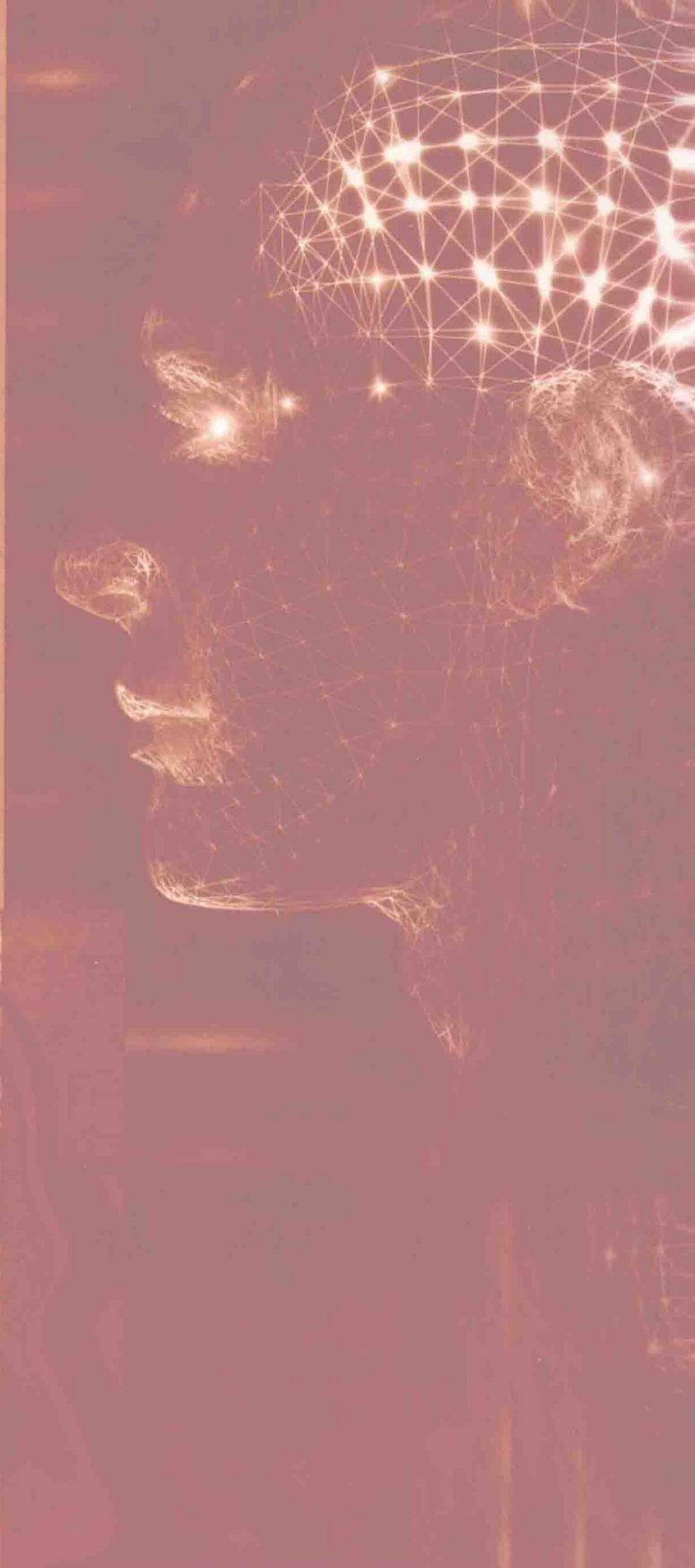


PSYCHOLOGY

concepts & applications

SPECIAL SECOND EDITION

JEFFREY S. NEVID



WITH STUDY GUIDE &
PSYCHOLOGY AND CAREERS

PSYCHOLOGY

concepts & applications

SPECIAL SECOND EDITION

With Study Guide & Psychology and Careers

JEFFREY S. NEVID

St. John's University

HOUGHTON MIFFLIN COMPANY

Boston New York

PSYCHOLOGY: CONCEPTS AND APPLICATIONS, SECOND EDITION

by Jeffrey S. Nevid

Copyright © 2007 by Houghton Mifflin Company. All rights reserved.

Publisher: Charles Hartford
Sponsoring Editor: Jane Potter
Development Editor: Laura Hildebrand
Senior Project Editor: Carol Newman
Editorial Assistant: Deborah Berkman
Senior Art and Design Coordinator: Jill Haber
Senior Photo Editor: Jennifer Meyer Dare
Composition Buyer: Chuck Dutton
Designer: Henry Rachlin
Manufacturing Coordinator: Karen Banks Fawcett
Marketing Manager: Laura McGinn
Marketing Associate: Erin Lane

Text and photo credits begin on page A-73.

STUDY GUIDE TO ACCOMPANY PSYCHOLOGY: CONCEPTS AND APPLICATIONS, SECOND EDITION

by Patricia S. Laser and Rachelle Lipshultz

Copyright © 2007 by Houghton Mifflin Company. All rights reserved.

Vice President, Publisher: Charles Hartford
Sponsoring Editor: Jane Potter
Assistant Editor: Liz Hogan
Editorial Assistant: Deborah Berkman
Digital Ancillary Producer: Sean McGann
Marketing Manager: Laura McGinn
Marketing Associate: Erin Lane

HOW TO STUDY IN COLLEGE, EIGHTH EDITION

by Walter Pauk and Ross J. Q. Owens

Copyright © 2006 by Houghton Mifflin Company. All rights reserved.

Publisher: Patricia Coryell
Senior Sponsoring Editor: Mary Finch
Development Editor: Shani B. Fisher
Editorial Assistants: Andrew Sylvester and Sean McGann
Senior Manufacturing Coordinator: Florence Cadran
Marketing Manager: Elinor Gregory

Custom Publishing Editor: Todd Corbin
Custom Publishing Production Manager: Christina Battista
Project Coordinator: Georgia Young

Cover Designer: Heather Pytel
Cover Image: GettyImages

This book contains select works from existing Houghton Mifflin Company resources and was produced by Houghton Mifflin Custom Publishing for collegiate use. As such, those adopting and/or contributing to this work are responsible for editorial content, accuracy, continuity and completeness.

Compilation copyright © 2007 by Houghton Mifflin Company. All rights reserved.

No part of this work may be reproduced or transmitted in any form or by any means, electronic or mechanical, including photocopying and recording, or by any information storage or retrieval system without the prior written permission of Houghton Mifflin Company unless such copying is expressly permitted by federal copyright law. Address inquiries to College Permissions, Houghton Mifflin Company, 222 Berkeley Street, Boston, MA 02116-3764.

Printed in the United States of America.

ISBN-13: 978-0-618-81429-9

ISBN-10: 0-618-81429-9

N-06836

4 5 6 7 8 9 - AB - 08

 **Houghton Mifflin**
Custom Publishing

222 Berkeley Street • Boston, MA 02116

Address all correspondence and order information to the above address.

Preface

Welcome to the Second Edition of *Psychology: Concepts and Applications*. As instructors, we are challenged every day in the classroom to help our students succeed in today's learning environment. I approached the task of writing this text with that fundamental challenge in mind. I drew upon my experience in the classroom and research evidence from the science of psychology to build a learning-centric pedagogical framework. We have learned a great deal about the processes of learning and memory that we can bring to the classroom and incorporate in our textbooks. I also believe that empirical research on textbook pedagogy can lead to innovative ways of transforming the modern textbook into a more effective learning tool.

Research-Based Text Development

In our research laboratory, we conducted studies on two key pedagogical features embodied in this text, **modularization** and **concept signaling**.¹ The results of these studies gave me confidence that combining a modular approach with the pedagogical tool of concept signaling would help students better organize their study efforts and master key concepts in the field. This text is literally the product of the research program we undertook in our laboratory and honed through field-testing in classrooms around the country.

A textbook is more than its pedagogy, of course. Each author has a distinctive voice and style of writing. Throughout my writings, I have endeavored to speak directly to students and to make the material accessible to students at all levels. Psychology is a vibrant, dynamic discipline, and I have tried to approach the writing of this text with the same enthusiasm that psychologists bring to their research, teaching, and professional work every day.

¹Nevid, J. S., & Carmony, T. M. (2002). Traditional versus modular format in presenting textual material in introductory psychology. *Teaching of Psychology*, 29, 237–238.

Nevid, J. S., & Lampmann, J. L. (2001, April). *Do pedagogical aids in textbooks enhance learning?* Paper presented at the 15th Annual Conference on Undergraduate Teaching of Psychology, Ellenville, NY.

Nevid, J. S. (2003, September). *Helping students get the point: Concept signaling as a pedagogical aid*. Paper presented at the conference, Taking Off: Best Practices in Teaching Introductory Psychology, Atlanta, GA.

Nevid, J. S., & Lampmann, J. L. (2003). Effects on content acquisition of signaling key concepts in text material. *Teaching of Psychology*, 30, 227–229.

Nevid, J. S. (2004, January). *Graphing psychology: The effective use of graphs and figures in teaching introductory psychology*. Invited address presented at the 26th Annual National Institute on the Teaching of Psychology, St. Petersburg, FL.

Nevid, J. S. (2004, February). *Evidence-based pedagogy: Using research to find new ways to help students learn*. Invited address presented at the 11th Midwest Institute for Students and Teachers of Psychology (MISTOP), Glen Ellyn, IL.

A Unique Pedagogy: The Concept-Based Module

If you thumb through the pages of this text, you'll see that it is organized in a series of individualized study units called *modules*. Each module is a cohesive study unit organized around a set of key concepts in a particular area of study. The text also incorporates a unique signaling tool called *concept signaling*, a method of extracting and signaling or "calling out" key concepts in the margins of the text.

Signaling is an effective tool for helping people encode important information. Textbooks traditionally have used a form of signaling in which key terms are boldfaced and defined in the margins of the text. This form of signaling helps students learn the technical vocabulary in the field. As an instructor, I want my students to learn key terms, but I recognize it is even more important for them to learn and retain the key concepts that comprise the basic units of knowledge in the field. This text uses signaling as a pedagogical aid to help students encode and retain both key terms and key concepts.

Why a Modular Approach?

The primary advantage of a modular format is that it breaks down complex chapters into smaller instructional units called modules. Many of our students juggle jobs, families, and careers. Tight for time, they need to balance studying with other life responsibilities. The modular approach helps busy students organize their study efforts by allowing them to focus on one module at a time rather than trying to tackle a whole chapter at once.

The majority of the student participants in our research program preferred a modular format over the traditional textbook format (57.3 percent versus 38.5 percent, with 4.2 percent expressing no preference) (Nevid & Carmony, 2002). In addition, we discovered that students who preferred a modular format performed significantly better on quizzes when material was presented in this manner rather than in the traditional narrative format. It stands to reason that if students prefer a particular approach, they will become more engaged in reading texts written in that format—an outcome that may translate into improved performance.

Learning Benefits of Concept Signaling

In a later study (Nevid & Lampman, 2003), we explored whether signaling key concepts by means of extracting and highlighting them in the margins of the text would enhance learning of this material. Though some students easily extract key concepts from text material, many others struggle to recognize the key points the author tries to convey. As in-

structors, we may only become aware of these struggles at examination time. Many students are able to cull facts or figures from text material, but have difficulty extracting the broader concepts that comprise the basic building blocks of knowledge in the field.

To examine the learning effects of signaling concepts, we had students read the same text passage under one of two conditions—one that highlighted key concepts in the margins and another that did not. We used a randomized, counterbalanced design to control for order effects and tested our research participants on a multiple-choice quiz shortly after a 20-minute study period. Our results showed that signaling key concepts significantly improved test performance overall as well as on the subset of items directly testing knowledge of key concepts. **Students who read the text material with concept signaling averaged 83 percent correct on items assessing key concepts, as compared to an average of 76.5 percent among students who read the same material without concept signaling.**

Concept signaling is a tool that can help students encode and retain key concepts. We did not expect, nor did we find, that concept signaling would improve student performance on quiz items assessing the surrounding material in the text that was not signaled. Our results only reinforce what instructors have known for years—that students should not use pedagogical aids (whether they be chapter summaries, running glossaries, study breaks, interim quizzes, or cued concepts) as substitutes for reading the text in its entirety. Students should be advised to use signaled concepts as an aid to help them gauge their knowledge of these important points, not as a substitute for reading the whole chapter.

We also polled student participants on which format they preferred—the one with signaled concepts or the one without. More than three out of four students preferred the signaling format and found it easier to understand and more clearly presented than the non-signaled format. (These findings were interesting in light of the fact that the material was exactly the same in both formats; the only difference was the signaling of key concepts).

Building Upon the Core

The defining features of the text that make it a learning-centric and student-friendly text are carried into the new edition. Users who are familiar with the text will recognize that the pedagogical platform of concept-based modules remains very much at the core of the text. The engaging writing style and use of many personal examples and vignettes helps make the text material accessible to students from varied backgrounds. The built-in pedagogical tools, such as keyed and numbered concepts, running glossary, Concept Charts, and the SQ3R+ study method help students master complex material. The Pioneers feature provides behind-the-scene glimpses into the personal lives of leading contributors to the field.

What's New in this Edition?

New Features

This edition includes several new features designed to stimulate critical thinking, engage interest, help students recognize relational connections between concepts, and review text material.

NEW . . . Reality Check This new critical thinking feature helps students examine common beliefs and misconceptions in the light of evidence. Each of these capsulized features (there's one per chapter) consists of three parts: the Claim, the Evidence, and the Take-Away Message. Examples include the following:

- Humans only use 10 percent of our brains (Ch. 2)
- ESP exists (Ch. 3)
- Skinner raised his daughter in a Skinner box. (Ch. 5)
- Girls are not good at math. (Ch. 11)
- Mental disorders affect relatively few people. (Ch. 13)

NEW . . . Exploring Psychology This new feature focuses on specific aspects of psychology. In these sections, I explore contemporary issues and controversies in psychology, highlight emerging research, and personalize the material by relating it to significant life concerns, such as suicide (Ch. 13) and the risks posed by unsafe sexual behaviors (Ch. 11). Here is a sampling:

- Anatomy of a Research Study: The Shooter Bias (Ch. 1)
- Driving While Distracted: Risks of Divided Consciousness (Ch. 4)
- Are Recovered Memories Credible? (Ch. 6)
- Does Day Care Affect Attachment? (Ch. 9)
- Cohabitation: Trial Marriage or Marriage Alternative? (Ch. 10)
- Making It in America: The Challenge of Acculturative Stress (Ch. 15)

NEW . . . Concept Maps for Psychology This unique print supplement helps students form linkages among key concepts. Concept maps are visual learning tools that are widely used in many fields, including education and computer science. These visual-spatial diagrams help students make relational connections between concepts.

NEW . . . Module Reviews The structure and content of these reviews have been changed to better help students gauge their knowledge of the text material. One important difference in this new edition is that review sections are

placed at the end of each module, rather than compiled at the end of the chapter. This change allows each module to be a fully self-contained study unit. Each module review consists of three parts:

- **Recite It:** Here students have the opportunity to recite their answers to the survey questions that introduced the module. This question-and-answer format encourages active learning and adopts the SQ3R model to encourage recitation of answers to survey questions. Students not only can recite their answers to the questions, but they can then compare their answers to sample answers presented in the text.
- **Recall It:** Students test their knowledge by answering a variety of questions, including fill-in, multiple choice, short answer, and matching questions.
- **Think About It:** These thought-provoking questions encourage students to think critically about information contained in the module.

Expanded and Updated Coverage

Expanded Coverage of Neuroscience Neuroscientists are making important contributions to our understanding of the relationships between brain and behavior. A full listing of neuroscience content in the text is found in a tabbing guide available on the **Online Teaching Center**. Here are some examples:

- Use of brain scans in personality and memory research (“Looking Under the Hood,” Ch. 2)
- Research using fMRI to investigate why it is impossible to tickle yourself (Ch. 2)
- Brain structures involved in controlling sleep-wake cycles (Ch. 4)
- Brain imaging study of hypnosis (Ch. 4)
- Brain-imaging study of response to alcohol words (Ch. 4)
- Role of SWS sleep, as well as REM sleep, in consolidating daily experiences into long-term memories (Ch. 6)
- Brain mechanisms involved in regulating appetite (Ch. 8)
- Research linking reduced utilization of serotonin in the brain to suicidal behavior (Ch. 13)
- New research on brain abnormalities in people with OCD, schizophrenia, and bipolar disorder (Ch. 13)

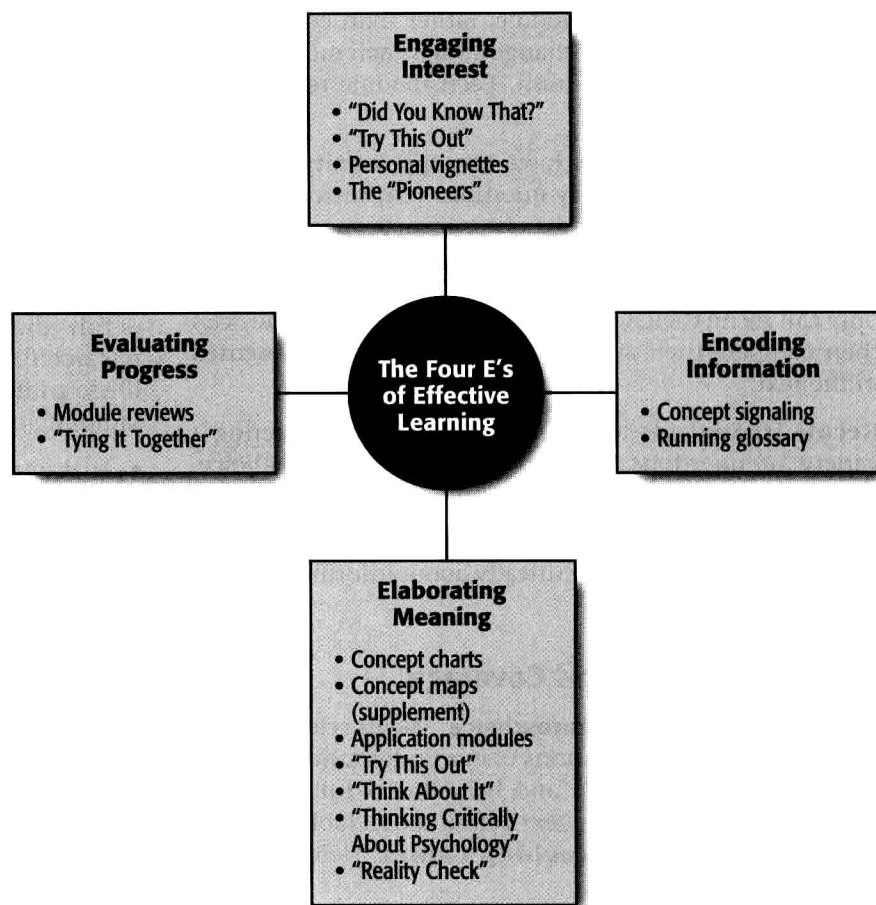
Expanded Coverage of Positive Psychology Positive psychology is an emerging movement within psychology that has been growing in momentum during the past few years. This edition features expanded coverage of positive psychology, including a new section on research on personal happiness (Ch. 8). For a full listing of positive psychology

coverage, including such topics as love, optimism, and happiness, see the accompanying tabbing guide available on the **Online Teaching Center**.

Updated Research Throughout Importantly, the text has been thoroughly updated from start to finish. The field of psychology stands still for no author! New research developments are reported daily in our professional journals and circulated widely in the popular media. As you thumb through the pages of this edition, you will find more than 1,000 new citations of research findings and theoretical developments appearing in the scientific literature since the last edition. Here is but a small sampling of new research included in the Second Edition:

- Anatomy of a research study—the Shooter Bias study (Ch. 1)
- New research on the effectiveness of meditation in helping to relieve chronic pain (Ch. 3)
- New research on the risks posed by distracted driving (Ch. 4)
- New research showing the role of parental modeling in learning styles of dealing with conflicts in intimate relationships (Ch. 5)
- New research on induction of false memories, including the “Bugs Bunny” memory study (Ch. 6)
- New research on the “Flynn Effect” in developing countries (Ch. 7)
- New research on the role of body dissatisfaction and peer pressure in predicting bulimic behavior in young women (Ch. 8)
- New section on the growing interest in happiness research (Ch. 8)
- New research on relationships between TV viewing and attentional difficulties in children (Ch. 9)
- New research on relationship between new marriage and happiness (Ch. 10)
- New research showing that men express greater confidence in using computers than do women of equal quantitative skills (Ch. 11)
- New research examining personalities of mountain climbers attempting to scale Mt. Everest (Ch. 12)
- New research on the effectiveness of virtual reality therapy (Ch. 14)
- New research showing that newlyweds whose bodies pumped out more stress hormones during the first year of marriage were more likely to get divorced within ten years than were newlyweds with a lower stress response (Ch. 15)
- New research showing that people with baby-faced features are more likely to elicit help than people with more mature facial features (Ch. 16)

Figure 1
The Four E's of Effective Learning (EL)



New Pioneers Boxes Two additional Pioneers boxes are included in this edition: Tim Berners-Lee, the inventor of the World Wide Web who is profiled in Chapter 6 (“Weaving the Web”); and Stanley Milgram, who is profiled in Chapter 16 (“The Man Who Shocked the World”).

A Complete Learning System Based on the Four E's of Effective Learning

The text provides a broad perspective on psychology that covers the history, methods of research, major theories, and research findings of the discipline, as well as applications of knowledge gained from contemporary research to the problems and challenges we face in today's world. But a text needs to be more than a compendium of information. It needs to be an effective learning tool.

The features of the text form a complete learning system that is grounded in research on memory, learning, and textbook pedagogy. The pedagogy incorporates four key elements of *effective learning* that I call the “**Four E's**” (see Figure 1):

- Engaging Interest
- Encoding Information

- Elaborating Meaning
- Evaluating Progress

Engaging Interest

Learning begins with focused attention. A textbook can be an effective learning tool only if it succeeds in engaging and retaining the student's interest. Without focused attention, information is not likely to be encoded or retained.

This text is designed not only to generate interest but also to involve students directly in the material they read. Personal vignettes are used to draw the reader into the material and illustrate how the concepts discussed in the chapter relate to personal experiences. In addition, two distinctive pedagogical features are designed to further involve the student in the material.

“Did You Know That...” These chapter-opening questions whet students' appetite for the material presented in the chapter and encourage them to read further. Some questions debunk common myths and misconceptions; others highlight interesting historical features or bring recent research developments into focus. Accompanying page numbers are pro-

vided for easy cross-referencing to the chapter sections in which the information is discussed. A small sample follows:

Did You Know That . . .

- The mechanism that makes motion pictures possible lies in the viewer, not the projector? (Ch. 3)
- Practicing smiling can lift your mood? (Ch. 8)
- The “Big Five” is not the name of a new NCAA basketball conference but the label used to describe the leading trait theory of personality today? (Ch. 12)
- Gestalt therapists have their clients talk to an empty chair? (Ch. 14)
- Waitresses who write helpful messages on the backs of customer’s checks tend to get larger tips? (Ch. 16)

“Try This Out” These “hands-on” exercises encourage students to apply psychological concepts to their own experiences. Whether the topic involves using the principle of scaffolding to help a child acquire a particular skill, or performing a personal experiment on lucid dreaming, students can work through problems, generate solutions, and test out concepts and principles. They can participate in *active learning* by directly applying the text concepts to real-life situations, rather than simply reading about them.

“Try This Out” activities also offer suggestions for *service learning* through participation in research and volunteer experiences, while the self-scoring questionnaires in this feature allow students to evaluate their behavior and attitudes about specific issues.

Encoding Information

What image appears on the back of a \$10 bill? Though we may have handled countless numbers of \$10 bills in our lifetime, many of us are stumped when it comes to identifying the image on the back. (The answer is the U.S. Treasury). The more important question is why this question leaves so many people stumped. As discussed in the text (Ch. 6) with the related example of the image on the back of a nickel, information must first be encoded in order to be retained. We tend to encode only enough information as we need to know. Since we don’t need to know the images on the backs of coins or paper bills in order to use this currency, this information may never have been encoded in memory in the first place.

Learning and retaining key concepts in text material also requires that information is first encoded. The pedagogical technique of signaling or cueing can help people encode important information. Textbook authors have long used forms of signaling, such as headings and highlighted key terms. This text features two types of signaling, the *running glossary* and *concept signaling*.

Running Glossary Key terms are highlighted in the text and defined in the margins. Students need not interrupt their

reading to thumb through a glossary at the end of the text whenever they encounter an unfamiliar term. A full glossary is presented at the end of the text as well.

Concept Signaling Concept signaling is designed to help students encode and retain key concepts and involves extracting key concepts and highlighting them in the margins of the text. More than **500 key concepts** appear in the margins of the text, numbered consecutively throughout each chapter for easy reference and are correlated to questions in the test bank. Here is but a small sample:



CONCEPT 2.7

An action potential is generated according to the all-or-none principle—it is produced only if the level of excitation is sufficient.



CONCEPT 9.16

A more securely attached infant is likely to be better adjusted in childhood and adolescence than a less securely attached infant.



CONCEPT 16.8

The self-serving bias is widespread in Western cultures but virtually absent in some Eastern cultures.

Elaborating Meaning

Though information must first be encoded to be learned, new learning needs to be strengthened to help ensure long-term retention. We can help strengthen newly learned information by rote memorization, such as by mental rehearsal of definitions of key terms. But deeper processing and more enduring learning requires **elaborative rehearsal** in which we reflect on the meaning of the material and relate it our life experiences. This text provides several pedagogical features designed to foster both deeper processing and elaborative rehearsal.

Concept Charts Each module contains a Concept Chart that summarizes and reviews the key concepts in tabular form. Concept Charts reinforce knowledge of major concepts and help students make connections among concepts.

Application Modules The final module in each chapter is an application module. These modules illustrate how psychologists apply the knowledge they have gained from their

research studies to real-life problems. Students will also see how they can apply the knowledge they gain from reading the chapter to their own lives. See the Features section on page xviii for a chapter-by-chapter listing of the application modules in the text.

“Try This Out” These exercises not only engage students’ interest, but also encourage them to apply the concepts they learn to their own experiences.

Critical Thinking Features The critical thinking features included in this edition (“Think About It,” “Thinking Critically About Psychology,” and “Reality Check”) encourage deeper processing by encouraging reflection and critical evaluation of commonly held beliefs, assumptions, and claims in the light of scientific evidence.

Strengthening Learning Through Repeated Rehearsal Concepts are presented in several forms to reinforce learning—through discussion in the text, in Concept Charts, in marginal inserts, and in schematic diagrams in the text. The use of different contexts for presenting information strengthens new learning.

Evaluating Progress

The text contains built-in study aids to help students review material and evaluate their progress. These tools can help students prepare for exams and gauge whether they are integrating important concepts. Module Reviews test knowledge through “Q & A” recitation of answers to survey questions and through the use of self-scoring quizzes. “Tying It Together” sections appear at the end of each chapter to help students review how the modules are integrated within the chapter structure as a whole.

Additional Features of the Text

Targeting Critical Thinking Skills

Throughout the text, students are encouraged to challenge preconceived assumptions about human behavior and to think critically about claims made in the media in the light of scientific evidence. In addition to the “Think About It” and “Reality Check” critical thinking features, students are presented with critical thinking questions at the end of each chapter in the “Thinking Critically About Psychology” section. Students can sharpen their critical thinking skills by answering challenging questions that require them to analyze problems and evaluate claims in light of the information presented in the chapter. They may then compare their own answers to the critical thinking questions to sample responses provided in the appendix.

Targeting Technology as a Tool for Learning

The learning environment of today is much different from the one I experienced when I sat in my first undergraduate class in psychology. One important change has been the increased availability of computerized resources. The text is supported by enhanced multimedia resources: Online Teaching and Study Centers, and Eduspace.

Targeting Study Skills

The *survey, question, read, recite, review* (SQ3R) study method is a widely used technique for enhancing learning and encouraging students to adopt a more active role in the learning process. This text uses an SQ3R+ study method that incorporates the traditional elements of SQ3R along with an additional feature called “Think About It,” which poses questions at the end of each module that help foster critical thinking skills.

- **Survey and Question** Survey methods are incorporated within both the chapter structure and the modular structure. Each chapter opens with a preview section showing the contents and organization of the chapter (including a numbered list of modules presented in the chapter), and the material covered in the modules is described in the introductory section preceding the first module. In addition, survey questions begin each module to highlight important learning objectives and encourage students to use questions as advance organizers for studying.
- **Read** The writing style has been carefully developed for reading level, content, and style. Students are often addressed directly to engage them in the material and encourage them to examine how the information may relate to their own personal experiences.
- **Recite and Review** Each module ends with a review section that contains a “Recite It” feature that encourages students to recite answers to the survey questions that introduced the module and a “Recall It” feature that has students test their knowledge by completing a brief quiz comprising a variety of types of questions (e.g., multiple-choice, fill-in, matching, short answers). Concept Charts in each module provide further opportunities for students to review the knowledge they have acquired.
- **Think About It** The text goes beyond review and recitation by posing thought-provoking questions in each module review. This feature encourages critical thinking and reflection on how text material relates to one’s personal experiences.

Integrating Diversity

A primary objective of this text is to raise students’ awareness of the importance of issues relating to diversity. Discussion of cultural and gender issues is therefore integrated within the main body of the text rather than relegated to boxed features.

For a reference guide to the integrated coverage of gender and sociocultural issues in the text, see the complete listings available at the **Online Teaching Center**.

Ancillaries

Even the most comprehensive text is incomplete without ancillaries. The ones accompanying *Psychology: Concepts and Applications*, Second Edition, help make it a complete teaching and learning package.

Teacher Ancillaries

Online Instructor's Resource Manual The *Online Instructor's Resource Manual* contains a variety of resources to aid instructors in preparing and presenting text material in a manner that meets their personal preferences and course needs. It begins with a comprehensive preface, which covers preparation, pitfalls, planning, execution, resources, and best practices for both new and seasoned instructors. Each chapter provides a preview, goals, lecture suggestions and activity planner to help organize classes. These assets can be accessed through the *Online Teaching Center* or the *HM ClassPrep CD-ROM*.

Test Bank The *Test Bank* contains over 2,500 items specifically developed for *Psychology: Concepts and Applications*, Second Edition. Multiple-choice questions and essay questions with answers are written both at the chapter and the modular level to provide flexibility to the instructor. All questions are labeled by type (factual, conceptual, applied), learning objective, module reference number, and page reference for easier use in creating exams. **New to this edition, each question is given the concept number that matches the marginal concept in the text to which it corresponds.** The test bank is available on the *HMClassPrep CD-ROM with HM Testing*.

HM ClassPrep CD-ROM with HM Testing *HM ClassPrep CD-ROM with HM Testing* is a CD-ROM that collects in one place, materials that instructors might want to have available electronically. It contains PowerPoint® slides of lecture outlines and art from the textbook, as well as the *Instructor's Resource Manual*, and the computerized test bank (HM Testing). HM Testing offers delivery of test questions in an easy-to-use format and contains 2,500 multiple-choice and essay questions with answers. All questions are labeled by type (factual, conceptual, applied), learning objective, module reference number, page reference, and concept. Additionally, the test bank questions are written both at the chapter level and the module level, to provide instructors with flexible options for customizing their exams.

PowerPoint® Presentations PowerPoint® presentations consist of an extensive set of slides providing lecture sequences that include tables, figures, and charts from the main text.

The slides are available on the *Online Teaching Center* as well as on the *HMClassPrep CD-ROM*.

Classroom Response System (CRS) Classroom Response System (CRS) content, available on the *Online Teaching Center* and on the *HM ClassPrep CD-ROM*, allows instructors to perform “on-the-spot” assessments, deliver quick quizzes, gauge students’ understanding of a particular question or concept, and take their class roster easily. Students receive immediate feedback on how well they understand concepts covered in the text, and where they need to improve. Answer slides provide the correct answer and explanation of why the answer is correct. Houghton Mifflin content is compatible with the GTCO Personal Response System and the eInstruction Classroom Performance System.

HM ClassPresent CD-ROM The *HM ClassPresent CD-ROM* includes over forty newly developed animations spanning twenty-two topic areas. These animations can be inserted into PowerPoint® presentations and projected during a lecture, to illustrate difficult concepts from the text.

Online Teaching Center <http://college.hmco.com/pic/nevid2e> *Online Teaching Center* <http://college.hmco.com/pic/nevid2e> is a comprehensive gallery of online resources, including the complete Instructor's Resource Manual and Media Integration Guide, downloadable PDFs of the overhead transparencies, PowerPoint® lecture outlines, CRS content, and selected art from the textbook.

Eduspace *Eduspace* is a powerful course management system that enables instructors to create all or part of their courses online using the widely recognized tools of Blackboard™ and text-specific content from Nevid, *Psychology: Concepts and Applications*, Second Edition. Instructors and students have access to automatically graded online homework quizzes, *Psych in Film* video clips with quizzes, and tutorials with accompanying pedagogy.

Blackboard/Web CT Cartridges Blackboard/Web CT Cartridges allow instructors to utilize, customize, and administer many of the instructor resources, such as chapter outlines, an activity planner, PowerPoint® slides, handouts, and a wealth of testing material developed specifically for this edition.

Houghton Mifflin Psych in Film® DVD or VHS Houghton Mifflin Psych in Film® DVD or VHS is available to adopters. This supplement contains thirty-five clips from Universal Studios films illustrating key concepts in psychology. Clips from films such as *Schindler's List* and *Snow Falling on Cedars*, are combined with commentary and discussion questions to help bring psychology alive for students and demonstrate its relevance to contemporary life and culture. Teaching tips are also included.

Student Ancillaries

NEW . . . Concept Maps for Psychology Offered for the first time in introductory psychology, *Concept Maps for Psychology* are visual-spatial diagrams that show relational connections among concepts. Concept Maps are visual learning tools that help students recognize linkages among concepts discussed in the chapter. They do not require students to learn any additional material. To make these maps an even more effective learning tool, they are accompanied by thought questions that encourage deeper processing by making the material more personally meaningful. In addition, each map is correlated with a set of multiple-choice questions in the *Eduspace* homework quizzes, which help students assess their knowledge of this material.

Study Guide The Study Guide focuses on providing students with resources aimed at improving study skills and comprehension of the text material. For each chapter, this guide provides a one-page detailed outline, a list of objectives, chapter overview, key terms and concepts, and self-testing exercises and activities. In addition, students are provided an integrated set of media resources to further improve and expand their understanding of the main concepts of the course.

Online Study Center <http://college.hmco.com/pic/nevid2e>
Online Study Center <http://college.hmco.com/pic/nevid2e> is a comprehensive gallery of online resources available to students using *Psychology: Concepts and Applications*, Second Edition. Organized by category and chapter topic, these resources include ACE practice tests, tutorials, Critical Thinking Activities, Concept Charts, and a variety of web links. A passkey is required to access high-value content on the student site. If a passkey is not packaged with this text, please go to <http://college.hmco.com/pic/nevid2e> to obtain one.

Eduspace Eduspace is a customizable, powerful, and interactive platform that allows students to access a variety of online resources that help them study and complete assignments. Students have access to automatically graded online homework quizzes, *Psych in Film* video clips with quizzes, and tutorials with accompanying pedagogy.

Acknowledgments

First, I am indebted to the thousands of psychologists and other scientists whose work has informed the writing of both this edition and the first edition of the text. Thanks to their efforts, the field of psychology has had an enormous impact in broadening our understanding of ourselves and enhancing the quality of our lives. On a more personal level, I owe a debt of gratitude to the many colleagues and publishing professionals who helped shape this manuscript into its present

form. Let me begin by thanking the professional colleagues who reviewed the manuscript and helped me refine it through several stages of development:

Patricia Abbott, D'Youville College
 Denise M. Arehart, University of Colorado, Denver
 James E. Arruda, Mercer University
 David R. Barkmeier, Northeastern University
 Howard Berthold, Lycoming College
 Kathleen Bey, Palm Beach Community College
 Cheryl Bluestone, Queensborough Community College/CUNY
 Reba M. Bowman, Tennessee Temple University
 John W. Bouseman, Hillsborough Community College
 Deborah S. Briehl, Valdosta State University
 Charles Brodie, Georgia Perimeter College
 John P. Broida, University of Southern Maine
 Winfield Brown, Florence Darlington Technical College
 Lawrence R. Burns, Grand Valley State University
 Adam Butler, University of Northern Iowa
 Bernard J. Carducci, Indiana University Southeast
 Elaine Cassel, Marymount University, Lord Fairfax Community College
 Hank Cetula, Adrian College
 Matthew G. Chin, University of Central Florida
 Sharon Church, Highland Community College
 Sandra K. Ciccarelli, Gulf Coast Community College
 Russell D. Clark, University of North Texas
 Wanda Clark, South Plains College
 Susan Clayton, The College of Wooster
 Sandra Cole, New Hampshire Community Technical College
 Larry J. Cology, Owens Community College
 Robert S. Coombs, Southern Adventist University
 Mary Webber Coplen, Hutchinson Community College
 Richard S. Coyle, California State University, Chico
 George J. Demakis, Elmhurst College
 Robin DesJardin, John Tyler Community College
 Victor Duarte, North Idaho College
 Mary H. Dudley, Howard College
 Vera Dunwoody, Chaffey College
 Gianna Durso-Finley, New England Institute of Technology
 Steven I. Dworkin, University of North Carolina, Wilmington
 Rebecca F. Eaton, The University of Alabama, Huntsville
 Tami Eggleston, McKendree College
 Julie Felender, Fullerton College
 Oney D. Fitzpatrick, Lamar University
 William F. Ford, Bucks County Community College
 Lenore Frigo, College of Southern Idaho
 Grace Galliano, Kennesaw State University
 David Griesse, State University of New York, Farmingdale
 Dr. Jackie Griswold, Holyoke Community College

Frank Hager, Allegany College of Maryland
 Lynn Haller, Morehead State University
 Debra Hope, University of Nebraska, Lincoln
 Senqi Hu, Humboldt State University
 Amanda M. Maynard, State University of New York at
 New Paltz
 Les Parrott, Seattle Pacific University
 Janet R. Pascal, DeVry Institute of Technology, Kansas
 City
 Christine M. Paynard, University of Detroit Mercy
 Lillian M. Range, University of Southern Mississippi
 Darren R. Ritzer, George Mason University
 John Sanford, Laramie County Community College
 H. R. Schiffman, Rutgers University
 Pennie S. Seibert, Boise State University
 Benjamin Wallace, Cleveland State University
 Nancy White, Coastal Carolina Community College
 David Yells, Utah Valley State College
 Arthur D. VanDeventer, Thomas Nelson Community
 College
 Jeanette Youngblood, Arkansas State University,
 Newport
 Michael J. Zeller, Minnesota State University
 Otto Zinser, East Tennessee State University

Second, I would like to thank the countless instructors and students who participated in our extensive market research conducted in the early stages of the text's development—including the instructors and students at Valencia Community College and the University of Central Florida, who provided us with great insight into their introductory psychology courses; the instructors who participated in the teleconference sessions and raised many important issues that impacted the day-to-day challenges of this course; and the 700-plus respondents who participated in our national survey on introductory psychology and this text. The overwhelming response we received from these professionals proved to be a rich resource throughout the development of

the text. Many thanks also to the supplements team who helped produce wonderful teaching tools and study tools to accompany the text: Tami Eggleston, McKendree College and Gabie E. Smith, Elon University (*Instructor's Manual*); Rachelle Lipschultz, Anne Arundel Community College (*Study Guide*); Christine M. Vanchella, South Georgia College (*Test Bank*); Billa Reiss, St. John's University (*CRS*); David Strohmetz, Monmouth University (PowerPoint® slides); and Lora Harpster, Salt Lake Community College (Ace quizzes).

Third, I would like a special thanks to Dr. Celia Reaves of Monroe Community College for her helpful suggestions of cartoons that convey psychological concepts in a medium that is both informative and entertaining.

Finally, but certainly not the least of all, I am grateful to the people at Houghton Mifflin who made this book possible, especially Jane Potter, senior sponsoring editor, who began as the marketing manager for the text and then moved to the editorial side; Rita Lombard and Laura Hildebrand, two of the finest developmental editors an author could ever find; senior project editor Carol Newman, who brought the project together and continues to oversee its production, including reining me in whenever necessary; marketing manager Laura McGinn, who uncannily has a sense of how to best serve instructor's needs, and marketing associate, Erin Lane. Many thanks to the supplements team who produced both the print and electronic ancillaries: Lynn Baldridge, discipline product manager; Liz Hogan, editorial associate; Deborah Berkman, editorial assistant; Sean McGann, digital ancillary producer; Jaime Smith, media developer; Walter Holland, production assistant; and Audra Bayette, sr. project manager. I am indebted to photo editor Ann Schroeder, who found even the most difficult-to-find photographs, Susan Zorn, copyeditor, and the many other talented and committed professionals at Houghton Mifflin. I thank you all.

Jeff Nevid
 New York, New York
askauthor@hotmail.com or jnevid@hotmail.com

A Message to Students

How to Use This Textbook

You are about to embark on a journey through the field of psychology. As with any journey, it is helpful to have markers or road signs to help you navigate your course. This text provides a number of convenient markers to help you know where you've been and where you're headed. Take a moment to familiarize yourself with the terrain you're going to encounter in your journey. It centers on the unique organizational framework represented in this text—the concept-based modular format.

Why a concept-based modular approach? There are three key reasons:

1. **To help you organize your study activities.** The modular approach breaks down large chapters into smaller units of instruction. Rather than try to digest an entire chapter at once, you can chew on one module at a time.
2. **To help you master the material.** Each module is a self-contained unit of instruction. At the end of each module you'll find a module review section designed to help you review the material in the module and test your knowledge before moving ahead.
3. **To help you learn key concepts that form the foundations of knowledge in each area of study.** As you make your way through each module, you will be learning a set of basic concepts and how they relate to the theoretical and research foundations of the field of psychology.

How to Use the SQ3R+ Study Method

This text includes a built-in study system called the SQ3R+ study method, a system designed to help students develop more effective study habits that expands upon the SQ3R method developed by psychologist Francis P. Robinson. SQ3R is an acronym that stands for five key features: *survey*, *question*, *read*, *recite*, and *review*. This text adds an additional section—"Think About It." Here's how you can best use the method to master the material:

1. **Survey** Preview each chapter before reading it. Scan the outline and the introductory section to get a sense of how the chapter is organized and what general topics are covered. Familiarizing yourself with the contents of a chapter before reading it can activate related information that you already hold in memory, thereby assisting you in acquiring and retaining new information.

2. **Question** This text incorporates survey questions at the start of each module that highlight key issues addressed in the module. Jot down these questions in a notebook or computer file so that you can answer them as you read along. You may also find it helpful to generate additional questions. Developing good questioning skills allows you to become a more active learner, which can enhance your ability to understand and retain information.
3. **Read** Read the material in the module in order to answer the survey questions and learn additional information.
4. **Recite** When you reach the end of the module, you'll see a Module Review. The review is intended to help you gauge your progress. The Module Review consists of three sections: *Recite It*, *Recall It*, and *Think About It*. The *Recite It* section contains the survey questions that began the module, with sample answers provided. Try reciting the answers to each question to yourself before looking at the sample answers. Then compare your answers with the sample answers provided. Hearing yourself speak the answers may further enhance your retention and later retrieval of the information you have read. That's why it is important for you to recite the answers first before looking at the sample answers provided in the text.
5. **Review** Establish a study schedule for reviewing the material on a regular basis. Test yourself each time you reread the material to further boost long-term retention. Use the *Recall It* section in the Module Review as a means of testing yourself. You may also go online and take self-scoring, ACE practice tests on the companion website.
6. **Think About It** The "Think About It" section in the Module Review poses thought-provoking questions that encourage you to apply your critical thinking skills and to reflect on how the material relates to your own experiences.

I hope you enjoy your journey through psychology. It began for me in my freshman year in college and has continued for me with a sense of wonder and joy ever since.

Please email your comments, questions, or suggestions to me at either askauthor@hotmail.com or jnevid@hotmail.com.

Jeff Nevid
New York, NY

About the Author

Dr. Jeffrey Nevid is Professor of Psychology at St. John's University in New York. He received his doctorate from the State University of New York at Albany and completed a post-doctoral fellowship in evaluation research at Northwestern University.

Dr. Nevid has conducted research in many areas of psychology, including health psychology, clinical and community psychology, social psychology, gender and human sexuality, adolescent development, and textbook pedagogy. His research publications have appeared in such journals as *Health Psychology*, *Journal of Consulting and Clinical Psychology*, *Journal of Community Psychology*, *Journal of Youth and Adolescence*, *Behavior Therapy*, *Psychology and Marketing*, *Professional Psychology*, *Teaching of Psychology*, *Sex Roles*, and *Journal of Social Psychology*, among others. Dr. Nevid also served as Editor-

ial Consultant for the journals *Health Psychology* and *Psychology and Marketing* and as Associate Editor for *Journal of Consulting and Clinical Psychology*. He is actively involved in conducting further research on advances in textbook pedagogy.

Dr. Nevid has coauthored several other college texts, including *Abnormal Psychology in a Changing World*, published by Prentice Hall, *Human Sexuality in a World of Diversity*, published by Allyn and Bacon, and *Psychology and the Challenges of Life: Adjustment in the New Millennium*, published by John Wiley & Sons. He also authored several books on AIDS and sexually transmitted diseases published by Allyn and Bacon, including *A Student's Guide to AIDS and Other Sexually Transmitted Diseases* and *Choices: Sex in the Age of AIDS*. He lives in New York with his wife Judy and his children Michael and Daniella.

Brief Contents

Contents	ix
Features	xvii
Preface	xix
A Message to Students	xxviii
About the Author	xxix

1 Introduction to Psychology and Methods of Research	2
2 Biological Foundations of Behavior	44
3 Sensation and Perception	92
4 Consciousness	136
5 Learning	180
6 Memory	216
7 Thinking, Language, and Intelligence	252
8 Motivation and Emotion	294
9 Child Development	336
10 Adolescence and Adulthood	382
11 Gender and Sexuality	422
12 Personality	460
13 Psychological Disorders	502
14 Methods of Therapy	542
15 Psychology and Health	580
16 Social Psychology	614

Appendix A: Sample Answers to Thinking Critically About Psychology Questions	A-1
Appendix B: Statistics Appendix	A-4
Glossary	A-13
References	A-30
Credits	A-73
Name Index	I-1
Subject Index	I-12

Contents

Features xvii
Preface xix
A Message to Students xxviii
About the Author xxix

1 Introduction to Psychology and Methods of Research 2

MODULE 1.1 Foundations of Modern Psychology 4
Origins of Psychology 4
Contemporary Perspectives in Psychology 9

Module 1.1 Review 17
Recite It 17 Recall It 17 Think About It 17

MODULE 1.2 Psychologists: Who They Are and What They Do 18
Specialty Areas of Psychology 18
Professional Psychology: Becoming More Diverse 22

Module 1.2 Review 24
Recite It 24 Recall It 25 Think About It 25

MODULE 1.3 Research Methods in Psychology 25
The Objectives of Science: To Describe, Explain, Predict, and Control 25
The Scientific Method: How We Know What We Know 28
Research Methods: How We Learn What We Know 29
Ethical Principles in Psychological Research 34

■ **EXPLORING PSYCHOLOGY:** Anatomy of a Research Study: The Shooter Bias 36
Module 1.3 Review 39
Recite It 39 Recall It 39 Think About It 39

MODULE 1.4 Application: Becoming a Critical Thinker 40
Features of Critical Thinking 40
Thinking Critically About Online Information 41

2 Biological Foundations of Behavior 44

MODULE 2.1 Neurons: The Body's Wiring 46
The Structure of the Neuron 46
How Neurons Communicate 48

Neurotransmitters: The Nervous System's Chemical Messengers 50

Module 2.1 Review 53
Recite It 53 Recall It 53 Think About It 53

MODULE 2.2 The Nervous System: Your Body's Information Superhighway 54

The Central Nervous System: Your Body's Master Control Unit 54
The Peripheral Nervous System: Your Body's Link to the Outside World 56

Module 2.2 Review 58
Recite It 58 Recall It 59 Think About It 59

MODULE 2.3 The Brain: Your Crowning Glory 59

The Hindbrain 59
The Midbrain 60
The Forebrain 61
The Cerebral Cortex: The Brain's Thinking, Calculating, Organizing, and Creative Center 62

Module 2.3 Review 65
Recite It 65 Recall It 66 Think About It 66

MODULE 2.4 Methods of Studying the Brain 66

Recording and Imaging Techniques 66
Experimental Methods 69
Module 2.4 Review 70
Recite It 70 Recall It 70 Think About It 70

MODULE 2.5 The Divided Brain: Specialization of Function 71

The Brain at Work: Lateralization and Integration 71
Handedness: Why Are People Not More Even-Handed? 72
Brain Plasticity 73
Brain Damage and Psychological Functioning 74

■ **EXPLORING PSYCHOLOGY:** Research on Split-Brain Patients: Does the Left Hand Know What the Right Hand Is Doing? 76

Module 2.5 Review 78
Recite It 78 Recall It 78 Think About It 78

MODULE 2.6 The Endocrine System: The Body's Other Communication System 79

Endocrine Glands: The Body's Pumping Stations 79
Hormones and Behavior 81

Module 2.6 Review 82

Recite It 82 Recall It 82 Think About It 82

MODULE 2.7 Genes and Behavior: A Case of Nature and Nurture 83

Genetic Influences on Behavior 83

Kinship Studies: Untangling the Roles of Heredity and Environment 84

Module 2.7 Review 87

Recite It 87 Recall It 87 Think About It 88

MODULE 2.8 Application: Looking Under the Hood: Scanning the Human Brain 88

Memory and Cognitive Research 88

Personality Research 88

Personnel Selection 89

Diagnosing Psychological Disorders 89

3 Sensation and Perception 92

MODULE 3.1 Sensing Our World: Basic Concepts of Sensation 94

Absolute and Difference Thresholds: Is Something There? Is Something *Else* There? 94

Signal Detection: More Than a Matter of Energy 95

Sensory Adaptation: Turning the Volume Down 96

Module 3.1 Review 97

Recite It 97 Recall It 97 Think About It 97

MODULE 3.2 Vision: Seeing the Light 97

Light: The Energy of Vision 98

The Eye: The Visionary Sensory Organ 98

Feature Detectors: Getting Down to Basics 101

Color Vision: Sensing a Colorful World 101

Module 3.2 Review 104

Recite It 104 Recall It 105 Think About It 105

MODULE 3.3 Hearing: The Music of Sound 105

Sound: Sensing Waves of Vibrations 105

The Ear: A Sound Machine 106

Perception of Pitch: Perceiving the Highs and Lows 108

Are You Protecting Your Hearing? 108

Module 3.3 Review 110

Recite It 110 Recall It 110 Think About It 110

MODULE 3.4 Our Other Senses: Chemical, Skin, and Body Senses 111

Olfaction: What Your Nose Knows 111

Taste: The Flavorful Sense 113

The Skin Senses: Your Largest Sensory Organ 114

The Kinesthetic and Vestibular Senses: Of Grace and Balance 116

Module 3.4 Review 117

Recite It 117 Recall It 118 Think About It 118

MODULE 3.5 Perceiving Our World: Principles of Perception 118

Attention: Did You Notice That? 119

Perceptual Set: Seeing What You Expect to See 119

Modes of Visual Processing: Bottom-Up vs. Top-Down 120

Gestalt Principles of Perceptual Organization 120

Perceptual Constancy 122

Cues to Depth Perception 123

Motion Perception 125

Visual Illusions: Do Your Eyes Deceive You? 125

Cultural Differences in Perceiving Visual Illusions 127

■ **EXPLORING PSYCHOLOGY:** Controversies in Perception: Subliminal Perception and Extrasensory Perception 130

Module 3.5 Review 131

Recite It 131 Recall It 132 Think About It 132

MODULE 3.6 Application: The Psychology of Pain Management 132

Distraction 133

Creating a Bottleneck at the "Gate" 133

Doing Something Enjoyable 133

Changing Thoughts and Attitudes 133

Obtaining Accurate Information 134

Meditation and Biofeedback 134

4 Consciousness 136

MODULE 4.1 States of Consciousness 138

Focused Awareness 138

Drifting Consciousness 139

Divided Consciousness 139

Unconsciousness 140

■ **EXPLORING PSYCHOLOGY:** Driving While Distracted: The Risks of Divided Consciousness 141

Module 4.1 Review 142

Recite It 142 Recall It 142 Think About It 142

MODULE 4.2 Sleeping and Dreaming 143

Sleep and Wakefulness: A Circadian Rhythm 143

The Stages of Sleep 144

Why Do We Sleep? 145