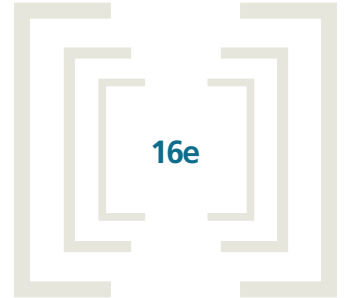Introduction to
PSYCHOLOGY 16E
GATEWAYS TO MIND & BEHAVIOR

COON / MITTERER / MARTINI

Introduction to
Psychology:
Gateways to Mind and Behavior
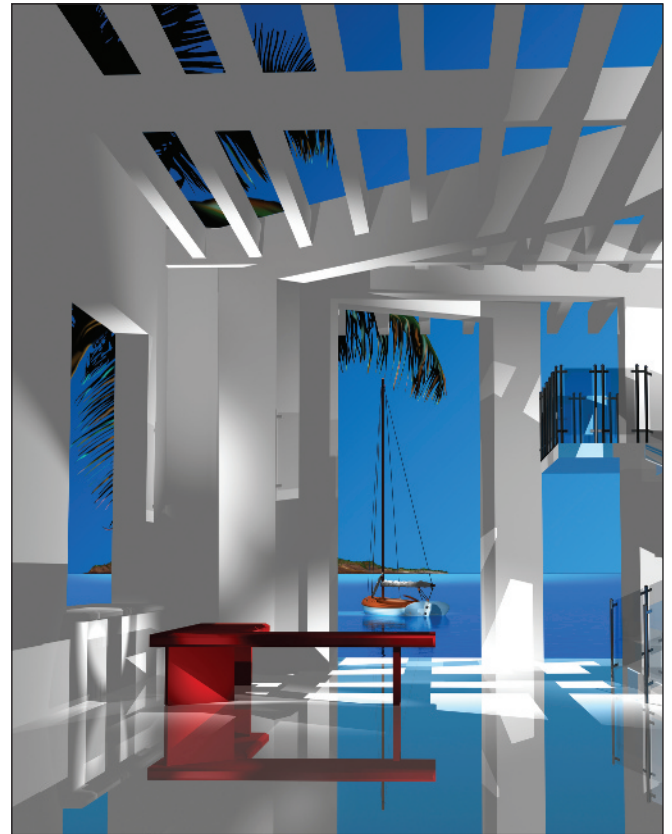
16e

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Dedication

To Sevren

—DC

To Rue Elizabeth Pante

—JM

To David, Callum, and Ronan

—TM

About the Authors

Courtesy of Dennis Coon

Courtesy of John Mitterer

Courtesy of Callum Williams

Dennis Coon is a publishing phenomenon and one of the best-selling authors in the field of psychology. His innovative instructional methods and student-focused style make his works perennial favorites among instructors and students alike. To date, more than two million students have learned psychology with a Coon text as their guide. Dr. Coon graduated with a B.A. in psychology from the University of California, Riverside, and earned his PhD in social psychology from the University of Arizona. He is also coauthor, with John Mitterer and Tanya Martini, of *Psychology: Modules for Active Learning, 15th Edition.*

John Mitterer was awarded his PhD in cognitive psychology from McMaster University. He has taught psychology at Brock University to more than 30,000 introductory psychology students. He is an award-winning teacher whose several teaching awards include a National 3M Teaching Fellowship, the Canadian Psychological Association Award for Distinguished Contributions to Education and Training in Psychology, and the Brock University Don Ursino Award for Excellence in the Teaching of Large Classes. He has created textbooks and support materials for both students and instructors, and he has published and lectured on undergraduate instruction throughout Canada and the United States.

Tanya Martini obtained her PhD in developmental psychology from the University of Toronto. In addition to introductory psychology, she also teaches research methods, human learning, and courses aimed at facilitating students' understanding of career-related skills. She has received both the Brock University Distinguished Teaching Award, and the Chancellor's Chair for Teaching Excellence. Dr. Martini's research examines how undergraduates think about the skills that are being fostered during university experiences, both inside and outside the classroom. She's also interested in how we can improve students' understanding of career-related skills so that they are in a better position to leverage them when they apply for jobs or post-graduate programs. In addition to her position at the university, Dr. Martini currently sits on the advisory board for the Socio-Emotional Skills Initiative that has been undertaken by the Conference Board of Canada.

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To You, the Student—An Invitation to Learn Psychology with Us

Greetings from your authors! We look forward to being your guides as you explore the exciting field of psychology and our ever-evolving understanding of human behavior. In a very real sense, we wrote this book about you, for you, and to you. We sincerely hope you will find, as we do, that what you learn is at once familiar, surprising, and challenging.

Reading *Introduction to Psychology: Gateways to Mind and Behavior*

We have done all we could to make *Gateways to Mind and Behavior* enjoyable to read and relevant to your everyday life. Each chapter takes you on a journey into a different realm of psychology, where you will explore areas such as personality, abnormal behavior, memory, consciousness, and human development. Each one is complex and fascinating in its own right, with many pathways, landmarks, and interesting detours for you to discover. Like any journey of discovery, your exploration of psychology will help you better understand yourself, others, and the world around you. It's definitely a trip worth taking.

Studying Effectively with *Introduction to Psychology: Gateways to Mind and Behavior*

As would be the case on any interesting trip, studying psychology will be most rewarding if you adopt a reflective attitude. Psychologists believe that answers to important questions come through engaged and careful thought, observation, and inquiry. Put another way, they often ask "How can we step outside ourselves to look objectively at how we live, think, feel, and act?" As simple as that approach may seem, this type of careful consideration takes practice to develop. *Gateways to Mind and Behavior*, then, is your gateway, or passport, to an adventure in active, reflective learning, not just passive reading.

We offer at least three different ways to help you develop this type of reflective approach to your studies. First, to help you get

off to a good start, we strongly encourage you to read our short "manual," *Psychology and Your Skill Set: Reflective Studying*, which precedes Chapter 1. In it, we describe what you can learn by taking this course, including the skills you'll develop that can be helpful in both your personal and professional life. In *Reflective Studying*, you'll also read about a variety of well-established study skills that you can use to get the most out of your psychology course, and your other courses as well.

Second, *MindTap® Psychology* for this text is a digital tool that can help you to learn the material in this book on your own terms. Using *MindTap*, you can read or listen to the electronic copy of the textbook, highlight key ideas, add notes, and create custom flashcards. MindTap also allows you to reinforce your learning with assignments that revisit topics you have learned about throughout each chapter. You can track your scores and stay motivated while pursuing your goals. Moreover, you can take advantage of the *MindTap Mobile App* to learn where and when it's convenient for you.

Third and finally, a set of *guided notes* is available for each chapter. Developed using the well-established Cornell method of note-taking, we have created them to help you distill the most important aspects of each chapter and develop good study aids to assist you in preparing for tests. Available as MS Word files, you can use the guided notes to help organize your thinking about the material, focus on key ideas and concepts, and practice summarizing important points in your own words.

To You, the Instructor—An Invitation to Teach Psychology with Us

Thank you for choosing *Introduction to Psychology: Gateways to Mind and Behavior* for your students and for your course. Marcel Proust wrote, "The real voyage of discovery consists not in seeing new landscapes but in having new eyes." It is in this spirit that we have written this book—our goal is to promote not just an interest in human behavior but an appreciation for the perspective of the psychological scientist as well.

As the authors of this textbook, we have together accumulated over 80 years of classroom experience, teaching tens of thousands of college and university students. Although we have found most students to be generally well intentioned, our modern world

certainly does immerse them in their work, careers, families, intimate relationships, and popular culture. As we compete for ever-more-limited student attention, we need to motivate our students to read and educate them about how to learn effectively—learning, after all, is a life-long endeavor (Matthew & Sternberg, 2009; Paternoster & Pogarsky, 2009).

We have explicitly designed and written the sixteenth edition of *Gateways to Mind and Behavior* to foster this type of deeper student engagement with the field of psychology. We believe that this will result in better memory for what has been read and studied, and a deeper understanding of how to become more reflective learners and thinkers. To help you and your students reach these goals, we have designed this edition around two key goals: ***integrating support to address instructor learning objectives*** and ***integrating support for active student learning***. In the sections below, we discuss each of these in more detail.

Integrating Support to Address Instructor Learning Objectives

This edition of *Gateways* has a new structure; one that we believe will make it easier for instructors to customize their use of the book to address their specific learning outcomes, regardless of whether they are driven by department/state standards or by personal preference. Specifically, each chapter is now organized around approximately five sections that represent the "big ideas and issues" in that particular area of psychology. Each of these self-contained sections begins with a set of learning outcomes that are compatible with Bloom's Taxonomy and ends with a short *Reflective Practice* box that allows students to receive some immediate formative feedback regarding their understanding of the key concepts and ideas from that section. We believe that structuring the book around a smaller number of key topics like this will allow instructors the flexibility to customize their course by having students read only those sections that are central to their unique learning objectives.

In addition, we have worked hard to bring the sixteenth edition of *Gateways* in line with the new recommendations put forth by the APA's Introductory Psychology Initiative (APA-IPI), while still maintaining the past edition's compatibility with the broader APA Guidelines for the Undergraduate Major. There are three main themes that appear throughout the textbook that are relevant to the APA-IPI. The first is related to *Human Diversity*, and these sections include material that ranges from the way that culture shapes moral reasoning to the way that poverty shaped the impact felt by families during COVID-19. Our discussions of human diversity include race, ethnicity, culture, SES, gender, sexual orientation, and age. Too often, such differences needlessly divide people into opposing groups. Our aim throughout this book is to discourage stereotyping, prejudice, discrimination, and intolerance. To that end, all pronouns and examples involving females and males are equally divided by gender. In artwork, photographs, and examples, we have also set out to portray the rich diversity of humanity.

The second APA-IPI theme that appears throughout the book is called *Studying the Science*. These sections model good critical thinking on topics such as adolescent mental health and the replication crisis, but they're also intended to emphasize how thinking in psychology has evolved with new research, and to highlight areas in which we're still searching for answers (e.g., How should we best conceptualize intelligence? How can we best manage implicit bias in the workplace?).

Finally, you'll see APA-IPI sections throughout the book related to *Psychology in Everyday Life*, which emphasize how psychological science can be applied to the world around us, including topics such as using laptops to take notes in class, intersex athletes competing at the Olympics, and celebrity endorsements to promote marketing campaigns. Table P.1 underscores the text's compatibility with the APA-IPI and Table P.2 shows how it can help you and your students meet the American Psychological Association's (2013) Guidelines for the Undergraduate Major.

In addition to our new format and compliance with APA initiatives, this edition of *Gateways* has a newly revised and expanded Instructor Companion Site that includes an *Instructor's Resource Manual,* which provides a wealth of teaching tips and classroom resources; *Cengage Learning Testing Powered by Cognero* featuring questions correlated to learning objectives, Bloom's taxonomy level, and difficulty; and *PowerPoint slides* providing concept coverage with dynamic animations, photographs, and video. Each of these resources has been designed with your needs in mind and will support you in successfully addressing the learning objectives you've created for your course.

Integrating Support for Active Student Learning

We have built in a number of features into the new edition of *Gateways* that we believe will assist students in honing their active learning skills. We'd like to draw your attention to four of them: *assisting with active reading, scaffolding student note-taking, promoting empirically-supported learning strategies*, and *emphasizing practical applications*.

Assisting with Active Reading

We have incorporated a number of features into the text itself that are intended to help students to learn actively as they are reading. These features include:

▲ TABLE P.1 APA-IPI Objectives Addressed by Reading *Introduction to Psychology: Gateways to Mind and Behavior,* 16e	
Psychology Content: Identify basic concepts and research findings	
1.1. Define and explain basic psychological concepts.	All chapters, with support provided by *Glossary* and *Guided Notes*
1.2. Interpret research findings related to psychological concepts.	Sections 1.5–1.7 (*Research Methods*) Section 1.8 (*Psychology and Your Skill Set: Information Literacy*) *Studying the Science* sections
1.3. Apply psychological principles to personal growth and other aspects of everyday life.	*Psychology and Your Skill Set* sections *Psychology and Everyday Life* sections
Scientific Thinking: Solve problems using psychology methods	
2.1. Draw logical and objective conclusions about behavior and mental processes from empirical evidence.	Sections 1.5–1.7 (*Research Methods*) Section 1.8 (*Psychology and Your Skill Set: Information Literacy*) *Studying the Science* sections
2.2. Describe the advantages and limitations of various research strategies.	Sections 1.5–1.7 (*Research Methods*) *Studying the Science* sections
2.3. Design, conduct, or evaluate psychological research.	Sections 1.5–1.7 (*Research Methods*) *Studying the Science* sections
2.4. Evaluate how psychological science can be used to counter unsubstantiated statements, opinions, or beliefs.	Sections 1.5–1.7 (*Research Methods*) Section 1.8 (*Psychology and Your Skill Set: Information Literacy*)
Key Themes: Provide examples of psychology's integrative themes	
3.A. Psychological science relies on empirical evidence and adapts as new data develop.	All chapters, with a specific emphasis in *Studying the Science* sections
3.B. Psychology explains general principles that govern behavior while recognizing individual differences.	All chapters, with specific emphasis in *Human Diversity* sections
3.C. Psychological, biological, social, and cultural factors influence mental processes and behavior.	All chapters, with specific emphasis on Section 1.4 (*Biopsychosocial Model*) Section 17.4 (*Psychology and Your Skill Set: Diversity and Inclusion*) *Human Diversity* sections
3.D. Our perceptions filter our experiences of the world through an imperfect personal lens.	Sections 4.5–4.6 (*Attention and Perception*) Section 5.5 (*Psychology and Your Skill Set: Metacognition*) *Human Diversity* sections
3.E. Applying psychological principles can change our lives and communities in positive ways.	Section 18.3 (*Community Psychology*) Section 11.5 (*Civic Engagement*) *Psychology and Your Skill Set* sections *Psychology and Everyday Life* sections
3.F. Ethical principles guide psychology research and practice.	Sections 1.5–1.7 (*Research Methods*) Section 3.5 (*Ethical Behavior*)
3.G. Psychologists strive to promote respect for human diversity in its many forms.	All chapters, with specific emphasis in Section 17.4 (*Psychology and Your Skill Set: Diversity and Inclusion*) and *Human Diversity* sections

New Bloom's-oriented learning outcomes act as advance organizers to help guide student reading

Research suggests that, when included at the beginning of each chapter, learning outcomes help students build cognitive maps of upcoming topics and guide reading in productive ways (Ausubel, 1978; Gurlitt et al., 2012). The sections in each chapter of *Gateways* begin with a number of clearly-defined learning outcomes to prime student interest and focus their attention on the key ideas that they will encounter.

Active questioning is emphasized and modeled

How can questioning be built into a textbook? This new edition of *Gateways* continues its long tradition of using italicized *Dialogue Questions*, such as the previous sentence. They are typically the sorts of questions that students might find themselves thinking as

they begin reading a section of text. As such, they model a dialogue in which the questions and the reactions of students are anticipated. They also clarify difficult points in a lively give-and-take between questions and responses.

Formative feedback is provided to students as they read

Within chapters, each main section concludes with a *Reflective Practice* box that allows students to test their recall and further develop their understanding of the topics presented. Each *Reflective Practice* box begins with a series of short, noncomprehensive quiz questions to help students actively process information and assess their progress. These questions, which are not as difficult as in-class tests, are meant to offer a sample of what students could be asked about various topics. Students who miss any items are

▲ TABLE P.2 APA Skills Guidelines 2.0 Addressed by Reading
Introduction to Psychology: Gateways to Mind and Behavior, **16e**

Chapter	Topic of Chapter	Skills in Action Topic	Chapter Addresses Material from APA Guidelines 2.0
Introduction	How to Study	Reflective Studying	4.1, 5.2, 5.3, 5.5
1	The Foundations of Psychological Science	Information Literacy	1.1, 1.2, 1.3, 2.1, 2.2, 2.3, 2.4, 2.5, 3.1
2	Brain and Behavior	Self-Regulation	1.1, 1.2, 5.2
3	Human Development	Ethical Behavior	1.1, 1.2, 2.5, 3.2, 5.1
4	Sensation, Attention, and Perception	Communication	1.1, 1.2, 4.1, 4.2, 4.3, 5.4
5	States of Consciousness	Metacognition	1.1, 1.2, 5.2, 5.3
6	Conditioning and Learning	Behavioral Self-Management	1.1, 1.2, 5.2
7	Memory	Giving Memorable Presentations	1.1, 1.2, 4.2, 5.3
8	Cognition, Language, and Creativity	Creativity and Innovation	1.1, 1.2, 1.3, 2.3, 2.5
9	Intelligence	Emotional Intelligence	1.1, 1.2, 3.2, 3.3, 4.3, 5.1, 5.4
10	Motivation and Emotion	Positivity and Optimism	1.1, 1.2, 1.3, 2.5, 4.3, 5.4
11	Sex, Gender, and Sexuality	Civic Engagement	1.3, 3.2, 3.3, 4.3, 5.2, 5.3, 5.4
12	Personality and Individual Differences	Leadership	1.1, 1.2, 2.1, 3.3, 5.1, 5.2, 5.4
13	Health Psychology	Stress Management	1.1, 1.2, 1.3, 3.3, 5.1
14	Psychological Disorders	Perseverance	5.2, 5.3, 5.5
15	Therapies	Managing Mental Health Issues	1.1, 1.2, 1.3, 3.3
16	Social Thinking and Social Influence	Teamwork	1.1, 1.2, 3.2, 3.3, 4.3, 5.1, 5.4
17	Prosocial and Antisocial Behavior	Diversity and Inclusion	1.1, 1.2, 1.3, 2.5, 3.2, 3.3, 4.3, 5.1, 5.4
18	Applied Psychology	Career Preparation	1.1, 1.2, 1.3, 2.3, 5.1, 5.5
Appendix	Statistics	Statistical Literacy	1.1, 2.1, 2.2, 2.4, 4.1

encouraged to backtrack and clarify their understanding before reading further.

Reflective Practice boxes also include *Think Critically* questions. These stimulating questions challenge students to think critically and analytically about psychology. Each is followed by a brief answer with which students can compare their own thoughts. Many of these answers are based on research and are informative in their own right. Finally, *Reflective Practice* boxes conclude with *Self-Reflect* questions that encourage students to connect new concepts with personal experiences and prior knowledge.

Built-in reading aids assist students in mastering key concepts and ideas

These reading aids include:

- Boldface terms, robust illustrations, and summaries of information relevant to the learning outcomes at the end of each chapter.
- *Bridges*, which are clearly marked in-text links to other material relevant to the reading at hand. For example, a student

reading about the Freudian theory of dreams will encounter a bridge to a relevant discussion of psychoanalysis in a later chapter.

- *Placeholders*—different colored text and small geometric shapes—are used to draw attention to figure and table references in the text and make it easier for students to return to the section that they were reading after they have paused to view a table or figure.
- The *glossary function* has been made as powerful as possible. The *Main Glossary*, at the end of the book, is integrated with the *Subject Index*, making it easy to link important definitions to where they are discussed in the text. All glossary items are bold and defined in-text when the term is first encountered. In addition, the parallel *Running Glossary* defines key terms in the margins of the relevant pages, making it easy for students to find, study, and review important terms.

Scaffolding Student Note-Taking

We've noticed that many students struggle to take a good set of notes based on their reading of college texts. To address this issue, this new edition of *Gateways* comes with guided notes that are designed to scaffold students' ability to address the learning outcomes by extracting the most important information from each chapter. The notes, which are available as MS Word files, were developed using the well-established Cornell method of note-taking.

Each set of notes begins with a single-page multi-level summary of the chapter called *The Big Picture*, which gives students a bird's eye view of the chapter as a whole and emphasizes the structure that's created with headers and subheaders. The guided notes themselves focus students' attention on information relevant to the learning outcomes and press them to generate their own examples and summarize important ideas in their own words. Concept maps that are included with the notes are designed to assist students in recognizing the relationships between ideas presented in each section so that they can make important connections.

Promoting Empirically-Supported Learning Strategies

One of our goals with *Gateways* was to ensure that students begin thinking about skills during your course. Given its far-reaching implications, one that we spend considerable time on relates to effective learning. In the text itself, effective learning is promoted in a few places. First, the introduction (*Psychology and Your Skill Set: Reflective Studying*, which precedes Chapter 1) outlines some of the key features of reflective cognition and underscores its links to deeper understanding and memory. It also introduces students to specific empirically-supported strategies for a variety of different assessments, including multiple choice and short/long answer question formats.

In addition, *MindTap® Psychology* for this text provides a digital learning solution that powers students from memorization to mastery. MindTap gives you complete ownership of your content and learning experience. You have the freedom to customize the interactive syllabi, emphasize the most important topics, and add your own material or notes in the eBook. Assign Mastery Training to encourage students to begin studying early, and reinforce all that they have learned from the eBook with virtual labs, auto-graded writing assignments, and more. Whatever your learning goals may be, MindTap allows you to provide engaging content, and to challenge every single student while building his or her confidence.

Emphasizing Practical Applications

To further encourage students' reading, we have emphasized the many ways that psychology relates to practical problems in daily life. As mentioned earlier, this edition of the texts includes new *Psychology in Everyday Life* sections that tackle the role of psychology in addressing issues relevant to the world around us. Another major feature of this book is the *Psychology and Your Skill Set* sections that are found at the end of each chapter. These high-interest discussions bridge the gap between theory and practical applications by exploring how psychology has contributed to

our understanding of the skills that are valuable at work and in our relationships.

We believe that it is fair for students to ask, "Does this mean anything to me? Can I use it? Why should I learn it if I can't?" These two unique sections found throughout the text allow them to see the benefits of adopting new ideas from this text, and they breathe life into psychology's concepts.

Introduction to Psychology: Gateways to Mind and Behavior—What's New in the 16th Edition?

On the content side, the 16th edition of *Introduction to Psychology: Gateways to Mind and Behavior* has been extensively updated and features some of the most recent, reliable, and interesting findings from psychological science, plus fully updated statistics. The following sections provide some highlights regarding the new topics and features that appear in this edition.

Chapter 1: The Foundations of Psychological Science

- The new organization of this chapter includes the following major sections:

1.1 Commonsense Psychology	1.5 Core Features of Psychological Science
1.2 What Psychologists Do	1.6 Experimental Research
1.3 The History of Psychological Science	1.7 Nonexperimental Research
1.4 Contemporary Psychological Science and the Biopsychosocial Model	1.8 Psychology and Your Skill Set: Information Literacy

- The structure of Section 1.2 (*What Psychologists Do*) has been simplified to address two major themes: conducting psychological research and "helping people," or clinical work.
- Section 1.3 (*History of Psychological Science*) has been reorganized such that contemporary approaches are more clearly contrasted against historical ones.
- Section 1.5 (*Core Features of Psychological Science*) now includes a designated section on the types of data collected by psychological scientists (i.e., self-report/surveys, observational data, physiological data). New material in this section also introduces qualitative methods of inquiry. In addition, a new *Studying the Science* segment explains the importance of replicating scientific findings and the various reasons that can account for replication failures.
- Section 1.7 (*Nonexperimental Research*) now brings together all of the material related to nonexperimental methods (i.e., quasi-experiments, correlational research, cases studies).
- Section 1.8 (*Information Literacy*) includes new material related to the pressing need to check sources at a time when it is so easy to create misleading or biased web-based content, as

well as quick and practical suggestions related to lateral reading, which is the primary method employed by professional fact checkers.

Chapter 2: Brain and Behavior

- The new organization of this chapter includes the following major sections:

2.1 The Nervous System	2.4 The Subcortex and Endocrine System
2.2 Brain Research	2.5 Psychology and Your Skill Set: Self-regulation
2.3 The Cerebral Cortex	

- Section 2.3 (*The Cerebral Cortex*) contains more recent research concerning mirror neurons that questions their role in autism.
- Section 2.5 (*Self-Regulation*) includes a new *Studying the Science* segment that addresses recent efforts to replicate Mischel's famous "marshmallow test," and how poverty can impact the results of such self-regulation tasks.

Chapter 3: Human Development

- The new organization of this chapter includes the following major sections:

3.1 The Forces That Shape Development: Nature and Nurture	3.4 Language, Cognitive, and Moral Development
3.2 Physical and Perceptual Development	3.5 Psychology and Your Skill Set: Ethical Behavior
3.3 Emotional and Social Development	

- Section 3.1 (*Nature and Nurture*) now contains a new segment about epigenetics that describes, in very simplified terms, how epigenetic factors work to alter gene expression and their impact on development across the lifespan.
- Sections 3.2, 3.3, and 3.4 have been reorganized to adopt a chronological approach within each of these "topical areas" of development. Specifically, each topical area begins with a discussion of development in infancy and childhood, followed by a discussion of development in adolescence and adulthood.
- Section 3.2 (*Physical and Perceptual Development*) has new material detailing perceptual development beyond the visual system to include lifespan changes in hearing, taste, and smell.
- Section 3.3 (*Emotional and Social Development*) now includes recent research related to adolescent mental health concerns, as well as information about the positivity effect that has been repeatedly observed in research related to adults' emotional lives. This section also includes new material related to emerging adulthood, and introduces readers to established literature demonstrating that shrinking social networks in older adulthood is less about disengagement and more about purposefully prioritizing relationships that are the most rewarding.
- Section 3.4 (*Language, Cognitive, and Moral Development*) has been streamlined and reorganized to make way for an expanded discussion of theory of mind research, as well as more recent cognitive developmental research related to executive functions, academic learning, and children's memory.

- Section 3.5 (*Ethical Behavior*) includes a new *Human Diversity* section that outlines alternative bases for making moral decisions that go beyond the traditional focus on justice and care, outlining how they are important, in particular, in cultures outside of the West.

Chapter 4: Sensation, Attention, and Perception

- The new organization of this chapter includes the following major sections:

4.1 Sensation	4.5 Attention
4.2 Vision	4.6 Perception
4.3 Hearing	4.7 Psychology and Your Skill Set: Communication
4.4 Chemical and Somesthetic Senses	

- Section 4.1 (*Sensation*) has been rewritten to further clarify the process of transduction, and the section on sensory selection has been reorganized to make clear the four specific ways in which selection can take place.
- Sections 4.2 to 4.4, which relate to the basic sensory modalities, have all been reorganized to focus on how transduction occurs in that particular modality. A new *Psychology in Everyday Life* segment describes the phenomenon of motion sickness in terms of new material on multimodal integration.
- Section 4.5 (*Attention*) provides expanded coverage on processes related to attention, including new material related to multitasking. The importance of goals in guiding attention is also highlighted with new research that has been connected to inattentional blindness. This section concludes with a newly-written *Psychology in Everyday Life* section that addresses recent research on mind-wandering.
- Section 4.6 (*Perception*) has been reorganized to emphasize how transduction and experience contribute to both similarities and differences in human perception. In doing so, we draw in new references to popular culture (#thedress; Yanni vs. Laurel). A new *Human Diversity* segment discusses the other-race effect observed in face perception studies, and a new *Psychology in Everyday Life* segment discusses research related to the use of virtual reality in clinical contexts.

Chapter 5: States of Consciousness

- The new organization of this chapter includes the following sections:

5.1 States of Consciousness	5.4 Drug-Altered Consciousness
5.2 Hypnosis and Meditation	5.5 Psychology and Your Skill Set: Metacognition
5.3 Sleep	

- Section 5.3 (*Sleep*) includes new research on sleep disorders.
- Section 5.4 (*Drug-Altered Consciousness*) has updated information on state laws related to cannabis, new research on caffeine, and new statistics related to fentanyl overdoses.

Chapter 6: Conditioning and Learning

- The new organization of this chapter includes the following major sections:

6.1 The Basics of Learning	6.4 Observational Learning
6.2 Classical Conditioning	6.5 Cognitive Learning
6.3 Operant Conditioning	6.6 Psychology and Your Skill Set: Behavioral Self-Management

- Material related to conditioning has been streamlined to allow for a significantly expanded discussion of observational and cognitive learning.
- Section 6.4 (*Observational Learning*) includes new material that connects observational learning to workplace behavior (e.g., how people learn the type of inappropriate behavior that was the focus of the #metoo movement) and media coverage of real-life tragedies such as mass shootings (i.e., copycat crimes). Material related to observational learning and media-based violence has been updated, and a new *Studying the Science* segment unpacks why researchers sometimes come up with conflicting findings regarding the connection between media violence and aggression.
- Section 6.5 (*Cognitive Learning*) is now more clearly aimed at students interested in pursuing careers in education, as well helping students to better understand their own learning. Newly-written material covers the distinction between school and educational psychologists, Bloom's Taxonomy, and factors that influence cognitive learning (e.g., learner characteristics and learning strategies). Two *Studying the Science* sections look carefully at mindset and learning styles, areas in which newer findings have not always aligned with original research. This section concludes with a new segment on educational technology, including research that specifically examines the costs and benefits of using laptops in the classroom for note-taking.

Chapter 7: Memory

- The new organization of this chapter includes the following major sections:

7.1 A General Model of Memory	7.5 Accuracy of Long-Term Memory
7.2 Sensory & Short-Term (Working) Memory	7.6 Improving Your Memory
7.3 Long-Term Memory	7.7 Psychology and Your Skill Set: Giving Memorable Presentations
7.4 Remembering and Forgetting	

- This chapter now more clearly delineates memory systems (that is, types of memory) from memory processes, and emphasizes the general process of encoding as the means of moving information from working memory into long-term memory.
- Section 7.3 (*Long-Term Memory*) has been substantially reworked, elaborating on the idea that LTM is organized primarily based on meaning. This section also addresses the importance of LTM (i.e., the problem with adopting a view that people don't need to remember because they can just

"Google it"), drawing on findings demonstrating that extensive prior knowledge in LTM helps with both quickly understanding new information and with remembering it later.
- Section 7.4 (*Remembering and Forgetting*) has been reorganized to focus on factors that do promote encoding and those that (surprisingly) do not, backed up by newer research that builds on the classic "penny" study. Updated views on forgetting (including its benefits for learning and the distinction between active and passive forgetting) and the reconstructive nature of remembering have also been added to this section.

Chapter 8: Cognition, Language, and Creativity

- The new organization of this chapter includes the following major sections:

8.1 The Basic Units of Cognition	8.4 Creative Thinking
8.2 Problem Solving	8.5 Psychology and Your Skill Set: Creativity and Innovation
8.3 Intuition, Decision-Making, and Cognitive Biases	

- Section 8.1 (*The Basic Units of Cognition*) includes updated information about bilingualism.
- Section 8.2 (*Problem Solving*) includes an expanded discussion of the different problem-solving strategies employed by experts and novices, drawing students' attention to the link between problem solving and memory.
- Section 8.3 (*Intuition, Decision Making, and Cognitive Biases*) now introduces readers to the role of psychology in the emerging field of behavioral economics. It also has a new section that describes the availability heuristic, as well as updated information on choice overload (including the conditions under which it does *not* occur).

Chapter 9: Intelligence

- The new organization of this chapter includes the following major sections:

9.1 Defining Human Intelligence	9.4 Genetic and Environmental Contributions to Intelligence
9.2 Measuring Intelligence	9.5 Thinking Ethically About Intelligence
9.3 Intellectual Giftedness and Disability	9.6 Psychology and Your Skill Set: Emotional Intelligence

- Section 9.1 (*Defining Human Intelligence*) has been reorganized to include more general material from other sections, and discusses the strengths and weaknesses associated with multiple conceptualizations of intelligence.
- Section 9.2 (*Measuring Intelligence*) includes newer research concerning developmental change in traditional IQ measures.
- Section 9.4 (*Genetic and Environmental Contributions to Intelligence*) describes newer research related to genetic contributions to intelligence, including the findings of large-scale studies suggesting that intelligence is the product of a large number of genes. Also included in this section is updated information about the role of the environment, including an

attempt to clarify conflicting research findings related to the role of programs such as Head Start.

- Chapter 9.5 (*Thinking Ethically About Intelligence*) includes new information from large-scale genetic studies emphasizing the need to avoid over-simplifying the concept of race, and its relation to IQ test scores. A new *Psychology in Everyday Life* section expands on prior coverage of artificial intelligence (AI), and includes a new discussion about AI privacy concerns, particularly those associated with the facial recognition programs now in use in many parts of the United States.

Chapter 10: Motivation and Emotion

- The new organization of this chapter includes the following major sections:

10.1 The Basics of Motivation	10.4 The Four Basic Aspects of Emotion
10.2 Biological Motives	10.5 Connecting the Four Basic Aspects of Emotion
10.3 Stimulus and Learned Motives	10.6 Psychology and Your Skill Set: Positivity and Optimism

- Section 10.1 (*The Basics of Motivation*) outlines newer findings related to the history of Maslow's hierarchy of needs, including some misconceptions about his ideas.
- Section 10.3 (*Stimulus and Learned Motives*) contains a more nuanced account of the Yerkes-Dodson law with a new figure that helps to explain how the relationship between arousal and performance depends on the ease of the task.
- Section 10.4 (*The Four Basic Aspects of Emotion*) now situates our discussion of emotion in the context of emotion-related experience, physiology, expression (i.e., behavior), and cognitions. In terms of behavior, newer research related to the importance of posture, eye gaze, and tone of voice has been included, and a new *Psychology in Everyday Life* section discusses new findings related to emotion contagion. Another new section describes emotion regulation, including the effectiveness of a variety of well-studied regulatory strategies.
- Section 10.5 (*Connecting the Four Basic Aspects of Emotion*) includes an updated treatment of Schachter and Singer's two-factor theory. A new *Studying the Science* section takes a closer look at Paul Ekman's basic emotion theory, including elements that have and have not been supported in more recent research.

Chapter 11: Sex, Gender, and Sexuality

- The new organization of this chapter includes the following major sections:

11.1 Sexual Development and Orientation	11.4 Sexual Relationships
11.2 Gender Identities and Roles	11.5 Psychology and Your Skill Set: Civic Engagement
11.3 Sexual Responses, Attitudes, and Behaviors	

- This chapter has been updated to reflect recent recommendations about the language that should be used to describe members of the LGBTQ community.

- Section 11.1 (*Sexual Development and Orientation*) contains a new *Psychology in Everyday Life* section related to the participation of intersex athletes in international competitions such as the Olympics.
- Section 11.3 (*Sexual Responses, Attitudes, and Behaviors*) includes newer research related to current sexual attitudes and behavior, as well as updated statistics on STDs.
- Section 11.4 (*Sexual Relationships*) has a brand-new section related to sexual harassment, including information designed to help students identify instances of harassment and potential responses.
- Section 11.5 (*Civic Engagement*) has updated information about young people's leadership and participation in major initiatives such as the Global Climate Strike.

Chapter 12: Personality and Individual Differences

- The new organization of this chapter includes the following major sections:

12.1 Theories of Personality	12.4 Factors Influencing Personality
12.2 Traits	12.5 Psychology and Your Skill Set: Leadership
12.3 Personality Assessment	

- Section 12.1 (*Theories of Personality*) has been reorganized to directly contrast key terms (e.g., personality, individual differences, temperament). Subsections related to theoretical perspectives have been rewritten in a parallel format (including each one's conceptions about the structure, dynamics, and development of personality) to make it easier for students to draw direct comparisons between them.
- Section 12.2 (*Traits*) includes a new *Human Diversity* section that highlights the HEXACO model of personality, and directly contrasts it with the Big Five. Two other new sections outline how a wide array of personalities can be explained with just a small number of trait-related factors, and the distinction between trait and type (e.g., Myers-Briggs) approaches to personality.

Chapter 13: Health Psychology

- The new organization of this chapter includes the following major sections:

13.1 Biopsychosocial and Behavioral Contributions to Health	13.4 Improving Health Through Coping
13.2 Stress and Health	13.5 Psychology and Your Skill Set: Stress Management
13.3 Improving Health with Treatment	

- Section 13.1 (*Biopsychosocial and Behavioral Contributions to Health*) has been substantially reworked to include greater emphasis on cultural differences in the extent to which practitioners adhere to the medical vs. biopsychosocial models of health. It also more clearly explains how the three components

of the biopsychosocial model are relevant to health psychologists' work. A new *Human Diversity* section addresses the role of poverty in contributing to the health-related consequences of COVID-19.

- Section 13.2 (*Stress and Health*) has been reorganized and streamlined to make way for new content in other sections.
- Section 13.3 (*Improving Health with Treatment*) is brand new and focuses broadly on the role of the biopsychosocial model in understanding the likelihood of seeking and complying with treatment from a health-care provider. Specific topics include: factors related to recognizing illness and seeking treatment (including complementary and alternative medicine), reasons for treatment noncompliance, and how health care practitioners can minimize the likelihood that noncompliance will occur. A *Studying the Science* section explores people's use of the Internet to find information during the COVID-19 pandemic.
- Section 13.4 (*Improving Health Through Coping*) has been streamlined to make way for content in other sections, but includes new material on relationship-focused coping.

Chapter 14: Psychological Disorders

- The new organization of this chapter includes the following major sections:

14.1 Psychopathology: Classification and Causes	14.4 Anxiety and Anxiety-Related Disorders
14.2 Psychotic Disorders	14.5 Psychology and Your Skill Set: Perseverance
14.3 Mood and Personality Disorders	

- Section 14.1 (*Classification and Causes*) has been reorganized to focus on four ways to define abnormality and the advantages and disadvantages of using the DSM-5 as a means of classifying mental health concerns.
- Section 14.3 (*Mood and Personality Disorders*) includes changes to language related to suicide that are in keeping with suggestions made by the American Foundation for Suicide Prevention.
- In all sections of this chapter, there is a greater emphasis on the biopsychosocial model as a means of understanding psychopathology.

Chapter 15: Therapies

- The new organization of this chapter includes the following major sections:

15.1 The Origins and Effectiveness of Psychotherapy	15.4 Medical Therapies
15.2 Behavior Therapies	15.5 Psychology and Your Skill Set: Managing Mental Health Issues
15.3 Cognitive and Humanistic Therapies	

- Section 15.1 (*The Origins and Effectiveness of Psychotherapy*) brings together general information about psychotherapies (e.g., history, classification, methods of establishing effectiveness) that had previously been distributed throughout the chapter.

- Section 15.2 (*Behavior Therapies*) now more clearly delineates two therapeutic techniques based on classical conditioning (aversion and exposure therapies) and two based on operant conditioning (token economies and a new section on intensive behavioral intervention, which is often used in the treatment of autism). The different types of exposure therapy (flooding, systematic desensitization, modeling) are also more clearly delineated.
- Section 15.3 (*Cognitive and Humanistic Therapies*) provides a clearer explanation of rational-emotive behavior therapy as one of the first examples of a cognitive behavior therapy.
- Section 15.4 (*Medical Therapies*) includes updated information related to brain stimulation therapies.

Chapter 16: Social Thinking and Social Influence

- The new organization of this chapter includes the following major sections:

16.1 The Fundamentals of Social Groups	16.3 Social Influence
16.2 Attitudes	16.4 Psychology and Your Skill Set: Teamwork

- Section 16.1 (*The Fundamentals of Social Groups*) brings together general information about groups (ingroups vs. outgroups, characteristics of groups, characteristics of individuals within groups) that was previously distributed throughout the chapter. This section also includes a more nuanced discussion of attribution theory, with a new table that shows how consistency, distinctiveness, and consensus impact the likelihood that an internal vs. external attribution will be made.
- Section 16.3 (*Social Influence*) includes a streamlined section on mere presence that allows for a more in-depth discussion of conformity (including new material on Sherif's famous autokinetic study) and compliance (including new research from behavioral economists related to "nudges"). A new *Studying the Science* section explores Milgram's obedience studies in greater depth, examining a broader range of his experimental conditions and what they tell us about the likelihood that people will (or will not) obey orders.
- Section 16.4 (*Teamwork*) now makes reference to COVID-19 and its impact on our understanding of the effectiveness of virtual teams.

Chapter 17: Prosocial and Antisocial Behavior

- The new organization of this chapter includes the following major sections:

17.1 Affiliation and Attraction	17.3 Antisocial Behavior: Aggression, Conflict, and Prejudice
17.2 Prosocial Behavior: Helping Others	17.4 Psychology and Your Skill Set: Diversity and Inclusion

- Section 17.2 (*Prosocial Behavior*) now clarifies the relationship between altruism and prosocial behavior, and distinguishes between self-oriented and other-oriented motives for prosocial behavior. An expanded section on the factors that

influence prosocial behavior is also included. Finally, a new *Studying the Science* section explores the construct of empathy.

- Section 17.3 (*Antisocial Behavior*) now distinguishes between direct and indirect aggression, providing examples from everyday life. Two new *Studying the Science* sections examine emerging work related to microaggressions (and some of the challenges associated with studying them) and the utility of the implicit association task (IAT). Finally, new material addresses the health consequences that stem from experiencing chronic prejudice and the utility of diversity training initiatives in the workplace.

Chapter 18: Applied Psychology

- The new organization of this chapter includes the following major sections:

18.1 Industrial/Organizational Psychology	18.3 Legal, Community, and Sports Psychology
18.2 Environmental Psychology	18.4 Psychology and Your Skill Set: Career Preparation

- Section 18.1 (*Industrial/Organizational Psychology*) has been reorganized and the discussion of flexible working has been expanded to include a discussion of this topic in relation to COVID-19.
- In Section 18.2 (*Environmental Psychology*), previous material on space habitats has been eliminated to allow for expanded coverage of human impacts on the environment.
- Section 18.3 (*Legal, Community, and Sports Psychology*) now distinguishes the related fields of legal and forensic psychology. Material about educational psychology has been moved to Chapter 6 (Conditioning and Learning); in its place is a brand-new section introducing students to community psychology.
- Section 18.4 (*Career Preparation*) contains some new suggestions for students to consider as they think about a possible career.

Appendix: A Psychologist's Skill Set: Statistical Literacy

- We have clarified the relationship between measures of central tendency and measures of variability to help readers understand their distinct contribution to descriptive statistics. The utility of correlations in making predictions has been further emphasized.

A Complete Course—Teaching and Learning Supplements

A rich array of supplements accompanies *Introduction to Psychology: Gateways to Mind and Behavior*, including several that make use of the latest technologies. These supplements are designed to make teaching and learning more effective. Many are available free to professors or students. Others can be packaged with this textbook at a discount. Contact your local sales

representative for more information on any of the listed resources.

Student Support Materials

Introductory students must learn a multitude of abstract concepts, which can make a first course in psychology difficult. The materials listed here will greatly improve students' chances for success.

MindTap

MindTap® Psychology for Coon/Mitterer/Martini's *Introduction to Psychology: Gateways to Mind and Behavior*, 16th Edition, helps students learn on their own terms. They can begin studying early with Mastery Training, interact with the eBook, and reinforce learning with assignments that will help them prepare for the test. Students can also take advantage of the *MindTap Mobile App*. They can read or listen to the textbook and study with the aid of instructor notifications, flashcards, and practice quizzes. They can also highlight key text, add notes, and create their own custom flashcards. When it's time to study, everything they've flagged or noted can be gathered into a guide that they can organize.

Instructor Resources

Teaching an introductory psychology course is a tremendous amount of work, and the supplements listed here should help make it possible for you to concentrate on the more creative and rewarding facets of teaching. All of these supplements are available online for download. Go to login.cengage.com to create an account and log in.

MindTap

MindTap® Psychology for Coon/Mitterer/Martini's *Introduction to Psychology: Gateways to Mind and Behavior*, 16th Edition, is the digital learning solution that powers students from memorization to mastery. It gives you complete control of your course—to provide engaging content, to challenge every single student, and to build his or her confidence. Empower students to accelerate their progress with MindTap. MindTap: Powered by You.

MindTap gives you complete ownership of your content and learning experience. Customize the interactive syllabi, emphasize the most important topics, and add your own material or notes in the eBook. Assign Mastery Training to encourage students to begin studying early, and reinforce all that they have learned from the eBook with virtual labs, auto-graded writing assignments, and more.

The Instructor Companion Site

The Instructor Companion Site for this title includes an *Instructor's Resource Manual,* which provides a wealth of teaching tips and classroom resources; *Cengage Learning Testing Powered by Cognero* featuring questions correlated to learning objectives, Bloom's taxonomy level, and difficulty; *Guided Notes for students* to assist with their note-taking; and *PowerPoint slides* providing

concept coverage with dynamic animations, photographs, and video.

Summary

We sincerely hope that both teachers and students will consider this book and its supporting materials a refreshing change from the ordinary. Creating it has been quite an adventurous journey for us; one that we look forward to sharing with you in the chapters that follow. We hope that you enjoy the ride.

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Introduction to
Psychology:
Gateways to Mind and Behavior

16e

Introduction
Psychology and Your Skill Set: Reflective Studying

Gateway Theme It is possible to learn more efficiently and effectively by being reflective about reading, note-taking, and studying.

Chapter Outline

Well Hello There!

As your authors, we are delighted to welcome you to the "manual" for this textbook. No! Don't skip this, please. We understand that few people want to start a new adventure by reading a manual—they would prefer to just step off the airplane and begin their vacation, get right into that new computer game, or start using their new camera or smartphone. But please be patient and take some time to read this short chapter—we think it will almost certainly increase your odds of success in this course.

Successfully learning psychology depends on how *reflective* you are as you read your textbook, listen during your classes, and study for exams. Students who get good grades tend to work more reflectively, not just longer or harder. They also tend to understand and remember more of what they've learned long after their exams are over. In this introduction, we share our thoughts on why psychology provides a good foundation for being successful in your personal and professional life, before going on to outline a variety of ways to become a more reflective learner.

I.1 Why Study Psychology?
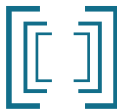
GATEWAYS LEARNING OUTCOME:
After reading this section you should be able to:

I.1.1 Explain how studying psychology will help you in your personal and professional life

As you begin exploring the field of psychology, you may well be asking yourself what you'll get out of it. In general, most of your courses will offer you opportunities to learn in two important ways. The first has to do with course *content*—in this introductory psychology course, the content is what you'll learn about the field of psychology. This includes what psychological research tells us about memory, social relationships, brain functioning, children's development, and psychopathology (to name just a few topics). But taking a psychology course will also promote your learning in a second way—specifically, it will teach you about *skills* that you'll need to be successful in your personal and professional life.

What do you mean by "skills"? When we talk about skills, we're often talking about things that you can do, such as communicate clearly or work well with others. But in some cases, the term *skills* can also refer to personal characteristics; for example, independence, tolerance, and adaptability are often considered to be important skills.

These two broad categories of learning—content and skills—are outlined in the American Psychological Association's (APA) *Guidelines for the Undergraduate Psychology Major* (*version 2.0*) (American Psychological Association, 2013). It is well worth having a look at the full document (which is available online), but you can start by having a look at ▲ Table I.1.

Do you assume that your only goal is to memorize "the facts," or knowledge base, of psychology? If so, as you can see in Table I.1, you are thinking in terms of Goal 1. But what about the other goals listed there? Suppose you are given an assignment that involves working in small groups to evaluate some published research articles. Would you wonder why you have to work with other students? Or wish your professor would just get to the point and tell you what the articles are about? Understanding that your education is also about acquiring skills—like being able to think critically (Goal 2), consider diverse points of view (Goal 3), communicate clearly

Working on developing your skills may seem like a waste of your time compared with putting that time into learning course content. But don't sell it short; your skill set will be just as important as your content expertise whether you go on to post-graduate education or a career.

(Goal 4), and work as part of a team (Goal 5)—makes it easier for you to appreciate that professors set up assignments to build skills, as well as furthering what you know about psychology.

One of the things that you might notice as you look through Table I.1 is that many of the skills listed aren't really specific to psychology—they're likely to be just as relevant to someone majoring in history or business or biology. After all, people in all disciplines need to understand how to communicate well, work well with others, and behave ethically.

Some of the most important advice we can give you, then, is to remember to focus on the skills that you are learning throughout your studies at university, whether in psychology or other subjects. They may not always seem obvious when you're reading a textbook or when you're completing your assignments, but when it comes time for you to hit the job market, you'll be happy that you did.

Psychology and Your Skill Set

To understand why your skill set is important, have a look at ▲ Table I.2, which lists a few of the career opportunities open to psychology majors.

Travel agent? Think about it for a moment. A travel agent may not need psychology content expertise, such as being able to list Freud's stages of psychosexual development or explain what psychological functions are controlled by the different parts of the brain. But it *would* help to be able to work independently, do your own research, be able to make presentations to individuals or groups, have some sensitivity to cross-cultural issues, write well, and, in general, work well with people. While these sorts of skills can be learned in other ways, studying psychology provides a "golden opportunity" for you to develop an impressive set of skills that are valued by many employers.

▲ Table I.1 APA Guidelines for the Undergraduate Psychology Major

Goal 1: Knowledge Base of Psychology
Goal 2: Scientific Inquiry and Critical Thinking
Goal 3: Ethical and Social Responsibility in a Diverse World
Goal 4: Communication
Goal 5: Professional Development

Adapted from American Psychological Association, 2013. For complete details, go to: www.apa.org/ed/precollege/about/learning-goals.pdf.

▲ Table I.2 A Skills-Based List of Some Potential Careers for Psychology Majors	
Addictions counselor	Manager
Administration	Market research analyst
Advertising	Marketing
Career/employment counselor	Mental health worker
Case worker	Motivational researcher
Child care worker	Personnel
Child welfare worker	Population studies researcher
Community worker	Probation or parole officer
Correctional officer	Professional consultant
Counselor	Program coordinator
Cultural diversity consultant	Psychiatric assistant or aide
Customs or immigration agent	Public health statistician
Daycare worker, supervisor	Public opinion interviewer
Educational counselor	Public relations
Entrepreneur	Psychology professor
Fundraiser or development officer	Recreation specialist
Gerontology	Research assistant
Government researcher	Sales representative
Health services	Social services/social worker
Hospice coordinator	Teaching
Human resources	Technical writer
Immigration officer	Travel agent
Labor relations specialist	Youth worker

Adapted from Canadian Psychological Association (2017).

How This Book Will Help You with Skill Development

You probably won't be surprised to learn that *Introduction to Psychology: Gateways to Mind and Behavior* has been written with the APA *Guidelines* in mind, in an effort to help you further develop your career-related skill set. Here are some skills highlights:

- **Application Skills:** One skill that employers value is the ability to see connections and apply learning from one situation to another. In this book, we have a number of sections about *Psychology in Everyday Life* which are intended to make clear how the findings from psychological science can be seen all around us.
- **Research and Critical Thinking Skills:** We will introduce you to science and psychology research, from the research methods in Chapter 1 to the Statistical Literacy Appendix (and everywhere in between!). An important element of research is critical thinking,

which encompasses a wide array of related skills including defining problems, searching for and evaluating information to address those problems, and synthesizing information that you gather. But critical thinking skills matter in many careers beyond research, so in this book we've tried to model it whenever we can. In particular, scattered throughout the book you'll find sections called *Studying the Science*, in which we specifically focus on thinking critically about complex topics such as the link between media violence and aggression.

- **Cultural Awareness Skills:** OK, so we can't take you on a field trip to Japan, but throughout this book, we invite you to reflect on the differences among people of different ethnicities, sexual orientations, ages, and genders. Developing these skills will be particularly important when you find yourself having to work with others whose background or belief system is not the same as your own. Throughout this text, you'll find sections titled *Human Diversity*, which will draw your attention to the wide variation in human characteristics and behaviors.
- **Psychology and Your Skill Set:** In the remainder of this Introduction we discuss a full set of study skills, from how to read and listen for understanding to how to take tests and overcome procrastination. In addition, at the end of each chapter you'll also encounter a *Psychology and Your Skill Set* section. Each of these sections connects the field of psychology to a skill that is likely to be useful across a broad range of career paths. These sections, combined with the digital resources for this book, will allow you to measure your skill level and give you practical ideas you can use to improve your skill set.

Of course, we understand that the classroom isn't the only place to learn skills that can help you in your personal life and career. Many college and university students will also have part-time jobs, or they will participate in other learning experiences such as community-based volunteering, student government or clubs, or study abroad. Often, the skills that you develop through these extracurricular experiences will support or complement the skills that you can learn through the assignments that you'll complete for your courses.

For example, common part-time student jobs involving inter-action with the public (e.g., waiting tables, customer service, or retail jobs) often help to build *verbal* communication skills such as the ability to speak to others, and to listen effectively to what others are saying. In contrast, class assignments often build *writing* skills and the ability to *read and understand* complex material. When you are attempting to persuade an employer that you have a broad range of communication skills, then, you should make sure that you discuss what you have learned from a variety of experiences both inside and outside of the classroom to demonstrate the full range of your abilities.

Reflective Learning: The Most Important Ingredient

Simply deciding that you want to learn some content or skills isn't going to actually make it happen. To understand why, think about the last time you spent the evening relaxing in front of the

"I'm too busy going to college to study."
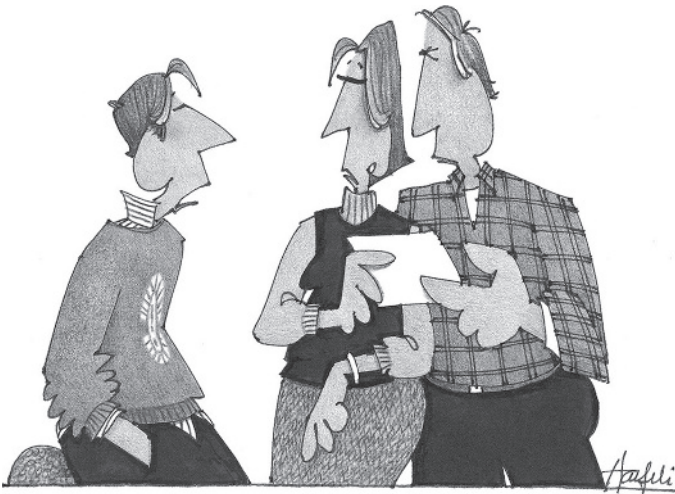
William Haefeli//Condé Nast/Cartoon bank

television. It probably was fun, but you may have noticed that you didn't think too much about what you were watching and that your subsequent memories are not detailed. You were engaging in **experiential processing**, more or less passively soaking up the experience (Kahneman, 2011; Norman, 1994).

Now contrast that with your experience in a recent job interview. It is highly unlikely that you got through the interview by relying on experiential processing alone (and even less likely that you landed the job if you did). Instead, you probably actively and carefully listened to the questions and put some serious effort into thinking through the implications of answering in different ways before responding. No drifting off here; you were focused and controlled until you left the interview, when you likely breathed a much-deserved sigh of relief. By reacting mindfully (Siegel, 2010), you engaged in **reflective processing** (Kahneman, 2011; Norman, 1994). Rather than just having the experience, you *actively thought* about it. Similarly, **reflective learning** occurs when you engage in deliberately reflective and active self-regulated study (Anthony, Clayton, & Zusho, 2013; Mega, Ronconi, & De Beni, 2014). Here, in general, is how you can promote reflective learning of both content and skills:

1. **Set specific, objective learning goals.** Begin each learning session with specific goals in mind. What knowledge or skills are you trying to master? What do you hope to accomplish (Pychyl, 2013)? The learning outcomes that precede each section will help you with this task.
2. **Plan a learning strategy.** How will you accomplish your goals? Make daily, weekly, and monthly plans for learning. Then put them into action.
3. **Be your own teacher.** Effective learners silently give themselves guidance and ask themselves questions. For example, as you are learning, you might ask yourself, "What are the important ideas here? What do I remember? What don't I understand? What do I need to review? What should I do next?"
4. **Monitor your progress and correct your strategy when necessary.** Reflective learning depends on self-monitoring. Exceptional learners keep records of their progress toward learning goals (pages read, hours of studying, assignments completed, and so forth). They quiz themselves, use study guides, and find other ways to check their understanding while learning. Consider asking yourself these questions regularly as you work toward mastering both course content and skills: Do any specific areas of your work need improvement? If you are not making good progress toward long-range goals, do you need to revise your short-term targets? If you fall short of your goals, you may need to adjust how you budget your time. You may also need to change your learning environment to deal with distractions such as browsing the web, daydreaming, talking to friends, or testing the limits of your hearing with your new ear buds.
5. **Reward yourself.** When you meet your daily, weekly, or monthly goals, reward your efforts in some way, such as going to a movie or downloading some new music. Be aware that self-praise also rewards learning. Being able to say "Hey, I did it!" can be rewarding. In the long run, success, self-improvement, and personal satisfaction are the real payoffs for learning.

If you discover that you lack certain knowledge or skills, ask for help, take advantage of tutoring programs, or look for information beyond your courses and textbooks. Knowing how to reflectively enhance learning can be a key to lifelong enrichment and personal empowerment (Van Blerkom, 2012).

I.2 Reflective Reading: How to Tame a Textbook

GATEWAYS LEARNING OUTCOME:
After reading this section you should be able to:

I.2.1 Describe how you can get the most out of this textbook

One powerful way to get the most out of this textbook is to be more reflective through **self-reference**. As you read, relate new facts, terms, and concepts to your own experiences and information that you already know well. Doing this will make new ideas more personally meaningful and easier to remember. **Critical thinking** is another powerful way to be more reflective. Remember, critical thinkers pause to evaluate, compare, analyze, critique, and synthesize what they are reading (Chaffee, 2015). You should, too. In Chapter 1, we will learn how to think critically about psychological science.

Does this really work? You bet! Using a reflective reading strategy improves learning and course grades (Taraban, Rynearson, & Kerr, 2000). It also results in enhanced long-term understanding. Simply reading straight through a textbook chapter can give you intellectual indigestion. That's why it's better to stop often to reflect, review, and digest information as you read.

Going Digital

Digital media can also offer several ways to learn more reflectively from this textbook. You can get a good start by exploring MindTap.

MindTap

MindTap is a highly personalized, fully online learning platform that integrates in one site all of the authoritative content, assignments, and services that accompany your textbook, *Introduction to Psychology: Gateways to Mind and Behavior*.

What can I expect to get out of MindTap? Many of the more active elements of reflective learning are better presented digitally. There is room, for example, to include only a few practice quizzes in a print textbook (and you, the reader, have to self-score them). In contrast, digital media make it feasible to present more extensive practice materials, as well as to provide immediate feedback.

MindTap has been designed to make it easier for you to engage in reflective learning by presenting the entire course (yup, the textbook, too) through a reflective learning path that includes video and other interactive activities. You will be able to complete reading assignments, annotate your readings, complete homework, get detailed instant feedback on Guided Practice Activities, and interact with quizzes and assessments. MindTap includes a variety of apps known as "MindApps," allowing functionality such as having the text read aloud to you, as well as synchronizing your notes with your personal Evernote account. MindApps are woven into the MindTap platform and enhance your learning experience with this textbook.

Psychology Websites

As you read (reflectively, of course) through this textbook, you may, from time to time, find yourself wanting to read more about a particular topic. Consider following up by looking up some of the references included in this text. For example, suppose that you were just reading about procrastination and wanted to learn more about the reference *Pychyl* (2013). You can look up all in-chapter references in the "References" section at the back of this text. There, you will find that *Pychyl* (2013) is a book about overcoming procrastination.

Sometimes, though, the reference that you are interested in will be a psychology journal article. To locate journal articles, you can use PsycINFO, a specialized online database offered by the American Psychological Association (APA). **PsycINFO** provides summaries of the scientific and scholarly literature in psychology. Each record in PsycINFO consists of an abstract (short summary), plus notes about the author, title, source, and other details. Entering the author's or authors' name(s) and article title will bring you to the article in question. Also, all PsycINFO entries are indexed using key terms. Thus, you can search for various topics by entering words such as *procrastination*, *postpartum depression*, or *creativity* and find research papers on any topic in psychology that might interest you.

Most colleges and universities subscribe to PsycINFO. You can usually search PsycINFO from a terminal in your college library or computer center—for free. PsycINFO can also be directly accessed (for a fee) through the Internet via APA's PsycINFO Direct service. For more information on how to gain access to PsycINFO, check out www.apa.org/pubs/databases/psycinfo/index .aspx. Beware, though: Many of the primary research papers available through PsycINFO are highly technical. Don't be put off by

this; read and digest what you can. You'll pick up some interesting information and become a better psychology student in the process.

Aside from PsycINFO, there are a number of good websites that you can consult for reliable information about psychology. For example, the American Psychological Association (APA) and the Association for Psychological Science (APS) maintain online libraries of general-interest articles on many topics. They are well worth consulting when you have questions about psychological issues. You'll find them at www.apa.org and www .psychologicalscience.org. For links to recent articles in newspapers and magazines, check the APA's PsycPORT page at www.apa.org /news/psycport/index.aspx. Other high-quality websites include those maintained by other professional organizations, such as the National Institute of Mental Health (www.nimh.nih.gov). (■ See Section 1.8 for more on the important skill of information literacy.)

I.3 Reflective Note-Taking: LISAN Up!

GATEWAYS LEARNING OUTCOME:
After reading this section you should be able to:

I.3.1 Describe how you can get the most out of class time

Just as studying a textbook is best done reflectively, so, too, is learning in class (Norman, 1994). Like effective reading, good notes come from actively seeking information. A **reflective listener** avoids distractions and skillfully gathers ideas. Here's a listening/note-taking plan that works for many students. The letters LISAN, pronounced like the word *listen,* will help you remember the steps:

- L = *Lead. Don't follow*. Read assigned materials before coming to class. Try to anticipate what your teacher will say by asking yourself questions. If your teacher provides course notes or

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Experiential processing Thought that is passive, effortless, and automatic.

Reflective processing Thought that is active, effortful, and controlled.

Reflective learning Deliberately reflective and active self-guided study.

Self-reference The practice of relating new information to prior life experience.

Critical thinking An ability to evaluate, compare, analyze, critique, and synthesize information.

PsycINFO A searchable online database that provides brief summaries of the scientific and scholarly literature in psychology.

Reflective listener A person who knows how to maintain attention, avoid distractions, and actively gather information from lectures.

Microsoft PowerPoint® overheads before lectures, survey them before coming to class. Reflective questions can come from those materials or from study guides, reading assignments, or your own curiosity.

- I = *Ideas.* Every lecture is based on a core of ideas. Usually, an idea is followed by examples or explanations. Ask yourself often, "What is the main idea now? What ideas support it?"
- S = *Signal words.* Listen for words that tell you what direction the instructor is taking. For instance, here are some signal words:

There are three reasons . . .	Here come ideas
Most important is . . .	Main idea
On the contrary . . .	Opposite idea
As an example . . .	Support for main idea
Therefore . . .	Conclusion

- A = *Actively listen.* Sit where you can get involved and ask questions. Bring questions that you want answered from the last lecture or from your text. Raise your hand at the beginning of class or approach your professor before the lecture. Do anything that helps you stay active, alert, and engaged.
- N = *Note taking.* Students who take accurate lecture notes tend to do well on tests (Williams & Eggert, 2002). However, don't try to be a tape recorder. Listen to everything, but be selective and write down only key points. If you are too busy writing, you may not grasp what your professor is saying. When you're taking notes, it might help to think of yourself as a reporter who is trying to get a good story (Ryan, 2001; Wong, 2015).

Most students take reasonably good notes—and then don't use them! Instead, they wait until just before exams to review. By then, their notes have lost much of their meaning. If you don't want your notes to seem like chicken scratches, it pays to review them periodically (Ellis, 2016).

Using and Reviewing Your Notes

When you review, you will learn more if you take these extra steps (Ellis, 2016; Pychyl, 2013; Santrock & Halonen, 2013):

- As soon as you can, reflect on your notes to fill in gaps, complete thoughts, and look for connections among ideas.
- Remember to link new ideas to what you already know.
- Summarize your notes. Boil them down and organize them.
- After each class session, write down several major ideas, definitions, or details that are likely to become test questions. Then, make up questions from your notes and be sure that you can answer them.

The letters *LISAN* are a guide to active listening, but listening and good note-taking are not enough. You must also review, organize, reflect, extend, and think about new ideas. Use active listening to get involved in your classes, and you will undoubtedly learn more (Van Blerkom, 2012).

I.4 Reflective Study Strategies: Making a Habit of Success

GATEWAYS LEARNING OUTCOME:
After reading this section you should be able to:

I.4.1 Describe how you can best prepare for tests

Grades depend as much on effort as they do on intelligence. But good students work more efficiently, not just harder, and that's true when they study as well as when they write exams. In this section we provide some tips for improving your studying and test-taking skills.

Strategies for Studying

In an interesting paper, researchers reviewed more than 700 research articles on 10 of the most commonly used learning strategies to determine which ones were the most effective (Dunlosky et al., 2013). One of the study strategies most commonly used by students—highlighting or underlining material in the text or lecture notes—was found to be a particularly *ineffective* way to master the material, largely because it doesn't usually promote active or reflective learning. If you cannot imagine your textbook without the pretty neon colors, make sure that you combine your highlighting with one (or more!) of the effective strategies that we discuss below.

Test Yourself

A great way to improve grades is to take practice tests before the real one (Karpicke & Blunt, 2011; Sutterer & Awh, 2016), and this strategy came out as a clear winner in the review of learning strategies. In other words, reflective studying should include **self-testing**, in which you pose questions to yourself. You can use flashcards, online quizzes in MindTap, a study guide, or any other means that you find helpful. You'll also find *Reflective Practice* self-tests at the end of each major section of this textbook. As you study, try to anticipate potential test questions and be sure you can answer them. Studying without self-testing is like practicing for a basketball game without shooting any baskets.

Use Spaced Study Sessions

Another clear winner in the review of learning strategies was the use of spaced study sessions. It is reasonable to review intensely before an exam. However, you're taking a big risk if you are only cramming (learning new information at the last minute). Spaced practice is much more efficient (Dunlosky et al., 2013; Sternberg, 2017). **Spaced practice** consists of a large number of relatively short study sessions. Long, uninterrupted study sessions are called **massed practice**. (If you "massed up" your studying, you probably messed it up, too.) Cramming places a big burden on memory. Generally, you shouldn't try to learn anything new about a subject during the last day before a test. It is far better to learn small amounts every day and review frequently.

Other Suggestions for Studying

Ideally, you should study in a quiet, well-lit area free of distractions. If possible, you should also have one place only for studying. Do nothing else there: keep magazines, social media sites, friends, cell phones, pets, video games, televisions, and other distractions out of the area (Przepiorka, Błachnio, & Díaz-Morales, 2016). In this way, the habit of studying will become strongly linked with one specific place.

Also, many students *underprepare* for exams, and most *overestimate* how well they will do. A solution to both problems is **overlearning**, in which you continue studying beyond your initial mastery of a topic. In other words, plan to do extra study and review *after* you think you are prepared for a test. One way to overlearn is to approach all tests as if they will be essays. That way, you will learn more completely, so you really "know your stuff."

Strategies for Taking Tests

OK, but what about actually taking the tests? Are there any strategies for that? You bet! You'll do better on all types of tests if you observe the following guidelines (Van Blerkom, 2012; Wong, 2015):

1. Read all directions and questions carefully. They may give you good advice or clues about what to include in your answer and how to format it.
2. Survey the test quickly before you begin.
3. Answer easy questions before spending time on more difficult ones.
4. Be sure to answer all questions.
5. Use your time wisely.
6. Ask for clarification when necessary.

Objective Tests

Several additional strategies can help you do better on objective tests. Such tests (multiple-choice and true–false items) require you to recognize a correct answer among wrong ones or a true statement versus a false one. Here are some strategies for taking objective tests:

1. Relate the question to what you know about the topic. Then read the alternatives. Does one match the answer that you expected to find? If none match, reexamine the choices and look for a partial match.
2. Read all the choices for each question before you make a decision. Here's why: if you immediately think that *a* is correct and stop reading, you might miss seeing a better answer like both *a* and *d.*
3. Read rapidly and skip items that you are unsure about. You may find free information in later questions that will help you answer difficult items.
4. Eliminate certain alternatives. With a four-choice multiple-choice test, you have one chance in four of guessing right. If you can eliminate two alternatives, your guessing odds improve to 50–50.
5. Be sure to answer any skipped items, unless there is a penalty for guessing. Even if you are not sure of the answer, you may be right. If you leave a question blank, it is automatically

wrong. When you are forced to guess, don't choose the longest answer or the letter that you've used the least. Both strategies lower scores more than random guessing does.
6. Some people might say: "Don't change your answers on a multiple-choice test. Your first choice is usually correct." Those people would be wrong. If you change answers, you are more likely to *gain* points than to lose them. This is especially true if you are uncertain of your first choice, or it was a hunch and your second choice is more reflective (Higham & Gerrard, 2005).
7. Search for the one best answer to each question. Some answers may be partly true, yet flawed in some way. If you are uncertain, try rating each multiple-choice alternative on a 1 to 10 scale. The answer with the highest rating is the one you are looking for.
8. Remember that few circumstances fall at the extremes. Answers that include superlatives such as *always* or *never* are often false.

Essay Tests

Essay questions are a weak spot for students who lack organization, don't support their ideas, or don't directly answer the question (Van Blerkom, 2012). When you take an essay exam, try the following:

1. Read the question carefully. Be sure to note key words, such as *compare*, *contrast*, *discuss*, *evaluate*, *analyze*, and *describe*. These words all demand a certain emphasis in your answer.
2. Answer the question. If the question asks for a definition and an example, make sure that you provide both. Providing just a definition or just an example will get you half marks.
3. Reflect on your answer for a few minutes and list the main points that you want to make. Just write them as they come to mind. Then rearrange the ideas in a logical order and begin writing. Elaborate plans or outlines are not necessary.
4. Don't beat around the bush or pad your answer. Be direct. Make a point and support it. Get your list of ideas into words.
5. Look over your essay for errors in spelling and grammar. Save this for last. Your ideas are more important. You can work on spelling and grammar separately if they affect your grade.

Short-Answer Tests

Tests that ask you to fill in a blank, define a term, or list specific items can be difficult. Usually, the questions themselves contain little information. If you don't know the answer, you won't get much help from the questions. The best way to prepare for short-answer tests is to overlearn the details of the course. As you study, pay special attention to lists of related terms.

Again, it is best to start with the questions whose answers you're sure you know. Follow that by completing the questions

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Self-testing Evaluating learning by posing questions to yourself.

Spaced practice Practice spread over many relatively short study sessions.

Massed practice Practice done in a long, uninterrupted study session.

Overlearning Continuing to study and learn after you think that you've mastered a topic.