerned at this point, however, that your time analysis did not take into account social and leisure activities. That omission was deliberate.

Although leisure time is essential to everyone's well-being, it should not take precedence over college work. Fortunately, most students who develop and follow a time schedule for accomplishing their course work are able to handle family and community obligations and still have time left for leisure and social activities. They also find time to become involved with campus groups and activities—an important aspect of college life.

	HOURS PER DAY	HOURS PER WEEK
Sleep	_____	_____
Breakfast	_____	_____
Lunch	_____	_____
Dinner	_____	_____
Part- or full-time job	_____	_____
Time spent in class	_____	_____
Transportation time	_____	_____
Personal care (dressing, shaving, etc.)	_____	_____
Household/family responsibilities (cooking dinner, driving sister to work, etc.)	_____	_____
Sports	_____	_____
Other priorities	_____	_____
Total committed time per week	_____	_____

**FIGURE 1-1**  
Weekly Time  
Commitments

## Building a Term Plan

A term plan lists all your unchanging commitments. These may include class hours, transportation to and from school and work, family commitments, religious obligations, job hours (if they are the same each week), sleep, meals, and sports. A form for a term plan is shown in Figure 1-2. You'll use your term plan to build weekly time schedules. Adjust your schedule each week as necessary.

	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
7:00							
8:00							
9:00							
10:00							
11:00							
12:00							
1:00							
2:00							
3:00							
4:00							
5:00							
6:00							
7:00							
8:00							
9:00							
10:00							
11:00							

**FIGURE 1-2**  
Term Plan

If you prefer to keep your schedule electronically, use an electronic calendar or scheduler on your laptop or cell phone. These applications can send you reminders about important deadlines and dates. They can also help you keep track of key dates throughout the course of the term (for example, scheduled exams and due dates for papers).

**DIRECTIONS** Use the form shown in Figure 1-2 or a computer software program to build your own term plan. ●

### Exercise 3

## Building Your Weekly Schedule

A weekly schedule is a plan that shows when and what you will study. It includes specific times for studying particular subjects as well as specific times for writing papers, conducting library research, and completing homework assignments for each course.

At the beginning of each week, decide what you need to accomplish that week, given your unchanging commitments. Consider upcoming quizzes, exams, and papers. A weekly schedule will eliminate the need to make frustrating last-minute choices between “should” and “want to” activities. The sample weekly time schedule in Figure 1-3 was developed by a first-year student. Her unchanging commitments are shown in yellow. Her weekly study adjustments are shown in lavender. Read the schedule carefully, noticing how the student reserved time for studying for each of her courses.

**TIPS FOR CREATING A WEEKLY SCHEDULE** Now that you have seen a sample weekly schedule, you can build your own, using the following guidelines.

1. **Before the week begins, assess the upcoming week’s workload.** Reserve a specific time for this activity. Sunday evening works well for many students. Check your course management system or your class Web site for updates and new assignments. Review your long-term or electronic planner for upcoming quizzes, exams, papers, and assignments.
2. **Write in any appointments, such as with the doctor or for a haircut.** Add in new commitments such as babysitting or helping a friend.
3. **Estimate the amount of time you will need for each of your courses.** Add extra time if you have an important exam or if the amount of reading is particularly heavy. Block in study times for each course.
4. **Plan ahead.** If there’s a paper due next week that requires library research, schedule time to begin your research. If you work on a shared computer (for example, in a computer lab), make sure you reserve access in advance.
5. **Block out reasonable amounts of time, especially on weekends, for having fun and relaxing.** For example, mark off the time to watch a movie or allocate time for exercise.
6. **Build into your schedule a short break before you begin studying each new subject.** Your mind needs time to refocus—to switch from one set of facts, problems, and issues to another.
7. **Include short breaks when you are working on just one assignment for a long period of time.** A 10-minute break after 50 to 60 minutes of study is reasonable.
8. **Set aside a specific time each week for developing next week’s plan.** Also be sure to review your prior week’s performance.

	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
7:00							
8:00							
9:00	Transportation Time						
10:00	History class	Psychology class	History class	Psychology class	History class		
11:00	review History notes; read assignment		review History notes; read assignment	Transportation	review History notes	Review/Edit Chemistry lab report	revise English paper
12:00	Math class	study psychology	Math class	study psychology	Math class	brainstorm ideas for English paper	Church
1:00	Lunch	Lunch	English class	Lunch	English	Lunch	Lunch
2:00	Math homework	review lab procedures	Lunch	Math homework	class	draft English paper	Review
3:00	Chemistry class		Chemistry class	read chemistry	Chemistry class	read psychology chapter	History assignment
4:00	Transportation	Chemistry Lab	Transportation		Transportation		Math homework
5:00						review psychology notes	read and
6:00	Dinner	Transportation	Dinner	Dinner	Dinner	Dinner	study chemistry
7:00	Work	Write lab report; start reading new chemistry chapter; type English composition	Work		Work		Call parents
8:00				read English assignment			plan next week's schedule
9:00				revise returned composition			
10:00							
11:00							

**FIGURE 1-3**  
Sample Weekly Time Schedule

**WHEN TO STUDY WHICH SUBJECTS** The order in which you study various subjects and complete various tasks does matter. Use the suggestions on the next page to use your study time effectively.

Keeping to your weekly schedule will mean saying no. When friends call and want to chat at a time you planned to study, you will have to refuse. When a friend or family member asks you to do a favor—such as running an errand—you will have to refuse, but you can suggest some alternative times when you will be free. You will find that your friends and family accept your constraints and respect you for being conscientious.

## GETTING THE MOST OUT OF YOUR STUDY TIME

1. **Study difficult subjects first.** It's tempting to get easy tasks and short assignments out of the way first, but resist this temptation. When you start studying, your mind is fresh and alert and you are at your peak of concentration. This is when you are best equipped to handle difficult subjects. Thinking through complicated problems or studying complex ideas requires maximum brain power, and you have the most brain power at the beginning of a study session.
2. **Leave the routine and more mechanical tasks for later in the evening.** Activities such as printing out papers or alphabetizing a bibliography for a research paper do not require a high degree of concentration and can be left until you are tired.
3. **Schedule study for a particular course close to the time when you attend class.** Plan to study the evening before the class meets or soon after the class meeting. If a class meets on Tuesday morning, plan to study Monday evening or Tuesday afternoon or evening.
4. **When reading or studying a particular subject, try to schedule two or three short, separate blocks of time for that course.** One long, continuous block can be fatiguing.
5. **Schedule study sessions at times when you know you are usually alert and feel like studying.** Do not schedule a study time early on Saturday morning if you are not a morning person, and try not to schedule study time late in the evening if you are usually tired after 8 P.M.
6. **Plan to study at times when your physical surroundings are quiet.** If the dinner hour is a rushed and confusing time, don't attempt to study then if alternative times are available. Eliminate distractions. Turn off your cell phone, disable instant messaging, and log out of social media sites.



### Visual Thinking APPLYING SKILLS

How could this student study more efficiently?

**DIRECTIONS** Using the term plan you wrote in Exercise 3, create a plan for next week. ●

## Exercise 4

### Using Time-Saving Tips to Manage a Busy Schedule

Here are a few suggestions that will help you to make the best use of your time.

1. **Use your smart phone's calendar.** Track tests, due dates for papers, and study group meetings. Set reminders to be notified of important deadlines.
2. **Set priorities.** Some students work on one project until they are exhausted and leave remaining assignments unfinished. A better approach is to decide what is most important to complete immediately and which assignments could, if necessary, be completed later.
3. **Use spare moments.** Think of all the time you spend waiting. You wait for a class to begin, for a ride, for a pizza to arrive. Instead of wasting this time, you could use it to review a set of lecture notes, work on review questions at the



end of a chapter, or review a chemistry lab setup. Always carry with you something you can work on in spare moments.

4. **Combine activities.** Busy students soon learn that it's possible to combine some daily chores with routine class assignments. Some students, for example, are able to do laundry and between loads outline a history chapter or work on routine assignments. Others review formulas for math or science courses or review vocabulary cards for language courses while riding a bus.
5. **Use lists to keep yourself organized and to save time.** A daily to-do list is helpful in keeping track of what needs to be done. As you think of tasks you need to do (whether related to coursework or not), jot them down or track them in the notes app in your phone. Then look over the list each morning and try to find the best way to get everything done. For instance, you may find that you can stop at the post office on the way to class, thus saving yourself an extra trip.
6. **Recognize when you're trying to do too much.** If you find your schedule is becoming too hectic or unmanageable, or if you are facing pressures you can't handle, consider dropping a course. Don't be too concerned that this will put you behind schedule for graduation. More than half of all college students take longer than the traditional time expected to earn their degrees. You may be able to pick up the course later during a summer or winter session or carry a heavier load during another semester.

## Controlling the Tendency to Procrastinate

Have you ever felt that you should work on an assignment, and even wanted to get it out of the way, but you could not get started? If so, you have procrastinated—put off tasks that need to be done. We often put off tedious, difficult, or uninteresting tasks. However, it is often these very tasks that are essential to success in college courses. The following suggestions can help you overcome or control a tendency to procrastinate.

HOW TO FIGHT PROCRASTINATION	
Do you . . .	Try this:
Get distracted?	<ul style="list-style-type: none"> <li>• Turn off the television.</li> <li>• Set your cell phone to silent (or put it in your backpack or another room).</li> <li>• Close social media.</li> <li>• Clear your desk; get rid of clutter; move other unfinished projects out of sight.</li> <li>• Avoid stimulus overload—don't listen to music while attempting to study in a busy and loud student lounge, for example.</li> </ul>
Feel overwhelmed by the task?	<ul style="list-style-type: none"> <li>• Break the task into manageable parts; this will make the task seem doable. Work on one piece at a time.</li> </ul>
Try to avoid the task?	<ul style="list-style-type: none"> <li>• Don't spend time on easy tasks like cleaning because they're easier than studying.</li> <li>• Sit and stay at your desk. Study in a library, where distractions and temptations are minimized.</li> </ul>

**REGARDLESS OF WHAT YOU DO, START!** If you are having difficulty getting started, do something other than sit and stare, regardless of how trivial it may seem. The following tips will help you get started.

### JUMP START!

- Start with a small task that takes very little time, such as rereading a specific assignment.
- Start with easy-to-do tasks, such as making a list of what needs to be done.
- Give yourself five minutes to get started. Once you are involved with the task, it will be easier to continue.

**RECOGNIZE WHEN YOU NEED MORE INFORMATION** Sometimes procrastination is a signal that you lack skills or information. You may be avoiding a task because you're not sure how to do it. You may not really understand why a certain procedure is used to solve a particular type of math problem, for example, so you feel reluctant to do math homework. Similarly, selecting a topic for a term paper may be difficult if you aren't certain of the paper's purpose or expected length. Overcome such stumbling blocks by discussing them with classmates or with your professor.

## Thinking Positively

As you begin a task, it is easy to get discouraged by negative thoughts. A positive attitude will make the task more enjoyable (or at least less painful). Use the following tips to help you avoid negative thoughts.

### HOW TO STAY POSITIVE

If you think . . .	Try telling yourself . . .
This is boring.	I'll be able to stick with this (and give myself a reward when I finish).
I can't wait to finish.	It will feel great to have this job done.
I'll never be able to remember all of this.	I'll highlight what is important for later review.
This is not useful to learn anyway.	My instructor would not assign this if it weren't important.
If I didn't have to do this, I could be _____.	When this task is finished, I'll find time to _____.

**DIRECTIONS** Read each situation described, and then answer the questions that follow. Discuss your responses with another student, or write your answers in the spaces provided.

1. In analyzing his amount of committed time, Zabir filled in a weekly chart, in hours, as follows:

Sleep	56
Breakfast, lunch, dinner (total)	14
Job	35
Time in classes	23
Transportation	10
Personal care	15
Household/family	20
Study time	30
Total	203

## Exercise 5

Collaboration

Zabir is overcommitted; his total commitments add up to more hours than there are in a week (168). He has to have at least a part-time job in order to pay for school. He is working toward a degree in science lab technology, so he must spend a lot of class hours in lab. He estimates that he needs 30 hours of study time per week to maintain a high B average this semester. It is also important for him to have some time for leisure and recreation. Look at his chart again. What are his choices? Try to find as many alternatives as you can.

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2. Tiffany is a serious student but is having difficulty with her accounting course. She has decided to spend all day Sunday studying accounting. She plans to lock herself in her room and not come out until she has reviewed four chapters. What is wrong with her approach? What study plan would be more effective?

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3. Mark realizes that he has three assignments that must be completed in one evening. The assignments are to revise an English composition, to read and highlight ten pages in his anatomy and physiology text, and to learn a set of vocabulary words for his sociology course. He decides to get the sociology assignment out of the way first, to do the English composition next (because English is one of his favorite subjects), and then to read the anatomy and physiology text. Evaluate Mark's plan of study.

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4. You are taking a course in music appreciation, and your instructor sometimes unexpectedly asks you to listen to a certain part of a concert or watch a particular program online. You cannot predict when these assignments will be given or when you will need to complete them. What could you do to include them in your weekly study schedule?

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5. Carlos is registered for the following courses, which meet at the times indicated:

Business Management 109	T-Th 12–1:30 P.M.
English 101	M-W-F 11 A.M.–12 Noon
Math 201	T-Th 9–10:30 A.M.
Biology 131	Class M-W-F 2–3 P.M.; Lab W 3–5 P.M.
Psychology 101	M-W-F 9–10 A.M.

6. The workload for each course is as follows:

Business Management	Two chapters assigned each week; midterm and final exams; one term paper due at the end of the semester
English	One 250-word essay per week
Math	A homework assignment for each class, which takes approximately one hour to complete; a quiz each Thursday
Biology	Preparation for weekly lab; one chapter to read per week; a one-hour exam every three weeks
Psychology	One chapter to read per week; one library reading assignment per week; four exams throughout the semester

Because Carlos has a part-time job, he has the following times available for study:

- Between his classes
- Evenings: Tuesday, Wednesday
- Afternoons: Monday, Thursday, and Friday
- Weekends: Saturday morning, all day and evening Sunday

What study schedule would you recommend for Carlos? Indicate the times he should study each subject and what tasks he should work on. Use a blank term plan (Figure 1-2) to plan a schedule for Carlos.

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## ANALYZING YOUR LEARNING STYLE

It is important to analyze your learning style because:

- You will understand your strengths and weaknesses as a learner and understand how to choose study methods accordingly.
- You will realize why you learn more easily from some instructors than from others.
- You will discover what kinds of learning and thinking are expected in college.

### Goal 2

Analyze your learning style.

## How to Analyze Your Learning Style

Have you noticed that some types of tasks are easier to complete than others? Have you found that a study method that works well for a classmate does not work as well for you? These differences can be explained by *learning style*. Just as you have a unique personality, you also have a unique learning style. People differ in how they learn and in the methods and strategies they use to learn. Learning style

can also explain why certain assignments are difficult and other learning tasks are easy.

The following questionnaire will help you understand your personal learning styles. Complete the Learning Style Questionnaire before continuing.

## Learning Style Questionnaire

**DIRECTIONS** Each item presents two choices. Select the alternative that best describes you. In cases where neither choice suits you, select the one that is closer to your preference. Write the letter of your choice on the line to the left of each item.

### PART ONE

- |  |   |
|--|---|
| <p>_____ 1. I would prefer to follow a set of</p> <p style="margin-left: 40px;">a. oral directions.</p> <p style="margin-left: 40px;">b. print directions.</p>   | <p>_____ 5. I prefer classes in which the instructor</p> <p style="margin-left: 40px;">a. lectures and answers questions.</p> <p style="margin-left: 40px;">b. uses PowerPoint illustrations and videos.</p>                      |
| <p>_____ 2. I would prefer to</p> <p style="margin-left: 40px;">a. attend a lecture given by a famous psychologist.</p> <p style="margin-left: 40px;">b. read an online article written by the psychologist.</p> | <p>_____ 6. To follow current events, I prefer to</p> <p style="margin-left: 40px;">a. listen to the news on the radio or watch a TV or Web broadcast.</p> <p style="margin-left: 40px;">b. read the news in print or online.</p> |
| <p>_____ 3. When I am introduced to someone, it is easier for me to remember the person's</p> <p style="margin-left: 40px;">a. name.</p> <p style="margin-left: 40px;">b. face.</p>                              | <p>_____ 7. To learn how to repair a flat tire, I would prefer to</p> <p style="margin-left: 40px;">a. listen to a friend's explanation.</p> <p style="margin-left: 40px;">b. watch a demonstration.</p>                          |
| <p>_____ 4. I find it easier to learn new information using</p> <p style="margin-left: 40px;">a. language (words).</p> <p style="margin-left: 40px;">b. images (pictures).</p>                                   |   |

### PART TWO

- |  |   |
|--|---|
| <p>_____ 8. I prefer to</p> <p style="margin-left: 40px;">a. work with facts and details.</p> <p style="margin-left: 40px;">b. construct theories and ideas.</p>                               | <p>_____ 12. I prefer tasks that require me to</p> <p style="margin-left: 40px;">a. follow careful, detailed instructions.</p> <p style="margin-left: 40px;">b. use reasoning and critical analysis.</p>  |
| <p>_____ 9. I would prefer a job that involved</p> <p style="margin-left: 40px;">a. following specific instructions.</p> <p style="margin-left: 40px;">b. reading, writing, and analyzing.</p> | <p>_____ 13. For a criminal justice course, I would prefer to</p> <p style="margin-left: 40px;">a. discover how and when a law can be applied.</p> <p style="margin-left: 40px;">b. learn how and why it became law.</p>  |
| <p>_____ 10. I prefer to</p> <p style="margin-left: 40px;">a. solve math problems using a formula.</p> <p style="margin-left: 40px;">b. discover why the formula works.</p>                    | <p>_____ 14. To learn more about the operation of a digital camera, I would prefer to</p> <p style="margin-left: 40px;">a. work with several types of digital cameras.</p> <p style="margin-left: 40px;">b. understand the principles on which it operates.</p> |
| <p>_____ 11. I would prefer to write a term paper explaining</p> <p style="margin-left: 40px;">a. how a process works.</p> <p style="margin-left: 40px;">b. a theory.</p>                      |   |

## PART THREE

- \_\_\_\_\_ 15. To solve a math problem, I would prefer to
  - a. draw or visualize the problem.
  - b. study a sample problem and use it as a model.
- \_\_\_\_\_ 16. To remember something best, I
  - a. create a mental picture.
  - b. write it down.
- \_\_\_\_\_ 17. Assembling a bicycle from a diagram would be
  - a. easy.
  - b. challenging.
- \_\_\_\_\_ 18. I prefer classes in which I
  - a. handle equipment or work with models.
  - b. participate in a class discussion.
- \_\_\_\_\_ 19. To understand and remember how a machine works, I would
  - a. draw a diagram.
  - b. write notes.
- \_\_\_\_\_ 20. I enjoy
  - a. drawing or working with my hands.
  - b. speaking, writing, and listening.
- \_\_\_\_\_ 21. If I were trying to locate an office on an unfamiliar university campus, I would prefer
  - a. a map.
  - b. a set of printed directions.

## PART FOUR

- \_\_\_\_\_ 22. For a grade in biology lab, I would prefer to
  - a. work with a lab partner.
  - b. work alone.
- \_\_\_\_\_ 23. When faced with a difficult personal problem, I prefer to
  - a. discuss it with others.
  - b. resolve it myself.
- \_\_\_\_\_ 24. Many instructors could improve their classes by
  - a. including more discussion and group activities.
  - b. allowing students to work on their own more frequently.
- \_\_\_\_\_ 25. When listening to a lecturer or speaker, I respond more to
  - a. the person presenting the ideas.
  - b. the ideas themselves.
- \_\_\_\_\_ 26. When on a team project, I prefer to
  - a. work with several team members.
  - b. divide up tasks and complete those assigned to me.
- \_\_\_\_\_ 27. I prefer to shop and do errands
  - a. with friends.
  - b. by myself.
- \_\_\_\_\_ 28. A job in a busy office is
  - a. more appealing than working alone.
  - b. less appealing than working alone.

## PART FIVE

- \_\_\_\_\_ 29. To make decisions, I rely on
  - a. my experiences and gut feelings.
  - b. facts and objective data.
- \_\_\_\_\_ 30. To complete a task, I
  - a. can use whatever is available to get the job done.
  - b. must have everything I need at hand.
- \_\_\_\_\_ 31. I prefer to express my ideas and feelings through
  - a. music, song, or poetry.
  - b. direct, concise language.
- \_\_\_\_\_ 32. I prefer instructors who
  - a. allow students to be guided by their own interests.
  - b. make their expectations clear and explicit.



- \_\_\_\_\_ 33. I tend to  
a. challenge and question what I hear and read.  
b. accept what I hear and read.
- \_\_\_\_\_ 34. I prefer  
a. essay exams.  
b. objective exams.
- \_\_\_\_\_ 35. In completing an assignment, I prefer to  
a. figure out my own approach.  
b. be told exactly what to do.

To score your questionnaire, record the total number of times you selected choice *a* and the total number of times you selected choice *b* for each part of the questionnaire. Record your totals in the scoring grid provided.

SCORING GRID		
Part	Total Number of Choice <i>a</i>	Total Number of Choice <i>b</i>
Part One	_____	_____
	Auditory	Visual
Part Two	_____	_____
	Applied	Conceptual
Part Three	_____	_____
	Spatial	Verbal
Part Four	_____	_____
	Social	Independent
Part Five	_____	_____
	Creative	Pragmatic

Now circle your higher score for each part of the questionnaire. The word below the score you circled indicates an aspect of your learning style. Scores in a particular row that are close to one another, such as a 3 and a 4, suggest that you do not exhibit a strong, clear preference for either aspect. Scores that are farther apart, such as a 1 and a 6, suggest a strong preference for the higher-scoring aspect. The next section describes these aspects and explains how to interpret your scores.

### Interpreting Your Scores

The questionnaire was divided into five parts; each part identifies one aspect of your learning style. These five aspects are explained below.

**PART ONE: AUDITORY OR VISUAL LEARNERS** This score indicates the sensory mode you prefer when processing information. Auditory learners tend to learn more effectively through listening. Visual learners process information by seeing it in print or other visual modes, including films, pictures, or diagrams. If you have a higher score in auditory than visual, you tend to be an auditory learner. That is, you tend to learn more easily by hearing than by reading. A higher score in visual suggests strengths with visual modes of learning.

**PART TWO: APPLIED OR CONCEPTUAL LEARNERS** This score describes the types of learning tasks and learning situations you prefer and find easiest to handle. If you are an applied learner, you prefer tasks that involve real objects and situations. Practical, real-life learning situations are ideal for you. If you are a conceptual learner, you prefer to work with language and ideas; practical applications are not necessary for understanding.

**PART THREE: SPATIAL OR VERBAL LEARNERS** This score reveals your ability to work with spatial relationships. Spatial learners are able to visualize, or mentally see, how things work or how they are positioned in space. Their strengths may include drawing, assembling things, or repairing. Verbal learners tend to rely on verbal or language skills, rather than skills in positioning things in space.

**PART FOUR: SOCIAL OR INDEPENDENT LEARNERS** This score reveals your preferred level of interaction with other people in the learning process. If you are a social learner, you prefer to work with others—both peers and instructors—closely and directly. You tend to be people oriented and to enjoy personal interaction. If you are an independent learner, you prefer to work and study alone. You tend to be self-directed or self-motivated and often are goal oriented.

**PART FIVE: CREATIVE OR PRAGMATIC LEARNERS** This score describes the approach you prefer to take toward learning tasks. Creative learners are imaginative and innovative. They prefer to learn through discovery or experimentation. They are comfortable taking risks and following hunches. Pragmatic learners are practical, logical, and systematic. They seek order and are comfortable following rules.

**DIRECTIONS** Write a paragraph describing yourself as a learner. Include aspects of your learning style and give examples from everyday experience that confirm your profile. Explain any results of the Learning Style Questionnaire with which you disagree. ●

## Exercise 6

### Developing an Action Plan for Learning

Now that you know more about *how* you learn, you are ready to develop an action plan for learning what you read. Figure 1-4 lists each aspect of learning style and offers suggestions for how to learn from a reading assignment. To use the figure:

1. Circle the five aspects of your learning style for which you received higher scores. Disregard the others.
2. Read through the suggestions that apply to you.
3. Place a check mark in front of the suggestions you think will work for you. Choose at least one from each category.
4. List the suggestions you chose in the following Action Plan for Learning box.

**FIGURE 1-4**  
Learning Strategies  
for Various Learning  
Styles

AUDITORY	VISUAL
<ol style="list-style-type: none"> <li>1. Record review notes.</li> <li>2. Discuss/study with friends.</li> <li>3. Talk aloud when studying.</li> <li>4. Record lectures.</li> <li>5. Listen to audio recordings about the subject matter (podcasts, MP3s).</li> </ol>	<ol style="list-style-type: none"> <li>1. Use mapping (see Chapter 4).</li> <li>2. Use visualization.</li> <li>3. Use online resources if available.</li> <li>4. View videos when available.</li> <li>5. Draw diagrams, charts, and maps.</li> </ol>
APPLIED	CONCEPTUAL
<ol style="list-style-type: none"> <li>1. Associate ideas with their application.</li> <li>2. Take courses with a lab or practicum.</li> <li>3. Think of practical situations to which learning applies.</li> <li>4. Use case studies, examples, and applications to cue your learning.</li> </ol>	<ol style="list-style-type: none"> <li>1. Use outlining.</li> <li>2. Focus on thought patterns (see Chapter 9).</li> <li>3. Organize materials into rules and examples.</li> </ol>
SPATIAL	VERBAL
<ol style="list-style-type: none"> <li>1. Draw diagrams; make charts and sketches.</li> <li>2. Use outlining.</li> <li>3. Use visualization.</li> <li>4. Use mapping (see Chapter 4).</li> </ol>	<ol style="list-style-type: none"> <li>1. Record steps, processes, and procedures in words.</li> <li>2. Write summaries.</li> <li>3. Translate diagrams and drawings into language.</li> <li>4. Write your interpretations next to textbook drawings, maps, and graphics.</li> </ol>
SOCIAL	INDEPENDENT
<ol style="list-style-type: none"> <li>1. Interact with the instructor.</li> <li>2. Find a study partner.</li> <li>3. Form an in-person or online study group.</li> <li>4. Take courses involving class discussion.</li> <li>5. Work with a tutor.</li> <li>6. Use social media to trade study tips with classmates.</li> </ol>	<ol style="list-style-type: none"> <li>1. Use online tutorials if available.</li> <li>2. Enroll in courses using a traditional lecture–exam format.</li> <li>3. Consider independent study courses.</li> <li>4. Purchase review books, study guides, and online self-tutorial packages, if available.</li> </ol>
CREATIVE	PRAGMATIC
<ol style="list-style-type: none"> <li>1. Take courses that involve exploration, experimentation, or discussion.</li> <li>2. Use annotation to record impressions and reactions.</li> <li>3. Ask questions about chapter content and answer them.</li> </ol>	<ol style="list-style-type: none"> <li>1. Write lists of steps, processes, and procedures.</li> <li>2. Write summaries and outlines.</li> <li>3. Use a structured study environment.</li> <li>4. Focus on problem-solving and logical sequence.</li> </ol>

**ACTION PLAN FOR LEARNING**

Learning Strategy 1 \_\_\_\_\_

\_\_\_\_\_

Learning Strategy 2 \_\_\_\_\_

\_\_\_\_\_

Learning Strategy 3 \_\_\_\_\_

\_\_\_\_\_

Learning Strategy 4 \_\_\_\_\_

\_\_\_\_\_

Learning Strategy 5 \_\_\_\_\_

\_\_\_\_\_

Now that you have listed suggestions to help you learn what you read, the next step is to experiment with these techniques, one at a time. (You may need to refer to the chapters listed in parentheses in Figure 1-4 to learn or review how a certain technique works.) Use one technique for a while, then move on to the next. Continue using the techniques that seem to work; work on revising or modifying those that do not. Do not hesitate to experiment with other techniques listed in the figure; you may find other techniques that work well for you.

**Developing Strategies to Overcome Limitations**

You should also work on developing the weaker aspects of your learning style. Make a conscious effort to work on improving areas of weakness as well as taking advantage of your strengths. Your learning style is not fixed or unchanging; you can improve areas in which you had low scores. Although you may be weak in auditory learning, for example, many of your professors will lecture and expect you to take notes. If you work on improving your listening and note-taking skills, you will learn better from lectures.

**Several Words of Caution**

Ideally, through activities in this section and the use of the questionnaire, you have discovered more about yourself as a learner. However, several words of caution are in order.

1. The questionnaire is a quick and easy way to discover your learning style. Other more formal and more accurate measures of learning style are available. These include *Kolb's Learning Style Inventory* and the *Myers-Briggs Type Indicator*. These tests may be available through your college's counseling, testing, or academic skills centers.
2. There are many more aspects of learning style than those identified through the questionnaire in this chapter. To learn more about other factors affecting learning, see one or both of the tests listed in point 1.

3. Learning style is *not* a fixed, unchanging quality. Just as personalities can change and develop, so can learning style change and develop through exposure, instruction, or practice. For example, as you attend more college lectures, your skill as an auditory learner may be strengthened.
4. You probably will not be clearly strong or weak in each aspect. Some students, for example, can learn equally well spatially and verbally. If your scores on one or more parts of the questionnaire were quite close, then you may have strengths in both areas.
5. When students discover the features of their learning style, they usually recognize themselves. A frequent comment is “Yep, that’s me.” However, if for some reason you feel the description of yourself as a learner is incorrect, then do not make changes in your learning strategies on the basis of the questionnaire results. Instead, discuss your style with your instructor or consider taking one of the tests listed in point 1.

### Goal 3

Understand instructors’ teaching styles.

## UNDERSTANDING YOUR INSTRUCTORS’ TEACHING STYLES

Just as each student has an individual learning style, each instructor also has a teaching style. Some instructors, for example, have a teaching style that promotes social interaction among students. An instructor may organize small-group activities, encourage class participation, or require students to work in pairs or teams to complete a specific task. Other instructors offer little or no opportunity for social interaction, as in a lecture class. Some instructors are very applied; they teach by example. Others are more conceptual; they focus on presenting ideas, rules, and theories. In fact, the same five categories of learning styles identified on pages 24–25 can be applied to teaching styles as well.

To an extent, of course, the subject matter also dictates how the instructor teaches. A biology instructor, for instance, has a large body of factual information to present and may feel he or she has little time to schedule group interaction.

### Comparing Learning and Teaching Style

Once you are aware of your learning style and consider the instructor’s teaching style, you can begin to understand why you learn better from one instructor than from another and why you feel more comfortable in certain instructors’ classes than in others. When aspects of your learning style match aspects of your instructor’s teaching style, you are on the same wavelength, so to speak; the instructor is teaching the way you learn. However, when your learning style does not correspond to an instructor’s teaching style, you may not be as comfortable, and learning will be more of a challenge. You may have to work harder in that class by taking extra steps to reorganize or reformat the material into a form better suited to your learning style. The following sections present each of the five categories of learning–teaching styles and suggest how you might adapt to accommodate each type of teaching style.

**AUDITORY-VISUAL** If your instructor announces essential course information (such as paper assignments, class projects, or descriptions of upcoming exams) orally and you are a visual learner, you should be sure to record as much information as possible in your notes. If your instructor relies on lectures to present

new material not included in your textbook, taking complete lecture notes is especially important. If your instructor uses numerous visual aids and you tend to be an auditory learner, consider recording summaries of these visual aids.

**APPLIED–CONCEPTUAL** If your instructor seldom uses examples, models, or case studies and you are an applied learner, you need to think of your own examples to make the course material real and memorable to you. Leave space in your class notes to add examples. Add them during class if they come to mind; if not, take time as you review your notes to add examples. If your instructor uses numerous demonstrations and examples and you are a conceptual learner, you may need to leave space in your class notes to write in rules or generalizations that state what the examples are intended to prove.

**SPATIAL–VERBAL** If you are a spatial learner and your instructor has a verbal teaching style (he or she lectures), then you will need to draw diagrams, charts, and pictures to learn the material. If you are a verbal learner and your instructor is spatial (he or she frequently uses diagrams, flowcharts, and so forth), then you may need to translate the diagrams and flowcharts into words in order to learn them.

**SOCIAL–INDEPENDENT** If your instructor organizes numerous in-class group activities and you tend to be an independent learner, then you will need to spend time alone after class reviewing the class activity, making notes, and perhaps even repeating the activity by yourself to make it more meaningful. If your instructor seldom structures in-class group activities and you tend to be a social learner, try to arrange to study regularly with a classmate or create or join an in-person or online study group.

**CREATIVE–PRAGMATIC** Suppose your instructor is very systematic and structured in his or her lectures, and, as a creative learner, you prefer to discover ideas through experimentation and free-flowing discussion. In this case, you should consider creating a column in your class notes to record your responses and creative thoughts or reserving the bottom quarter of each page for such annotations. If your instructor is creative and tends to use a loose or free-flowing class format, and you tend to be a pragmatic learner, you may need to rewrite and restructure class notes. If your instructor fails to give you specific guidelines for completing activities or assignments, you should ask for more information.

**DIRECTIONS** Analyze your instructors’ teaching styles by completing the following chart for the courses you are taking this semester. List as many teaching characteristics as you can, but do not try to cover every aspect of learning–teaching style.

## Exercise 7

Course	Instructor’s Name	Teaching-Style Characteristics
1. _____	_____	_____
2. _____	_____	_____
3. _____	_____	_____
4. _____	_____	_____
5. _____	_____	_____
6. _____	_____	_____ ●



**Exercise 8**

**DIRECTIONS** After you have completed the chart in Exercise 7, select one of your instructors whose teaching style does not match your learning style. Write a paragraph describing the differences in your styles. Explain how you will change your study methods to make up for these differences. ●

**Goal 4**

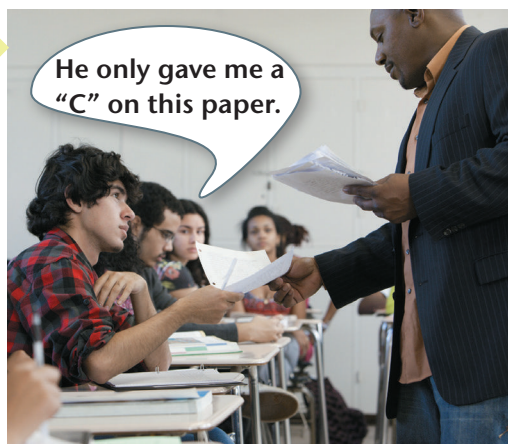
Meet instructors' expectations.

**MEETING YOUR INSTRUCTORS' EXPECTATIONS**

Whether you have just completed high school or are returning to college with work experiences or family responsibilities, you will face new demands and expectations in college. The following sections describe your instructors' expectations.

**Visual Thinking**  
APPLYING SKILLS

What does this student's comment reveal?

**Take Responsibility for Your Own Learning**

In college, learning is mainly up to you. Instructors function as guides. They define and explain what is to be learned, but they expect you to do the learning. Weekly class time is far shorter than in high school. For this reason, college class time is used primarily to introduce content and to discuss ideas. Instructors expect you to learn the material and to be prepared to discuss it in class. *When,*

*where,* and *how* you learn are your choices. Be sure to take into account the five aspects of your learning style as you make these choices.

**Focus on Concepts, Not Facts**

Each course you take will require you to learn a great many facts, statistics, dates, definitions, formulas, rules, or principles. It is easy to become a robot learner—memorizing facts from texts and lectures and then recalling them on exams and quizzes. However, factual information is only a starting point, a base from which to approach the real content of a course. Most college instructors expect you to go beyond facts to analysis—to consider what the collection of facts and details *means*. To avoid focusing too intensely on facts, be sure to keep the following questions in mind as you read and study.

- Why do I need to know this?
- Why is this important?
- What principle or trend does this illustrate?
- How can I use this information?
- How does this fit in with other course content?

**Focus on Ideas, Not “Right Answers”**

Through previous schooling, many students have come to expect their answers to be either right or wrong. They assume that their mastery of the course is measured

by the number of “right answers” they have learned. For this reason, they may be lost when faced with an essay question such as the following:

Defend or criticize the arguments that are offered in favor of capital punishment. Refer to any readings that you have completed.

There is no one right answer to this question. You can either defend the arguments or criticize them. The instructor who asks this question expects you to think and to provide a reasoned, logical, consistent response that draws on information you have acquired through your reading. Here are a few more examples of questions for which there are no single correct answers.

Would you be willing to reduce your standard of living by 15 percent if the United States could thereby eliminate poverty? Defend your response.

Imagine a society in which everyone has exactly the same income. You are the manager of an industrial plant. What plans, policies, or programs would you implement to motivate your employees to work?

## Evaluate New Ideas

Throughout college you will continually encounter new ideas; you will agree with some and disagree with others. Don’t accept or reject a new idea, however, until you have really explored it and have considered its assumptions and implications. Ask questions such as these:

- What evidence is available to support this idea?
- What opposing evidence is available?
- How is my personal experience related to this idea?
- What additional information do I need in order to make a decision?

**Tip** An *assumption* is a firm belief that something is true even without all the evidence to prove it. An *implication* is an idea that’s suggested but not stated directly. If your roommate says, “Take your umbrella today,” he or she is implying that it’s going to rain soon.

## DEVELOPING ACTIVE LEARNING STRATEGIES

Your instructors expect you to become an active learner, illustrated by the following situation.

A first-year student who had always thought of himself as a B student was getting low C’s and D’s in his business course. The instructor gave weekly quizzes; each was a practical problem to solve. Every week the student memorized his lecture notes and carefully reread the assigned chapter in his textbook. When he spoke with his instructor about his low grades, the instructor told him that his study methods were not effective and that he needed to become more active and involved with the subject matter. Memorizing and rereading are passive approaches, the instructor said, suggesting that the student try instead to think about content, ask questions, anticipate practical uses of the theory, solve potential problems, and draw connections among ideas.

### Goal 5

Use active learning strategies.

## Active Versus Passive Learning

How did you learn to ride a bike, play racquetball, or change a tire? In each case you learned by doing, by active participation. College learning requires similar active involvement and participation. Active learning is expected in most college courses and can often make the difference between barely average grades and top grades.

Figure 1-5 lists common college learning situations and contrasts the responses of passive and active learners. The examples in Figure 1-5 show that passive learners do not carry the learning process far enough. They do not go beyond what instructors tell them to do. They fail to think about, organize, and react to course content.

## Active Learning Strategies

When you study, you should be thinking about and reacting to the material in front of you. This is how to do so:

1. **Ask questions about what you are reading.** You will find that asking questions helps to focus your attention and improve your concentration.
2. **Consider the purpose behind assignments.** Why might a sociology assignment require you to spend an hour at the primate exhibit of the local zoo, for example?
3. **Try to see how each assignment fits with the rest of the course.** For instance, why does a section called “Amortization” belong in a business mathematics textbook chapter titled “Business and Consumer Loans”?
4. **Relate what you are learning to what you already know from the course and from your background knowledge and personal experience.** Connect a law in physics with how your car’s brakes work, for example.
5. **Think of examples or situations in which you can apply the information.**

Throughout the remainder of this text, you will learn many strategies for becoming an active learner. Active learning also involves active reading. In Chapter 6 you will learn specific strategies for becoming an active reader.

**FIGURE 1-5**  
Characteristics of  
Passive and Active  
Learners

ACTIVITIES	PASSIVE LEARNERS	ACTIVE LEARNERS
Class lectures	Write down what the instructor says	Decide what is important to write down
Textbook assignments	Read	Read, think, ask questions, try to connect ideas
Studying	Reread	Consider learning style, make study sheets, create outlines, predict exam questions, look for trends and patterns, use online resources
Writing class assignments	Only follow the professor’s instructions	Try to discover the significance of the assignment, look for the principles and concepts it illustrates
Writing term papers	Do only what is expected to get a good grade	Try to expand their knowledge and experience with a topic and connect it to the course objective or content

**DIRECTIONS** Consider each of the following learning situations. Answer each question by suggesting active learning approaches.

1. Your history professor returns a graded exam to you. How could you use it as a learning device? \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_
2. You have been assigned to read “Letter from Birmingham Jail” by Martin Luther King, Jr., for your English composition class. What questions would you try to answer as you read? \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_
3. Your biology course requires a weekly lab. How would you prepare for attending this lab? \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_
4. Your sociology instructor has assigned an article from *The New York Times* on crime in major U.S. cities. How would you record important ideas? \_\_\_\_\_  
 \_\_\_\_\_

## Exercise 9

## THINKING CRITICALLY

In college, your instructors expect you not only to learn actively, but also to think critically. A first step in becoming a critical thinker is to become familiar with the types of thinking that college instructors demand. Figure 1-6 lists six levels of thinking in order of increasing complexity. Based on a progression of thinking skills developed by Benjamin Bloom and revised by Lorin Anderson, they are widely used by educators in many academic disciplines.

## Goal 6

Explain and illustrate critical thinking.

LEVEL	EXAMPLES
<b>REMEMBERING:</b> recalling information, repeating information with no changes	Recalling dates, memorizing definitions for a history exam
<b>UNDERSTANDING:</b> understanding ideas, using rules, and following directions	Explaining a mathematical law, knowing how the human ear functions, explaining a definition in psychology
<b>APPLYING:</b> applying knowledge to a new situation	Using knowledge of formulas to solve a new physics problem
<b>ANALYZING:</b> seeing relationships, breaking information into parts, analyzing how things work	Comparing two poems by the same author
<b>EVALUATING:</b> making judgments, assessing the value or worth of information	Evaluating the effectiveness of an argument opposing the death penalty
<b>CREATING:</b> putting ideas and information together in a unique way, creating something new	Designing a Web page

**FIGURE 1-6**  
Levels of Thinking

The *remembering* level of thinking is basically memorization; this is something you've been doing for years. The *understanding* level is also familiar. If you are able to explain how to convert fractions to decimals, then you are thinking at the comprehension (*understanding*) level. At the *applying* level, you apply to a new situation information that you have memorized and understood. When you use your knowledge of punctuation to place commas correctly in a sentence, you are functioning at the application level. The *analyzing* level involves examining what you have learned and studying relationships. When you explain how a microscope works, you are analyzing its operation. *Evaluating* involves making judgments. When you decide what is effective and what is ineffective in a classmate's presentation in a public speaking class, you are evaluating the presentation. The *creating* level requires you to put ideas together to form something new. When you write a paper by drawing on a variety of sources, you are *synthesizing* sources to create something completely new.

**Tip** *Synthesizing* means "combining." The word part *syn-* means "together" or "with."

The last three levels—analyzing, evaluating, and creating—involve *critical thinking*. Critical thinking requires you to interpret and evaluate what you hear and read, rather than accept everything as "the truth." The term *critical* does not mean "negative." Rather, it means "analytical" and "probing"—that is, thinking more deeply about the subjects you study.

The benefits of critical thinking extend beyond your college courses. In your everyday life, critical thinking skills will help you

- become a savvy consumer and make good financial choices.
- understand when companies are trying to manipulate you with their advertising or public-relations efforts.
- resolve conflicts or come to acceptable compromises.
- solve problems and make decisions using a logical, step-by-step process.

## APPLYING LEVELS OF THINKING

### Reading and Levels of Thinking

As you read, be sure to think at each level. Here is a list of questions to help you read and think at each level.

Level of Thinking	Questions
REMEMBERING	What information do I need to learn?
UNDERSTANDING	What are the main points and how are they supported?
APPLYING	How can I use this information?
ANALYZING	How is this material organized? How are the ideas related? How are the data presented in graphs, tables, and charts related? What trends do they reveal?
EVALUATING	Is this information accurate, reliable, and valuable? Does the author prove his or her points?
CREATING	How does this information fit with other sources (class lectures, other readings, your prior knowledge)?

**DIRECTIONS** Identify the level or levels of thinking that each of the following tasks demands.

1. Retelling a favorite family story to your nieces and nephews  
\_\_\_\_\_
2. Using the principles of time management discussed earlier in this chapter to develop a weekly study plan  
\_\_\_\_\_
3. Learning the names of the U.S. presidents since World War II  
\_\_\_\_\_
4. Reorganizing your lecture notes by topic  
\_\_\_\_\_
5. Writing a letter to the editor of your hometown newspaper praising a recently passed city ordinance that restricts new toxic-waste disposal sites  
\_\_\_\_\_
6. Writing a term paper that requires library and online research  
\_\_\_\_\_
7. Using prereading techniques when reading your speech communication textbook  
\_\_\_\_\_
8. Listening to speeches by two candidates who are running for mayor and then deciding which one gets your vote  
\_\_\_\_\_
9. Watching several hours of TV programming to determine the amount of time given to commercials, to public service announcements, to entertainment programs, and to news  
\_\_\_\_\_
10. Writing an article for the campus newspaper explaining why on-campus parking is inadequate  
\_\_\_\_\_

## Exercise 10

**DIRECTIONS** Read “Dimensions of Nonverbal Communication” and answer the questions that follow.

### Dimensions of Nonverbal Communication

In recent years, research has reemphasized the important role of physical, or nonverbal, behaviors in effective oral communication. Basically, three generalizations about nonverbal communication should occupy your attention when you are a speaker:

1. *Speakers reveal and reflect their emotional states through their nonverbal behaviors.* Your listeners read your feelings toward yourself, your topic, and your audience from your facial expressions. Consider the contrast between a speaker who walks to the front of the room briskly, head held high, and one who shuffles, head bowed and arms hanging limply.

## Exercise 11



Communications scholar Dale G. Leathers summarized a good deal of research into nonverbal communication processes: “Feelings and emotions are more accurately exchanged by nonverbal than verbal means. . . . The nonverbal portion of communication conveys meanings and intentions that are relatively free from deception, distortion, and confusion.”

2. *The speaker’s nonverbal cues enrich or elaborate the message that comes through words.* A solemn face can reinforce the dignity of a funeral eulogy. The words “Either do this or do that” can be illustrated with appropriate arm-and-hand gestures. Taking a few steps to one side tells an audience that you are moving from one argument to another. A smile enhances a lighter moment in your speech.
3. *Nonverbal messages form a reciprocal interaction between speaker and listener.* Listeners frown, smile, shift nervously in their seats, and engage in many types of nonverbal behavior. . . . There are four areas of nonverbal communication that concern every speaker: (a) *proxemics*, (b) *movement and stance*, (c) *facial expressions*, and (d) *gestures*.

—Gronbeck et al., *Principles of Speech Communication*, pp. 217–218

1. **Remembering:** What are the three generalizations?

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2. **Understanding:** Explain how a speaker can reveal his or her emotional state.

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3. **Applying:** Give an example (not used in the excerpt) of how a speaker can reveal his or her emotional state.

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4. **Analyzing:** If nonverbal communication is relatively free of deception, is it possible to tell a lie using body language?

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5. **Evaluating:** How is this information useful and important to me in a public speaking class?

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6. **Creating:** To what extent is this information consistent with what I already know about nonverbal messages?

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**DIRECTIONS** Read the textbook selection “Race and Ethnicity,” in Part Seven, pages 425–438. Then write two questions that require thinking at each of the levels we have discussed (a total of 12 questions). ●

## Exercise 12

# USING COLLEGE TEXTBOOKS

## Keeping Up with Reading Assignments

An important part of time management is keeping up with textbook reading assignments. It is easy to let assignments slide, especially when your instructor is not checking to be sure you have completed them.

Use the following suggestions to keep up with assigned reading.

### USE AND MARK YOUR SYLLABUS

A syllabus (see the Success Workshop on page 2) often contains a list of assigned chapters along with the week they are due. Use the margins of the syllabus to mark when you plan to complete each assignment, and check it off when complete. Subdivide long chapters into sections to be completed on different days. Here is an excerpt from a syllabus for an art course.

Week 1	Chapter 1 The Nature of Art		✓ 9/15
Week 2	Chapter 3 Visual Elements of Art	pp. 112-130	✓ 9/19
		pp. 131-148	✓ 9/21
Week 3	Chapter 4 Principles of Art	pp. 149-160	9/26
		pp. 161-175	9/28

### Textbook Exercise 1: Working with Your College Textbook

Choose a chapter that you have been assigned in another course. Subdivide it into sections and create a schedule for reading and completing the chapter.

### ANNOTATE THE TEXT'S TABLE OF CONTENTS

Keep track of when assignments are due and when you have completed them using the book's table of contents, as shown on the next page. Feel free to add notes to yourself indicating sections that need further review or those that you had difficulty with.

		<b>Unit Two</b>	
		<b>Genetics</b>	
		<b>Chapter 5</b>	
		<b>Cancer</b>	
		DNA Synthesis, Mitosis, and Meiosis	108
2/5	5.1	<b>What Is Cancer?</b>	111
		Tumors Can Be Cancerous	111
		Risk factors for Cancer	112
	5.2	<b>Passing Genes and Chromosomes to Daughter Cells</b>	116
2/6		Genes and Chromosomes	116
		DNA Replication	117
	5.3	<b>The Cell Cycle and Mitosis</b>	118
		Interphase	119
		Mitosis	119
		Cytokinesis	120
Review and Study Diagrams	5.4	<b>Cell Cycle Control and Mutation</b>	121
		An Overview of Controls in the Cell Cycle	122

— Belk, et al., *Biology: Science for Life with Physiology*, 3e

Experiment with the two methods covered here and on the previous page of keeping track of reading assignments. Decide which one works better and use it for several weeks.

## Textbook Exercise 2: Annotate A Chapter From Your College Textbook

Use the method described on this and the previous page to annotate the table of contents for this textbook.

## FURTHER PRACTICE WITH TEXTBOOK READING

### Textbook Exercise 3 : Textbook Chapter

Below is a section of a syllabus that assigns the textbook chapter contained in Part Seven: Classroom Simulation: Textbook Reading and Writing (p. 422). The syllabus shows topics to be studied over a one-week period.

**Feb 13: Lecture on Race and Ethnicity.** Read the Chapter Overview and The Social Meaning of Race and Ethnicity.

**Feb 15: Lecture on Prejudice, Stereotypes, and Discrimination.** Read the remainder of the “Race and Ethnicity” chapter.

**Feb 17: Quiz on Chapter 11: Race and Ethnicity**

Using the guidelines on pages 37–38, annotate the table of contents below according to the syllabus.

## 11 Race and Ethnicity 338

**The Power of Society to shape political attitudes 339**

**The Social Meaning of Race and Ethnicity 340**

**11.1:** Explain the social construction of race and ethnicity.

Race 340

Ethnicity 342

Minorities 343

**Prejudice and Stereotypes 345**

**11.2:** Describe the extent and causes of prejudice.

Measuring Prejudice: The Social Distance Scale 346

Racism 348

Theories of Prejudice 348

**Discrimination 349**

**11.3:** Distinguish discrimination from prejudice.

Institutional Prejudice and Discrimination 349

Prejudice and Discrimination: The Vicious Circle 350

**Majority and Minority: Patterns of Interaction 350**

**11.4:** Identify examples of pluralism, assimilation, segregation, and genocide.

Pluralism 350

Assimilation 350

Segregation 351

Genocide 352



## Textbook Exercise 4 : Your College Textbook

Choose a textbook that you are using in one of your other courses. Using the syllabus for that course, annotate your textbook's table of contents according to the guidelines on pages 37–38.

## SELF-TEST SUMMARY

### Goal 1

**Why should you set goals and manage your time?**

Establishing your goals will eliminate conflicts and keep you focused. Begin by establishing your priorities and following them to achieve your academic goals. Next, compare the time you have allotted to various commitments with the priorities you have assigned to those activities. Finally, build a term plan that you will adjust weekly. Analyze how you spend your time each week on nonacademic tasks to determine if you have enough time for classes, studying, and homework. Use your time wisely and control the tendency to procrastinate.

**Goal 2**

Why should you analyze your learning style?

Analyzing your learning style can help you understand why you learn better from one instructor than another and why some courses are easier than others. Building an awareness of how you learn best and what your limitations are can help you study more effectively and become a more efficient learner.

**Goal 3**

Why is it important to analyze your instructors' teaching styles?

You may need to make changes in how you learn to suit each instructor's teaching style.

**Goal 4**

What do instructors expect of college students?

In college, instructors expect students to set their own operating rules, take responsibility for their own learning, and focus on and evaluate ideas and concepts.

**Goal 5**

What does "becoming an active learner" mean?

Active learning is essential to success in college. To become a more effective learner, you should get actively involved with reading assignments, lectures, and class activities by (a) asking questions about class presentations and reading assignments, and (b) looking for the purpose of learning the information presented.

**Goal 6**

What is critical thinking and why is it important?

College instructors expect their students to read and think critically. There are six levels of thinking: remembering, understanding, applying, analyzing, evaluating, and creating. The last three of these are critical thinking skills. Many classroom activities, such as exams, papers, and discussions, require reading and thinking at these levels.

**APPLYING****YOUR SKILLS****DISCUSSING THE CHAPTER**

1. What are the advantages of working on assignments in several short sessions over a period of time rather than in one longer session all at once?
2. What are some of the ways that you can use spare moments and combine activities to help you save time?
3. How do learning styles relate to choice of major or choice of profession? Discuss majors and jobs that may be most appropriate or inappropriate for the various learning styles.
4. Take a look at the tests you've taken so far in college. Determine which of Benjamin Bloom's types of thinking are present in each exam question. Brainstorm some study strategies to help you prepare for questions in each category.

## ANALYZING A STUDY SITUATION

**DIRECTIONS** Working in groups of three or four students, analyze the following situation. Discuss answers to the questions that follow.

A history professor has just returned graded midterm exams to her class. One student looks at the grade on the first page, flips through the remaining pages while commenting to a friend that the exam was “too picky,” and files it in her notebook. A second student reviews his exam for grading errors and notices one error. Immediately, he raises his hand and asks for an adjustment to his grade. The instructor seems annoyed and tells the student she will not use class time to dispute individual grades. A third student reviews her exam bluebook to identify a pattern of error; on the cover of the bluebook, she notes topics and areas in which she is weak.

1. Compare the three students’ responses to the situation.
2. What does each student’s response reveal about his or her approach to learning?
3. Analyze the student’s response to the instructor’s error in grading. What alternatives might have been more appropriate?
4. At what level(s) of thinking was each of the three students functioning?

## WORKING ON COLLABORATIVE PROJECTS

**DIRECTIONS** Working in groups of two or three, prepare a “Need to Know” list for new students on your campus. Include information you have discovered so far about learning and studying in college. Groups should compare and compile lists and may wish to prepare a handout for next semester’s class, post information on the campus Web site, or submit the final list to the college newspaper for publication or to the director of student orientation for use with incoming students.



**Quick****Quiz**

**DIRECTIONS** Write the letter of the choice that best completes each statement in the space provided.

**CHECKING YOUR RECALL**

- \_\_\_\_\_ 1. If you are taking 12 hours of classes, you should expect to study each week for at least
- 6 hours.
  - 12 hours.
  - 24 hours.
  - 30 hours.
- \_\_\_\_\_ 2. An example of an effective time-saving technique is
- waiting as long as possible to complete an assignment.
  - reviewing class notes while riding on the bus.
  - eliminating optional assignments from your weekly plan.
  - studying with a friend.
- \_\_\_\_\_ 3. It is usually best to study for a difficult course
- in two or three short blocks of time rather than in one long block.
  - only when you really feel like it.
  - after a warm-up session.
  - after you have studied for your easier courses.
- \_\_\_\_\_ 4. The primary value of identifying your learning style is that it can help you
- become interested in what you are studying.
  - develop and maintain your concentration.
  - become more efficient in how you study.
  - increase your reading rate.
- \_\_\_\_\_ 5. An active learner would do all of the following *except*
- read, think, ask questions, and try to connect ideas.
  - predict exam questions and look for trends and patterns.
  - do only what is expected to get a good grade.
  - try to discover the significance of the assignment and look for the principles and concepts it illustrates.

**APPLYING YOUR SKILLS**

- \_\_\_\_\_ 6. Sarah has an economics examination tomorrow. She has been cramming for four hours straight and is starting to panic. Which of the

following suggestions would *not* have helped Sarah to study more effectively?

- studying her easier topics first
  - studying in short blocks of time, rather than in one long block
  - taking a ten-minute break for each hour that she studies
  - scheduling her study session at a time when she is alert and feels like studying
- \_\_\_\_\_ 7. Tonight, Justine needs to prepare for a math midterm examination that she'll take tomorrow, make vocabulary flash cards for tomorrow's Russian class, and read three chapters in a novel for her English class in two days. In what order should she attack these assignments?
- math, Russian, English
  - math, English, Russian
  - Russian, math, English
  - English, Russian, math
- \_\_\_\_\_ 8. Craig learns best using diagrams, charts, and sketches. He frequently uses outlining, visualization, and mapping to help him organize the ideas presented in his classes. Craig can best be described as a
- verbal learner.
  - auditory learner.
  - spatial learner.
  - applied learner.
- \_\_\_\_\_ 9. On her physics test, Janiece will be expected to use her knowledge of formulas to solve a new physics problem. Janiece's test will require her to use which level of thinking?
- remembering
  - applying
  - analyzing
  - evaluating
- \_\_\_\_\_ 10. Amelia is taking a biology class in which the instructor relies on lectures to present information. Because the course covers so much material, the instructor does not have time to schedule group interaction. If Amelia were a social learner, it would be most helpful for her to
- drop the class immediately because it doesn't suit her learning style.
  - spend time alone after class, reviewing the lecture.
  - form an online study group with students from her class.
  - record lectures to listen to by herself later.

# Taking Notes in Class

## LEARNING GOALS

In this chapter you will learn to

- 1 Sharpen your listening skills.
- 2 Prepare for a class lecture.
- 3 Take lecture notes.
- 4 Edit your notes.
- 5 Study your notes.

## LEARNING EXPERIMENT

- 1 Ask a friend to read each of the following paragraphs aloud (or your instructor may choose to read them). While paragraph 1 is read to you, just listen. While and after paragraph 2 is read to you, write a set of notes that contain its most important ideas.

### Paragraph 1

Did you know that use of empty space is a form of communication? How humans use space can communicate as loudly as words and phrases. How close or how far away you stand from another person communicates a message. Research by Edward Hall identifies four types of distance, each of which defines the relationship you establish with others. The first, intimate distance, is not considered appropriate in public (except in crowded places, such as elevators). Family members and spouses may use the intimate distance. Personal distance is the space around you that no one invades unless invited, such as to shake hands. Social distance is the distance at which you operate in daily living—sitting in classrooms, attending a play, shopping, and

so forth. The fourth type, public distance, is used when you are not involved with another person.

### Paragraph 2

Communication occurs with words and gestures, but did you know it also occurs through sense of smell? Odor can communicate at least four types of messages. First, odor can signal attraction. Animal species give off scents to attract members of the opposite sex. Humans use fragrances to make themselves more appealing or attractive. Second, smell communicates information about tastes. The smell of popcorn popping stimulates the appetite. If you smell a chicken roasting you can anticipate its taste. A third type of smell communication is through memory. A smell can help you recall an event months or even years ago, especially if the event is an emotional one. Finally, smell can communicate by creating an identity or image for a person or product. For example, a woman may wear only one brand of perfume. Or a brand of shaving cream may have a distinct fragrance, which allows users to recognize it.

**2** Wait 24 hours, or until the next class session; then, without reading either paragraph or looking at your notes, answer the following questions.

### Paragraph 1

Name the four types of distances discussed in the paragraph.

### Paragraph 2

Name the four messages that smell can communicate.

Check your answers using the Answer Key at the bottom of page 62.

### The Results

You probably got more information correct for paragraph 2 than you did for paragraph 1. Why?

Because you listened to paragraph 2 and took notes. In doing so, you used three sensory modes: hearing (listening), touching (writing), and seeing (reading your notes). For paragraph 1, you used only one sensory mode: hearing.

### Learning Principle: What This Means to You

You have five senses—five ways of taking in information from the world around you: sight, touch, smell, sound, and taste. **The more senses you use to learn something, the easier it will be to learn.** When you listen to a college lecture, you are using only one sensory mode. If you take notes on the lecture as you listen, you are using your sense of touch as well as your sense of hearing. When you reread the notes after you have written them, you are employing a third sensory mode—sight. In this chapter you will learn how to take notes effectively, how to edit them, and how to develop a system to study them.

## Goal 1

Sharpen your listening skills.

## SHARPENING YOUR LISTENING SKILLS

The first step in taking good lecture notes is to sharpen your listening skills. The average adult spends 31 percent of each waking hour listening. By comparison, 7 percent is spent on writing, 11 percent on reading, and 21 percent on speaking. Listening, then, is an essential communication skill. During college lectures, listening is especially important; it is your primary means of acquiring information.

Have you ever found yourself not listening to a professor who was lecturing? Her voice was loud and clear, so you certainly could hear her, but you weren't paying attention—you tuned her out. This situation illustrates the distinction between hearing and listening. Hearing is a passive, biological process in which the ear receives sound waves. In contrast, listening is an intellectual activity that involves the processing and interpretation of incoming information. Listening must be intentional, purposeful, and deliberate. You must plan to listen, have a reason for listening, and carefully focus your attention. Use the suggestions in the following box to sharpen your listening skills.

## Goal 2

Prepare for a class lecture.

## PREPARING FOR A CLASS LECTURE

Before you attend a lecture class, you should become familiar with the main topic of the lecture and be aware of important subtopics and related subjects.