This Instructor’s Guide offers you an overview of the third edition of Fundamentals of Cognition, helping you to discover how the book meets your needs as a course leader. A reader-friendly textbook, Fundamentals of Cognition has been thoroughly updated and revised with an emphasis on making it even more accessible to introductory-level students, providing a perfect balance between traditional approaches to cognition and cutting-edge cognitive neuroscience and cognitive neuropsychology. Covering all the key topics within cognition, this comprehensive overview is essential reading for all students of cognitive psychology and related areas.

Should you decide to adopt the book as core reading for your course, this guide will also aid you in mapping the book to each subject that your class covers.

PEDAGOGY

Each chapter offers a range of pedagogical features to make sure that your students are getting the most out of the book. The third edition of Fundamentals of Cognition includes:

- **Key terms** in the margins
- **Learning objectives** for each chapter
- “In the Real World” **case studies**
- **Research activities**
- **Section summaries**
- **Full color figures**
- **Essay questions** for each chapter
- **Further reading lists** for each chapter
- **Evaluation boxes**
- **Comprehensive glossary**
The Companion Website is available [here](#), and includes resources for both students and instructors. It offers:

### FOR STUDENTS
- **Interactive quizzes** based on subject matter from each chapter
- **Flashcards** to consolidate knowledge of key terms
- **Sample answers** for a selection of the essay questions presented at the end of each chapter
- **Links** to relevant videos and other web resources

### FOR INSTRUCTORS
- Separate set of **multiple-choice questions** for each chapter
- Downloadable **PowerPoint** containing all the figures from the book

<table>
<thead>
<tr>
<th>Chapter Number</th>
<th>Chapter Title</th>
<th>Chapter Summary / Topics Covered</th>
<th>Research Activity</th>
<th>“In the Real World” Case Study</th>
</tr>
</thead>
</table>
| 1              | What Is Cognitive Psychology? | Introduction  
  History of cognitive psychology  
    • Introspection  
    • Behaviorism  
    • Cognitive psychology  
    • Information-processing approach  
  Contemporary cognitive psychology  
    • Experimental cognitive psychology  
    • Cognitive neuroscience  
    • Cognitive neuropsychology  
    • Computational cognitive science  
    • Combining approaches  
    • Combining findings from experiments  
  Structure of the book | 1.1. How much do you know about human memory and cognition?  
  1.2. Are you susceptible to the Stroop effect? | 1.1. Remembering what we have seen: cognitive psychology is very relevant to everyday life |
<table>
<thead>
<tr>
<th>Chapter Number</th>
<th>Chapter Title</th>
<th>Chapter Summary / Topics Covered</th>
<th>Research Activity</th>
<th>“In the Real World” Case Study</th>
</tr>
</thead>
</table>
| 2              | Visual Perception   | Introduction  
From sensation to perception  
• Sensation vs. perception  
Perceptual organization  
• The Gestalt Laws  
• Figure-Ground Segregation  
• Findings  
Pattern recognition  
• Template theories  
• Feature theories  
• Top-down processes  
Visual object recognition  
• Recognition-by-components theory  
• Does viewpoint affect object recognition?  
• Disorders of object recognition  
Face recognition  
• Face recognition by eyewitnesses  
• Face vs. object recognition  
• Face blindness: Prosopagnosia  
• Fusiform face area  
• Theories of face recognition  
• Super-recognizers  
Perception and action  
• Two visual systems: perception and action  
In sight but out of mind  
• Inattentional blindness  
• Change blindness  
• What causes change blindness?  
Does perception require conscious awareness?  
• Perception without awareness  
• blindsight  
• Evaluation | 2.1.  Gestalt laws in conflict  
2.2.  Composite face illusion  
2.3.  Visual illusions | 2.1.  Fingerprinting |
<table>
<thead>
<tr>
<th>Chapter Number</th>
<th>Chapter Title</th>
<th>Chapter Summary / Topics Covered</th>
<th>Research Activity</th>
<th>“In the Real World” Case Study</th>
</tr>
</thead>
</table>
| 3             | Attention and performance     | Introduction  
Choose auditory attention  
- Where is the bottleneck?  
- Recent developments  
  Selective visual attention  
- Posner’s Paradigm  
- Spotlight, zoom lens, or split?  
- What is selected?  
- What happens to unattended stimuli?  
- Cross-modal effects  
  Visual search  
- Feature integration theory  
  Disorders of attention  
- Neglect and extinction  
- ADHD  
  Multitasking  
- How efficient is multitasking?  
- Practice and dual-task performance  
- Does practice make perfect?  
  Attention and consciousness  
- Consciousness  
- The relationship between attention and consciousness  
- Controlling actions: unconscious processing and free will  
3.2. Can we think and drive?  
3.3. The vegetative state |
| 4             | Short-term and working memory | Introduction  
Short-term memory  
- The Atkinson and Shiffrin Model of Memory  
- Short-term memory capacity  
- Duration  
- Short-term vs. Long-term memory  
Working Memory  
- The Baddeley and Hitch Working Memory Model  
- Phonological loop  
- Visuo-Spatial Sketchpad  
- Central executive  
- Episodic buffer  
- Unitary-store alternative  
Working memory capacity  
- Measuring working memory capacity  
- Working memory capacity and intelligence  
- Can working memory capacity be trained? | 4.1. Word length and recall | 4.1. Simultaneous interpreting |
<table>
<thead>
<tr>
<th>Chapter Number</th>
<th>Chapter Title</th>
<th>Chapter Summary / Topics Covered</th>
<th>Research Activity</th>
<th>“In the Real World” Case Study</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>Learning and long-term memory</td>
<td>Introduction&lt;br&gt;Implicit vs. explicit learning&lt;br&gt;• Assessing implicit learning&lt;br&gt;• Specific characteristics of implicit and explicit learning&lt;br&gt;• Neuroscientific evidence&lt;br&gt;Variables affecting explicit learning&lt;br&gt;• Levels of processing&lt;br&gt;• Distinctiveness&lt;br&gt;• The testing effect&lt;br&gt;Long-term memory&lt;br&gt;• Declarative vs. non-declarative memory&lt;br&gt;• Episodic memory&lt;br&gt;• Semantic memory&lt;br&gt;Amnesia&lt;br&gt;• Retrograde and anterograde amnesia&lt;br&gt;• What remains intact?&lt;br&gt;• What is impaired?&lt;br&gt;• An alternative single-system view&lt;br&gt;Forgetting and misremembering&lt;br&gt;• The forgetting curve&lt;br&gt;• Context effects&lt;br&gt;• Interference effects&lt;br&gt;• Recall vs. recognition&lt;br&gt;• Consolidation&lt;br&gt;• Misremembering</td>
<td>5.1. Do the word-fragment task&lt;br&gt;5.2. Distinctiveness and long-term memory</td>
<td>5.1. Skilled typists and implicit learning</td>
</tr>
<tr>
<td>6</td>
<td>Knowledge in semantic memory</td>
<td>Introduction&lt;br&gt;Concepts&lt;br&gt;• Functions of concepts&lt;br&gt;• Common feature approach&lt;br&gt;• Prototype approach&lt;br&gt;• Exemplar approach&lt;br&gt;• Knowledge-based approach&lt;br&gt;• Embodied cognition approach&lt;br&gt;• Integration: the hub-and-spoke model&lt;br&gt;Organization of concepts&lt;br&gt;• Hierarchies of concepts&lt;br&gt;• A network of concepts&lt;br&gt;Schemas and stereotypes&lt;br&gt;• From concepts to propositions&lt;br&gt;• Combining propositions into events and schemas&lt;br&gt;• Stereotypes</td>
<td>6.1. Concept activation and the context&lt;br&gt;6.2. Similarities and differences between perception and visual imagery&lt;br&gt;6.3. Effects produced by stereotypes</td>
<td>6.1. Semantic dementia&lt;br&gt;6.2. Feeding meaning to computers: the use of semantic vectors</td>
</tr>
<tr>
<td>Chapter Number</td>
<td>Chapter Title</td>
<td>Chapter Summary / Topics Covered</td>
<td>Research Activity</td>
<td>“In the Real World” Case Study</td>
</tr>
<tr>
<td>----------------</td>
<td>---------------</td>
<td>---------------------------------</td>
<td>------------------</td>
<td>-------------------------------</td>
</tr>
<tr>
<td>7</td>
<td>Everyday memory</td>
<td><strong>Introduction</strong>&lt;br&gt;• Traditional memory research vs. everyday memory research&lt;br&gt;• Chapter structure&lt;br&gt;<strong>Autobiographical memory</strong>&lt;br&gt;• Autobiographical vs. episodic memory&lt;br&gt;• How good is autobiographical memory?&lt;br&gt;• Flashbulb memories&lt;br&gt;• Recovered memories&lt;br&gt;• Memories across the lifespan&lt;br&gt;• Self-memory system model&lt;br&gt;<strong>Eyewitness testimony</strong>&lt;br&gt;• Post-event misinformation effect&lt;br&gt;• Source misattribution&lt;br&gt;• Remembering faces&lt;br&gt;• Confirmation bias&lt;br&gt;• Violence and anxiety&lt;br&gt;• Aging and eyewitness testimony&lt;br&gt;• From laboratory to courtroom&lt;br&gt;• Cognitive interview&lt;br&gt;<strong>Prospective memory</strong>&lt;br&gt;• Prospective memory vs. retrospective memory&lt;br&gt;• Stages in prospective memory&lt;br&gt;• Event-based vs. time-based prospective memory&lt;br&gt;• Prospective memory in real life&lt;br&gt;• Improving prospective memory</td>
<td>7.1. Autobiographical memories and personality</td>
<td>7.1. Airplane crashes</td>
</tr>
<tr>
<td>8</td>
<td>Language</td>
<td><strong>Introduction</strong>&lt;br&gt;• Chapter organization&lt;br&gt;<strong>Speaking</strong>&lt;br&gt;• Stages of speech production&lt;br&gt;• Tip-of-the-tongue state&lt;br&gt;• Speech planning&lt;br&gt;• Speech errors&lt;br&gt;• Spreading activation&lt;br&gt;<strong>Speech perception</strong>&lt;br&gt;• Models of speech perception&lt;br&gt;• Realistic listening conditions&lt;br&gt;<strong>Reading</strong>&lt;br&gt;• It's in the eyes&lt;br&gt;• Sound as well as vision?&lt;br&gt;• Two routes from orthography to phonology&lt;br&gt;• Dyslexia&lt;br&gt;<strong>From words to conversations</strong>&lt;br&gt;• Easy and difficult words&lt;br&gt;• Sentence parsing: who does what to whom?&lt;br&gt;• From sentences to conversation</td>
<td>8.1. Story comprehension</td>
<td>8.1. Learning to read</td>
</tr>
<tr>
<td>Chapter Number</td>
<td>Chapter Title</td>
<td>Chapter Summary / Topics Covered</td>
<td>Research Activity</td>
<td>“In the Real World” Case Study</td>
</tr>
<tr>
<td>---------------</td>
<td>----------------------------------</td>
<td>---------------------------------------------------------------------------------------------------</td>
<td>-------------------</td>
<td>-------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Does insight exist? (Insight vs. non-insight problems; Facilitating insight with hints; Incubation and sleep; Representational change theory)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>How useful is past experience? (Expertise; Deliberate practice; Functional fixedness; Mental set; Ways to counteract functional fixedness and mental set)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Hypothesis testing: Two ways to test hypotheses; Motivated reasoning</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>Judgment, decision making, and reasoning</td>
<td>Introduction for Judgment: Likelihood depends on the availability of supporting information; Base-rate information; Heuristics are okay in general; Dual-process model</td>
<td>10.1. Syllogisms&lt;br&gt;10.2. Informal reasoning&lt;br&gt;10.3. Cognitive Reflection Test</td>
<td>10.1. Availability heuristic in medical diagnosis&lt;br&gt;10.2. Omission bias&lt;br&gt;10.3. Risk taking by experts&lt;br&gt;10.4. Informal reasoning can be unduly influenced by neuroscience content: “neuroimaging illusion”</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Decision making: Losses and gains; Emotional factors; Social context</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Reasoning: Syllogistic reasoning; Conditional reasoning; Wason selection task; Theories of reasoning; Informal reasoning</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Are humans rational? (Why human reasoning is not limited; Why human reasoning is limited; What is rationality?; Individual differences: intelligence)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chapter Number</td>
<td>Chapter Title</td>
<td>Chapter Summary / Topics Covered</td>
<td>Research Activity</td>
<td>“In the Real World” Case Study</td>
</tr>
<tr>
<td>----------------</td>
<td>--------------------------------</td>
<td>--------------------------------------------------------------------------------------------------</td>
<td>------------------------------------</td>
<td>-------------------------------------</td>
</tr>
</tbody>
</table>
| 11             | Cognition and emotion          | Introduction  
• The structure of emotions  
• Emotion, mood, personality, and affect  
How does cognition influence emotion?  
• Cognition processes and the brain  
• Appraisal approach  
• Non-conscious emotional processing  
• Emotion regulation  
How does emotion influence cognition?  
• Attention  
• Memory  
• Judgment and decision making  
• Moral dilemmas: emotion vs. cognition  
Anxiety and cognitive biases  
• Attentional bias  
• Interpretive bias | 11.1. Interpretive bias         | 11.1. Anxiety disorders and interpretive bias                                                   |

Endmatter Features  
• Glossary  
• Full reference list  
• Name index  
• Subject index