The Simple AP® Psychology Unit 2 Cheat Sheet

2.1 Perception: Processing & Attention

Two Directions of Processing

Bottom-up: starts w/ raw sensory input → brain builds it into a whole (data-driven).
Top-down: knowledge, expectations & experience guide how input is read (concept-driven).

What Shapes Top-Down

Schema: mental framework that organizes & predicts info (e.g., "restaurant" script).
Perceptual set: readiness to see what we expect → same image read differently.
Context, culture & emotion: alter what we notice & how we interpret the exact same sensory input.

Influence	Example
Expectation	See a face in clouds
Context	B/13 read by row/column
Culture	Different depth cue use
Motivation	Hungry → notice food

Attention

Selective attention: focus on a small part of all input at once; the rest fades out.
Inattentional blindness: miss a visible object b/c attention is elsewhere (gorilla study).
Change blindness: miss a change in a scene (e.g., swapped person mid-conversation).

⚠ Inattentional blindness = missing something new; change blindness = missing a change.

✓ Scenario Qs: ask "did prior knowledge shape it?" → yes = top-down; no = bottom-up.

2.1 Perception: Organization, Depth & Constancy

Gestalt Principles

Gestalt: whole > sum of parts; brain groups input into meaningful, organized patterns.

Principle	We group by…
Figure-ground	Object vs. background
Proximity	Nearness
Similarity	Shared color, shape
Closure	Filling in gaps
Continuity	Smooth, unbroken lines

Depth Cues

Binocular (2 eyes): **retinal disparity** (images differ more when close), **convergence** (eyes turn in).
Monocular (1 eye): **relative size**, **interposition** (overlap), **relative height**, **linear perspective**.
More monocular: texture gradient (finer = farther), relative clarity (hazy = farther).
Visual cliff (Gibson & Walk): crawling infants avoid the "drop" → depth perception early.

Constancy & Motion

Perceptual constancy: see objects as stable despite changing sensory input or lighting.
Size: car looks same size far away. **Shape**: open door still seen as rectangle. **Color/brightness**: looks the same in new or dimmer light.

⚠ Linear perspective = lines meet far away; texture gradient = detail fades.

✓ FRQ: name the cue AND explain how it signals distance in the scene or image.

2.2 Thinking, Problem-Solving & Decisions

Building Blocks

Concept: mental grouping of similar things.
Prototype: best example (robin for "bird").
Assimilation: fit new info into an existing schema.
Accommodation: change the schema to fit the new info (both key terms come from Piaget).

Problem-Solving

Algorithm: step-by-step method → slow but sure.
Heuristic: mental shortcut → fast, error-prone.
Mental set: keep using a method that worked before, even when a simpler, better one exists.
Functional fixedness: see objects only in usual use (can't use a coin as a screwdriver).
Creativity: divergent thinking (many answers) vs. convergent thinking (one best answer).

Biases & Errors

Error	What happens
Representativeness	Judge by prototype fit
Availability	Judge by ease of recall
Confirmation bias	Seek only agreeing info
Framing	Wording alters choice
Gambler's fallacy	Past odds alter future
Sunk-cost fallacy	Keep going b/c invested

⚠ Availability = how easily examples come to mind (plane crashes on news). Representativeness = fits a stereotype.

✓ FRQ: define the term, then show it in THIS scenario. A definition alone rarely scores.

2.3 Memory Systems & Models

Types of Memory

Type	Also called	Example
Explicit	Declarative	Facts, events
– Episodic	Personal events	Last birthday
– Semantic	General facts	Capital of Peru
Implicit	Nondeclarative	Skills, habits
– Procedural	Motor skills	Riding a bike

Implicit also covers classically conditioned responses + priming (shown, not said).

Models

Multi-store model (Atkinson-Shiffrin): sensory → short-term → long-term memory.
Working memory (Baddeley): active STM workspace run by a **central executive** (directs attention, juggles several tasks at once).
Its parts: **phonological loop** (sounds, words), **visuospatial sketchpad** (images), **episodic buffer**.
Levels of processing: shallow (structure, sound) → deep (meaning) → deeper = better recall.

Brain & Memory

Hippocampus: forms new explicit memories.
Cerebellum & basal ganglia: implicit & procedural.
Long-term potentiation (LTP): repeated firing strengthens the synapses → biological basis of learning + long-term memory storage.

⚠ Damaged hippocampus → can't form new facts, but can still learn new skills (H.M.).

✓ Sort by "can you say it?" → yes = explicit; shown only by doing or reacting = implicit.

2.4–2.5 Encoding & Storing Memories

Encoding (2.4)

Automatic processing: no effort (where you sat, how often). **Effortful**: needs attention & practice.
Chunking: group items into units (phone # as 3-3-4). **Hierarchies**: organize by category.
Mnemonics: memory aids. **Method of loci**: link items to places on a familiar route.
Spacing effect: **distributed practice** beats **massed practice** (cramming) for long-term recall.
Serial position effect: recall best for first (**primacy**) & last (**recency**) items in a list.
Self-reference effect: info tied to yourself is remembered better (deep processing).

Storage (2.5)

Store	Capacity	Duration
Sensory: iconic	Large	< 1 sec
Sensory: echoic	Large	3–4 sec
Short-term	~7 ± 2 items	~20–30 sec
Long-term	Near limitless	Years, life

Maintenance rehearsal: repeat to keep in STM.
Elaborative rehearsal: link to meaning → LTM.
Sperling: iconic memory holds nearly a whole display but fades in under 1 sec (partial report).
Consolidation: memories stabilize into LTM over time, esp. during sleep (hippocampus helps).

⚠ Recency fades on a delayed test; primacy lasts (early items got more rehearsal).

✓ Study tip Qs: spacing + elaboration + self-reference = strongest answers.

2.6 Retrieving Memories

Measures of Retrieval

Recall: pull info out w/ few or no cues (fill-in-the-blank, essay) → hardest measure of the three.
Recognition: identify info from options (multiple choice) → usually easier than free recall.
Relearning: learn faster the 2nd time → **savings** show memory remained (Ebbinghaus).

Retrieval Cues

Retrieval cue: anything that helps access a memory (smell, place, word, song).

Effect	Recall is best when…
Context-dependent	Same place as learning
State-dependent	Same internal state
Mood-congruent	Mood matches memory
Encoding specificity	Cues match encoding

Example: divers learn words underwater → recall better underwater (context-dependent).

Strengthen Retrieval

Testing effect: retrieval practice (quizzing) beats rereading for long-term memory.
Metacognition: thinking about your own thinking → judge what you really know vs. not.
Tip-of-the-tongue: know you know it, can't retrieve it → retrieval failure, not loss.

⚠ State-dependent = internal state (mood, drug). Context-dependent = outside setting.

✓ AAQ: if a study tests recall vs. recognition, that choice is the DV's operational definition.

2.7 Forgetting & Memory Challenges

Why We Forget

Forgetting curve (Ebbinghaus): fast loss at first, then levels off over time (nonsense syllables).
Encoding failure: info never entered LTM (can't draw a penny's details from memory).
Storage decay: memory traces fade over time.

Interference	Direction	Example
Proactive	Old blocks new	Old locker code
Retroactive	New blocks old	New # erases old

Amnesia & Disease

Anterograde amnesia: can't form NEW memories after injury. **Retrograde**: lose OLD memories.
Alzheimer's disease: loss of neurons → growing memory loss, starting w/ recent memories.

Memory Construction Errors

Misinformation effect (Loftus): misleading info after an event distorts memory ("smashed" vs. "hit" → people recall false broken glass).
Source amnesia: remember the info, but forget where or from whom it came (misattribution).
Constructive memory: we rebuild memories each time we recall → confident ≠ accurate.
Loftus & Palmer: "smashed" wording → more people falsely recall broken glass.

⚠ PRO = old blocks new; RETRO = new blocks old. Match the direction to the scenario.

⚠ Eyewitness confidence does not prove a memory is accurate; memory is rebuilt.

2.8 Intelligence & Achievement

Theories

General intelligence (g) (Spearman): one ability underlies scores on different tests.
Fluid intelligence: reason quickly, solve new problems (↓ w/ age). **Crystallized**: accumulated knowledge, vocabulary, general facts (↑ w/ age).

Testing

Binet: mental age. **IQ** (Terman) = mental age ÷ chronological age × 100 (for kids only).
Wechsler (WAIS): most-used IQ test; mean 100, SD 15 → ~68% score 85–115 (normal curve).
Aptitude test predicts future ability or success (SAT). **Achievement** test measures what you already learned (AP exam, final exam).

Term	Meaning
Standardization	Uniform rules, norm group
Reliability	Consistent results
Validity	Measures what it claims
Predictive validity	Predicts later outcome

Influences & Issues

Flynn effect: avg. IQ scores rose over the 20th century → environment matters.
Stereotype threat: worry about confirming a stereotype lowers test performance.

⚠ A test can be reliable but not valid (consistently wrong). Valid requires reliable.

✓ Explain score gaps w/ environment: Flynn effect, stereotype threat, test bias.