

Unit 2 Overview

Cognition (15-25%)

Cognition plays a major role in the field of psychology. Building on the knowledge of anatomical structures and biological processes students learned in Unit 1, this unit introduces them to the memory processes and contains content that is relevant to their daily lives, such as how people remember and perceive the world around them. In Unit 2, students learn about the basic elements of thought, judgment, and problem-solving, as well as research based strategies for memory improvement that can be directly applicable to their lives outside of the classroom. Students also delve into the measurement of intelligence and achievement, including how these assessments have been used both to identify students with aptitude to increase opportunities in school and the workplace, but also to limit access to jobs, military ranks, and educational institutions. The focus on perception in this unit, coupled with sensation from Unit 1, helps connect biological bases of behavior with cognitive psychology—ideas about how expectations and biases filter sensations to produce perception relate to theories about memory construction, forgetting, and judgment.

ESSENTIAL QUESTIONS

- Can you always trust your senses?
- Why don't people always make good decisions?
- What strategies do you use to help you remember important things?
- Why aren't our memories recorded by the brain exactly how we experienced them?

LEARNING OBJECTIVES (COLLEGE BOARD)

Topic 2.1 - Perception

- **2.1.A** - Explain how internal and external factors influence perception.
- **2.1.B** - Explain how visual perceptual processes produce correct or incorrect interpretations of stimuli.

Topic 2.2 - Thinking, Problem-Solving, Judgments, and Decision-Making

- **2.2.A** - Explain how psychological concepts and theories account for thinking, problem-solving, judgment, and decision-making.

Topic 2.3 - Introduction to Memory

- **2.3.A** - Explain how the types, structures, and processes of memory work.
- **1.3.B** - Explain how the basic process of neural transmission is related to behavior and mental processes.
- **1.3.C** - Explain how psychoactive drugs affect behavior and mental processes.

Topic 2.4 - Encoding Memories

- **2.4.A** - Explain how different encoding processes work to get information into memory.

Topic 2.5 - Storing Memories

- **2.5.A** - Explain how memory storage processes retain information in memory.

Topic 2.6 - Retrieving Memories

- **2.6.A** - Explain how memory retrieval processes get information out of memory.

Topic 2.7 - Forgetting and Other Memory Challenges

- **2.7.A** - Explain possible reasons why memory failure or errors may occur.

Topic 2.8 - Intelligence and Achievement

- **2.8.A** - Explain how modern and historical theories describe intelligence.
- **2.8.B** - Explain how intelligence is measured.
- **2.8.C** - Explain how systemic issues relate to the quantitative and qualitative uses of intelligence assessments.
- **2.8.D** - Explain how academic achievement is measured and experienced as compared to intelligence.

Unit 2 Vocabulary & Concepts

2.1 - Perception

- Perception
- Top down processing (external sensory information)
- Bottom up processing (internal prior expectations)
- Schemas
- Perceptual sets
- Context influence
- Experience influence
- Culture influence
- Gestalt psychology
 - Closure
 - Figure-ground
 - Proximity
 - Similarity
- Attention
 - Cocktail party effect
 - Inattention blindness
 - Change blindness
- Binocular depth cues
 - Retinal disparity
 - Convergence
- Monocular depth cues
 - Relative clarity
 - Relative size
 - Texture gradient
 - Linear perspective
 - Interposition
- Perceptual constancy
- Apparent movement

2.2 - Thinking, Problem-Solving, Judgments, and Decision-Making

- Prototypes
- Concepts
- Schema frameworks
- Assimilation
- Accommodation
- Algorithms
- Heuristics
 - Representative heuristic
 - Availability heuristic
- Mental set
- Priming
- Framing
- Gambler's fallacy
- Sunk cost fallacy
- Executive functions
- Creativity
- Divergent thinking
- Convergent thinking
- Functional fixedness

2.3 - Introduction to Memory

- Memory
- Explicit memory
 - Episodic memory
 - Semantic memory
- Implicit memory
 - Procedural memory
- Prospective memory
- Long term potentiation
- Working memory model
 - Central executive system
 - Phonological loop
 - Visuospatial sketchpad
- Multi store model of memory
 - Sensory memory
 - Iconic memory
 - Echoic memory
 - Short term memory
 - Long term memory
 - Automatic processing
 - Effortful processing
 - Encoding
 - Storage
 - Retrieval
- Levels of processing model
 - Shallow processing
 - Deep processing
 - Structural
 - Phonemic
 - Semantic

2.4 - Encoding Memories

- Mnemonic devices
 - Method of loci
- Chunking
- Categorizing
- Hierarchies
- Spacing effect
- Memory consolidation

- Massed practice
- Distributed practice
- Serial position effect
 - Primacy effect
 - Recency effect

2.5 - Storing Memories

- Maintenance rehearsal
- Elaborative rehearsal
- Superior autobiographical memory
- Retrograde amnesia
- Anterograde amnesia
- Infantile amnesia
- Alzheimer's disease

2.6 - Retrieving Memories

- Recall
- Recognition
- Context-dependent memory
- Mood-congruent memory
- State-dependent memory
- Retrieval practice processes
 - Testing effect
 - Metacognition

2.7 - Forgetting and Other Memory Challenges

- Forgetting curve
- Encoding failure
- Storage failure
- Retrieval failure
- Proactive interference
- Retroactive interference
- Tip-of-the-tongue phenomenon
- Repression (Ego distress)
- Misinformation effect
- Source amnesia
- Constructive memory
 - Memory consolidation
 - Imagination inflation

2.8 - Intelligence and Achievement

- General intelligence (*g*)
- Intelligence quotient (IQ)
- Psychological assessments
- Psychometric principles
 - Standardization
 - Validity
 - Construct validity
 - Predictive validity
 - Reliability
 - Test-retest reliability
 - Split-half reliability
- Stereotype threat
- Stereotype lift
- Personal and sociocultural bias
- Flynn effect
- Achievement tests
- Aptitude tests
- Fixed mindset
- Growth mindset

