**Cognitive Psychology**

**13-17% AP Exam Weighting**

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 the how and why cognitive processes fail despite (or because of) the complexity of our biological structures. Teachers can offer students opportunities to provide their own explanations for these phenomena. 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.

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| **Essential Questions:** |
| * What roles do memory and thinking play in our behaviors? * What is intelligence and how can we study it to understand it? |

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| **Unit Outline and Learning Targets** |
| **5.1 Introduction to Memory-** *Skill: Define and/or apply concepts.*   1. Compare and contrast various cognitive processes. 2. Describe and differentiate psychological and physiological systems of memory. 3. Identify the contributions of key researchers in cognitive psychology.   **5.2 Encoding-** *Skill: Explaining behavior in authentic context.*   1. Outline the principles that underlie construction and encoding of memories.   **5.3 Storing-** *Skill: Explaining behavior in authentic context.*   1. Outline the principles that underlie effective storage of memories.   **5.4 Retrieving-** *Skill: Explain behavior in authentic context.*   1. Describe strategies for retrieving memories.   **5.5 Forgetting and Memory Distortion-** *Skill: Explain behavior in authentic context.*   1. Describe strategies for memory improvement and typical memory errors   **5.6 Biological Bases for Memory-** *Skill: Define and/or apply concepts*   1. Describe and differentiate psychological and physiological systems of short-and long-term memory.   **5.7 Introduction to Thinking and Problem Solving-** *Skill: Define and /or apply concepts.*   1. Identify problem solving strategies as well as factors that influence their effectiveness. 2. List the characteristics of creative thought and creative thinkers.   **5.8 Biases and Errors in Thinking-** *Skill: Explain behavior in authentic context.*   1. Identify problem-solving strategies as well as factors that create bias and errors in thinking.   **5.9 Introduction to Intelligence-** *Skill: Apply theories and perspectives in authentic contexts.*   1. Define intelligence and list characteristics of how psychologists measure intelligence. 2. Discuss how culture influences the definition of intelligence. 3. Compare and contrast historic and contemporary theories of intelligence. 4. Identify the contributions of key researchers in intelligence research and testing.   **5.10 Psychometric Principles and Intelligence Testing-** *Skill: Analyze psychological research studies.*   1. Explain how psychologists design tests, including standardization strategies and other techniques to establish reliability and validity. 2. Interpret the meaning of scores in terms of the normal curve. 3. Describe relevant labels related to intelligence testing. 4. Debate the appropriate testing practices, particularly in relation to culture-fair test uses.   **5.11 Components of Language and Language Acquisition-** *Skill: Apply theories and perspectives in authentic contexts.*   1. Synthesize how biological, cognitive, and cultural factors converge to facilitate acquisition, development, and use of language. |

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| **Vocabulary to Master:** (you should be able to define each of these terms by test day) | | |
| **5.1 Introduction to Memory** Automatic vs. Effortful Processing  Selective vs. Divided Attention  Deep vs. Shallow Processing  Parallel/Dual Processing  Information Processing Model  Encoding  Storage  Retrieval  **5.2 Encoding**  Sensory Memory  Iconic Memory  Echoic Memory  Short-term Memory  Working Memory  Rote Rehearsal  **5.3 Storing**  Long-Term Memory  Explicit Memories (Declarative)  Episodic Memories  Semantic Memories  Implicit Memories (Nondeclarative)  Prospective Memory  Procedural Memories  Emotional Memories  Priming  Chunking  Maintenance Rehearsal  Elaborative Rehearsal  **5.4 Retrieving**  Recognition  Recall  State-Dependent Memories  Mood-Dependent Memories  Tip-of-the-Tongue  **5.5 Forgetting and Memory Distortion**  Serial Position Effect  Primacy Effect  Recency Effect  Interference  Retroactive Interference  Proactive Interference  Misinformation Effect  Source Amnesia  Flashbulb Memories  Eidetic Memory | **5.6 Biological Basis for Memory**  Long-Term Potentiation  Hippocampus, Amygdala, Cerebellum  Amnesia  Retrograde Amnesia  Anterograde Amnesia  Forgetting Curve  **5.7 Introduction to Thinking and Problem Solving**  Schema  Prototype  Metacognition  Algorithm  Heuristics    Creativity  Convergent Thinking  Divergent Thinking  **5.8 Biases and Errors in Thinking**  Representativeness Heuristic  Availability Heuristic  Functional Fixedness  Mental Set  Anchoring Effect  Confirmation Bias  Overconfidence  Belief Perseverance  Belief Bias  **Key people to know**  Noam Chomsky  Hermann Ebbinghaus  Wolfgang Kohler  Elizabeth Loftus  George A. Miller  Alfred Binet  Francis Galton  Howard Gardner  Charles Spearman  Robert Sternberg  Lewis Terman  David Wechsler | **5.9 Introduction to Intelligence**  Intelligence  Psychometric Psychologists  Achievement Tests  Aptitude Tests  General Intelligence  Factor Analysis  Stanford-Binet Intelligence Test  Intelligence Quotient (IQ)  Mental Age  Wechsler Intelligence Scale (adult and children)  Crystallized vs. Fluid Intelligence  Triarchic Theory of Intelligence  Multiple Intelligences  Emotional Intelligence (EQ)  **5.10 Psychometric Principles and Intelligence Testing**  Standardization  Reliability  Split-half Reliability  Test-Retest Reliability  **Validity**  Construct Validity  Content Validity  Concurrent Validity  Predictive Validity  ***Assessing the Range***  Stereotype Threat  Down Syndrome  Flynn Effect  Gifted  Intellectual Disability  Savant Syndrome  **5.11 Components of Language and Language Acquisition**  Morpheme  Phoneme  Grammar  Semantics  Syntax  Holophrastic Speech  Telegraphic Speech  Universal Inborn Grammar  Critical Period  Linguistic Determinism |