**Cognitive Psychology**

In this unit, knowledge surrounding sensation, perception, and learning provides the foundation for an understanding of cognition. Cognitive psychologists focus their research on the complex nature of the brain, particularly the areas of memory processes and intelligence and the influence of mental processes on behavior. Understanding how this information is gathered and processed gives insight into how we make sense of and perceive the world. Some cognitive psychologists attempt to answer how and why cognitive processes fail despite (or because of) the complexity of our biological structures. Other psychologists study intelligence and the reasons for individual differences. This cognitive perspective offers one way to understand how our thinking impacts our behavior, which can in turn provide insight into psychological disorders and their treatment.

Topics:

5.1 Introduction to Memory 5.7 Introduction to Thinking and Problem Solving

5.2 Encoding 5.8 Biases and Errors in Thinking

5.3 Storing 5.9 Introduction to Intelligence

5.4 Retrieving 5.10 Psychometric Principles, Intelligence Testing

5.5 Forgetting & Memory Distortion 5.11 Components of Language & Acquisition

5.6 Biological Bases of Memory

AP students in psychology should be able to do the following:

* Compare and contrast various cognitive processes.
* Describe and differentiate psychological and physiological systems of memory
* Identify the contributions of key researchers in cognitive psychology.
* Outline the principles that underlie construction and encoding of memories.
* Outline the principles that underlie effective storage of memories.
* Describe strategies for retrieving memories.
* Describe strategies for memory improvement and typical memory errors.
* Describe and differentiate psychological and physiological systems of short- and long-term memory.
* Identify problem-solving strategies as well as factors that influence their effectiveness.
* List the characteristics of creative thought and creative thinkers.
* Identify problem-solving strategies as well as factors that create bias and errors in thinking.
* Define intelligence and list characteristics of how psychologists measure intelligence.
* Discuss how culture influences the definition of intelligence.
* Compare and contrast historic and contemporary theories of intelligence.
* Identify the contributions of key researchers in intelligence research and testing.
* Explain how psychologists design tests, including standardization strategies and other techniques to establish reliability and validity.
* Interpret the meaning of scores in terms of the normal curve.
* Describe relevant labels related to intelligence testing.
* Synthesize how biological, cognitive, and cultural factors converge to facilitate acquisition, development, and use of language.
* Debate the appropriate testing practices, particularly in relation to culture-fair test uses.

**Vocabulary for Flashcards**

*Chapter 7, Section 1: The Nature of Memory, pages 221-232*

1. Memory
2. Constructive process (of memory)
3. Encoding
4. Storage
5. Retrieval
6. Level of processing model
7. Elaborative rehearsal
8. Parallel distributed processing (PDP)
9. Three-stage memory model
10. Sensory memory
11. Short-term memory
12. Chunking
13. Maintenance rehearsal
14. Working memory
15. Long-term memory
16. Explicit (declarative) memory
17. Semantic memory
18. Episodic memory
19. Implicit (nondeclarative) memory
20. Priming
21. Retrieval cues
22. Encoding specificity principle
23. Mnemonic
24. Method of loci

*Chapter 7, Section 2: Forgetting, pages 233-237*

1. Decay theory
2. Interference theory
3. Retroactive interference
4. Proactive interference
5. Motivated forgetting theory
6. Encoding failure theory
7. Retrieval failure theory
8. Tip-of-the-tongue phenomenon
9. Misinformation effect
10. Serial-position effect
11. Source amnesia
12. Distributed practice
13. Massed practice

*Chapter 7, Section 3: Biological Bases of Memory, pages 238-243*

1. Long-term potentiation
2. Flashbulb memory
3. Retrograde amnesia
4. Consolidation
5. Anterograde amnesia
6. Alzheimer’s disease

*Chapter 7, Section 4: Memory Distortions and Improvement, pages 244-250*

1. Repression

*Chapter 8, Section 1: Thinking, pages 257-266*

1. Cognition
2. Embodied cognition
3. Prototype
4. Artificial concept
5. Hierarchies
6. Algorithm
7. Heuristic
8. Mental set
9. Functional fixedness
10. Availability heuristic
11. Representativeness heuristic
12. Confirmation bias
13. Cognitive offloading
14. Creativity
15. Divergent thinking
16. Convergent thinking

*Chapter 8, Section 2: Language, pages 266-272*

1. Language
2. Phoneme
3. Morpheme
4. Grammar
5. Syntax
6. Semantics
7. Cooing
8. Babbling
9. Overextension
10. Telegraphic speech
11. Overgeneralization
12. Language acquisition device (LAD)

*Chapter 8, Section 3: Intelligence, pages 272-276*

1. Intelligence
2. General intelligence
3. Fluid intelligence
4. Crystallized intelligence
5. Intelligence quotient
6. Stanford-Binet Intelligence Scale
7. Wechsler Tests
8. Standardization
9. Reliability
10. Validity
11. Intellectually disabled
12. Savant syndrome
13. Gifted (for intelligence)

*Chapter 8, Section 4: Intelligence Controversies, pages 276-283*

1. Triarchic theory of intelligence
2. Emotional intelligence
3. Stereotype threat

*Test Date: January 27th*