# Unit 2: Study Guide Memory

Cognitive psychology is concerned with how we process information. In this unit, students discover that cognition includes specifically coding sensory input to make sense of the world around us. Students also learn that reconstruction is a common occurrence that is highly correlated with our general world knowledge. The unit can be divided into the kinds of knowledge, the types of processing, and the role of memory. We will distinguish between procedural and declarative knowledge, controlled (effortful) and automatic processing, and serial and parallel processing.

The unit then introduces students to the topics of memory, language, thinking, problemsolving, and creativity. Students learn about reconstruction, complexity, episodic and semantic memory, forgetting, the role of context, and current models of memory processes and practical methods for improving memory. We also study the various psycholinguistic models of language and learn how biological, cognitive, and cultural-social constraints operate on the acquisition, development, and use of language. Students are also introduced to the relationship between language and thought, as well as to the theories and evidence of the role of metacognitive skills in thinking. Psychological views of different modes of thinking, including formation, are also considered.

Students then move on to consider problem-solving strategies. They examine the distinction between algorithms and heuristics, as well as some of the common difficulties people have in solving problems, such as functional fixedness. Finally, they study theories on and evidence of creativity's role in problem-solving and thinking.

**CR7:** The course provides instruction in cognition

<u>Text</u> :	Chapters 9 (pp. 349 – 392)
Student Resources:	Flashcards from text <u>www.worthpublishers.com/myers8e</u>
	What you expect is what you get, Forty Studies, pp. 93 – 99
<u>Timeline</u> :	6 days

An emphasis on

- Memory
- Language
- Thinking
- Problem Solving and Creativity
- <u>(8 10 % of multiple choice)</u>

Key Terms		
Flashbulb Memory	Encoding	Storage
Retrieval	Sensory Register	Iconic Memory
Echoic Memory	Semantic Memory	Automatic Processing Effortful
Processing Rehe	earsal Spacin	ng Effect
Serial Position Effect	Chunking	Imagery Mnemonics
Short-Term Memory	Working Memory	Long-Term Memory
Implicit Memories	Explicit Memories	Episodic Memories
Long-Term Potentiation	Recall	Recognition
Mood Congruent Memory	State Dependent Learning	Forgetting Curve
Decay Theory	Interference Theory	<b>Retroactive Interference Proactive</b>
Interference Repression	Memory Cor	struction Misinformation Effect
False Memory Syndrome	Eyewitness Testimony Am	nesia
<b>Retrograde Amnesia</b>	Anterograde Amnesia	
Misattribution (Source Amnesia)	Priming	
Key People		

<b>Richard Atkinson and Richard Shiffren*</b>	 George Miller	
Lloyd and Margaret Peterson	 Hermann Ebbinghaus*	
Elizabeth Loftus*	 Wilder Penfield*	
Karl Lashley		

A. My curve of retention is more time spent learning = more we remember.

- B. Memories are all over the brain, not just one spot.
- C. Without a chance to rehearse, Short-Term Memories have a limited life.
- D. The 3-stages of memory are sensory, short-term, and long-term.
- E. Some memories are permanently etched into our brains.
- F. Short-Term Memory is 7 plus or minus 2.
- G. Misinformation and misleading can influence one's memory.

## **Myers' Psychology Text Reading Guide Questions** Unit 2: Learning and Memory

### Pages 349 - 361

- 1. Of Sensory Memory, Short-Term Memory, and Long-Term Memory, which is most associated with "working memory"?
- 2. Distinguish between automatic and effortful processing of encoded information.
- 3. What are the roles of chunking and mnemonics in recalling information?

### Pages 362 – 369

1. Long-Term Memory (LTM) and the Hippocampus

### Pages 370 - 390

- 1. Recognition and Recall.
- 2. Difficulties with retrieval of learned material (forgetting): decay, interference, repression, amnesia.
- 3. What does Elizabeth Loftus say about reconstructed memories?

#### Learning Outcomes (from the Myers text - Chapter 9: Memory)

- 1. Define *memory*, and explain how flashbulb memories differ from other memories.
- 2. Describe Atkinson-Shriffrin's classic three-stage processing model of memory, and explain how the contemporary model of working memory differs.
- 3. Describe the types of information we encode automatically.
- 4. Contrast effortful processing with automatic processing, and discuss the next-in-line effect, the spacing effect, and the serial position effect.
- 5. Compare the benefits of visual, acoustic, and semantic encoding in remembering verbal information, and describe a memory-enhancing strategy related to the self-reference effect.
- 6. Explain how encoding imagery aids effortful processing, and describe some memoryenhancing strategies that use visual encoding.
- 7. Discuss the use of chunking and hierarchies in effortful processing.
- 8. Contrast two types of sensory memory.
- 9. Describe the duration and working capacity of short-term memory.
- 10. Describe the capacity and duration of long-term memory.
- 11. Discuss the synaptic changes that accompany memory formation and storage.
- 12. Discuss some ways stress hormones can affect memory.
- 13. Distinguish between implicit and explicit memory, and identify the main brain structure associated with each.
- 14. Contrast the recall, recognition, and relearning measures of memory.
- 15.Explain how retrieval cues help us access stored memories, and describe the process of priming.
- 16. Cite some ways that context can affect retrieval.
- 17.Describe the effects of internal states on retrieval.
- 18.Explain why we should value our ability to forget, and distinguish three general ways our memory fails us.
- 19. Discuss the role of encoding failure in forgetting.
- 20. Discuss the concept of storage decay, and describe Ebbinghaus' forgetting curve.
- 21.Contrast proactive and retroactive interference, and explain how thy can cause retrieval failure.
- 22.Summarize Freud's concept of repression, and state whether this view is reflected in current memory research.
- 23. Explain how misinformation and imagination can distort our memory of an event.
- 24. Describe source amnesia's contribution to false memories.
- 25.List some differences and similarities between true and false memories.
- 26. Give arguments supporting and rejecting the position that very young children's reports of abuse are reliable.
- 27.Discuss the controversy over reports of repressed and recovered memories of childhood sexual abuse.
- 28. Explain how an understanding of memory can contribute to effective study techniques.