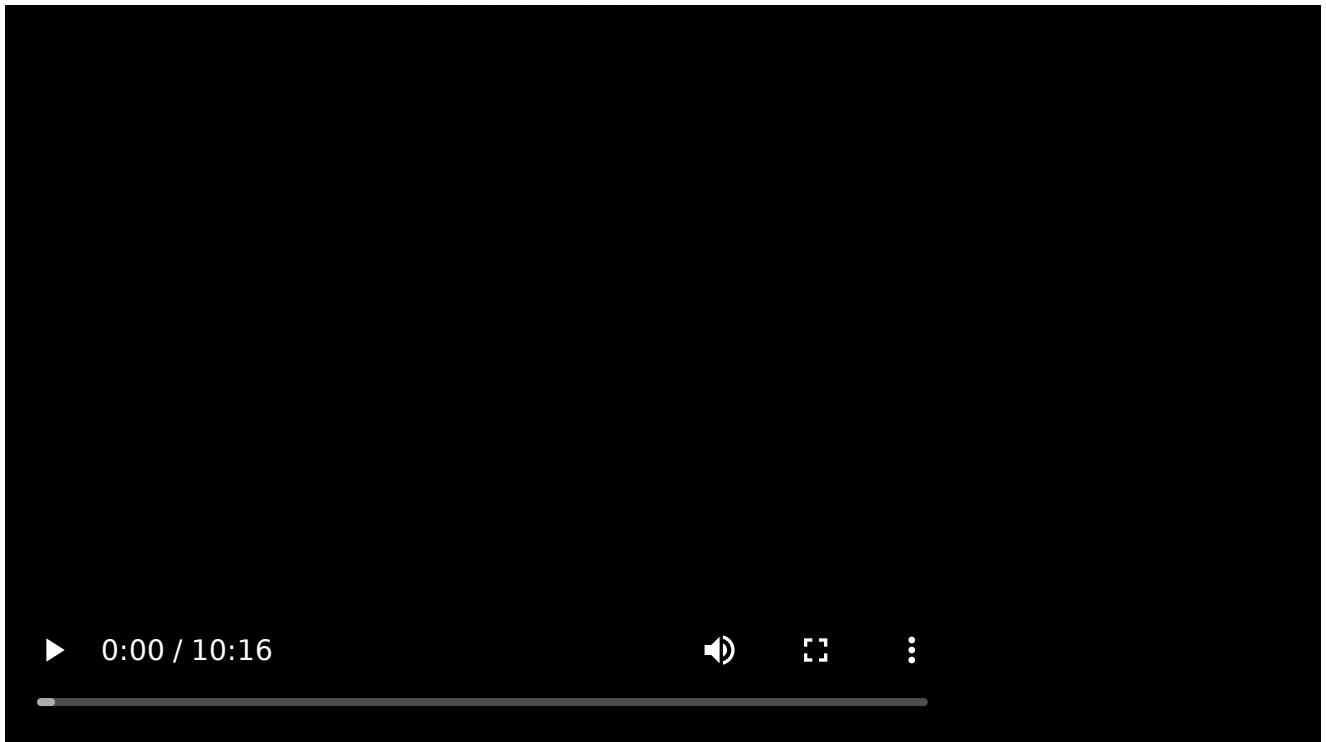


Optimised study content with concept explanations

The content of this document should contain the 'cliffs notes' of the most often tested learning outcomes, facts and concepts on the source documents particularly questions that appear in multiple past examinations with full concept explanations



A full concept guide for Psychology ATAR Year 12 (Units 3 & 4, syllabus effective 2026). This document explains the must-know concepts at the depth the course requires — including, for named theorists, the theory's features, strengths and limitations, and for designated studies, the aim, method, findings and contribution. Topics marked **HIGH PRIORITY** recur across multiple recent examinations.

About the past papers. All six exams (2020–2025) were reviewed. Only **2024 and 2025** reflect the current syllabus; **2020–2023** were sat under the previous syllabus and test much retired content (neural transmission, hormones, brain lobes, attachment, parenting styles, Piaget, Kohlberg, Erikson, personality and humanistic theories, conformity/obedience/social facilitation, attribution, cognitive dissonance, communication styles, sense of community, conflict resolution, post-traumatic growth). The explanations below cover only the current syllabus.

For each **named theorist** (Bandura; Deci and Ryan; Maslow) you must know the theory's characteristics, its strengths and limitations, and a real-world application. For each **designated study** (Craik and Tulving 1975; Pavlov 1902; Watson and Rayner 1920; Thorndike 1898; Skinner 1938; Bandura, Ross and Ross 1961; He et al. 2020) you must know the aim, method, key findings, contribution to psychology, and criticisms/limitations.

Unit 3 — Memory and learning

Sensation and perception

Sensation is the physical detection of raw sensory information; **perception** is the psychological process of interpreting it. Sensation proceeds through **reception** (sensory organs detect the stimulus), **transduction** (the stimulus is converted into neural signals) and **transmission** (signals are relayed to the brain). Perception proceeds through **selection** (attending to particular features), **organisation** (grouping features into a coherent whole) and **interpretation** (assigning meaning, shaped by prior knowledge and experience). Because interpretation draws on experience, the same sensory input — for instance an ambiguous figure — can be perceived differently by different people.

Models of memory **HIGH PRIORITY**

Long-running: 2020, 2021, 2022, 2023, 2025.

Memory has three core processes: **encoding** (converting information into a usable form), **storage** (retaining it) and **retrieval** (recovering it).

Multi-store model (Atkinson and Shiffrin, 1968). Information flows through three distinct stores, each with characteristic duration, capacity and encoding:

Store	Duration	Capacity	Encoding
Sensory register	A few hundred milliseconds	Very large — captures all sensory input	Sensory (iconic = visual; echoic = auditory)
Short-term memory	~18–30 seconds without rehearsal	Limited (~7 items)	Mainly acoustic
Long-term memory	Virtually unlimited	Virtually unlimited	Mainly semantic (by meaning)

Attention moves information from the sensory register to short-term memory; rehearsal moves it to long-term memory. **Strength:** the model is supported by case studies and clearly distinguishes the stores. **Limitation:** it treats short-term memory as a single passive store and over-simplifies rehearsal as the only route to long-term memory.

Long-term memory divides into **implicit** memory — procedural (skills and actions) — and **explicit/declarative** memory, which is semantic (facts, meanings) or episodic (personally experienced events). Worked example: knowing the words of a learnt story is semantic; tying shoelaces automatically is procedural; recalling the day a parent taught you is episodic.

Working memory model (Baddeley and Hitch, 1974; Baddeley, 2000). This recasts short-term memory as an active system. The central executive allocates attention and coordinates two subsystems: the phonological loop (verbal and auditory information) and the visuospatial sketchpad (visual and spatial information). The episodic buffer (added 2000) binds information from the subsystems and long-term memory into coherent episodes. **Strength:** explains how we perform two different-modality tasks at once. **Limitation:** the central executive is the least understood component and hard to measure.

Memory formation and the brain **HIGH PRIORITY**

The hippocampus forms and consolidates new explicit (declarative) memories. The case of **Henry Molaison** — who after bilateral hippocampal removal could not form new long-term explicit memories (anterograde amnesia) yet retained older memories and could still acquire motor skills — is the central evidence for this role. The cerebellum forms and stores implicit/procedural memories (motor skills, conditioned responses). The amygdala attaches emotional significance to memories, plays a key role in their emotional component and forms fear responses; in classical conditioning it evaluates a stimulus, recognises threat, and can trigger a reflexive unconditioned response.

Three causes of memory loss and their effects:

- CTE (Chronic Traumatic Encephalopathy) — trauma-induced, from repeated head impacts; progressive cognitive and memory decline, mood and behaviour change.
- Alzheimer's disease — degenerative; early stages bring difficulty with recall and short-term encoding, later stages affect most memory, with confusion about time and place, declining concentration, and personality change.
- Wernicke-Korsakoff Syndrome — drug-induced, from thiamine deficiency (chronic alcohol use); anterograde and sometimes retrograde amnesia, confusion, eye-movement disturbance, ataxia.

Remembering and forgetting **HIGH PRIORITY**

Retrieval is measured by recall (active retrieval — free, serial or cued), recognition (identifying previously encountered material) and relearning (faster learning of previously known material — the "savings" effect). Recall is an active, effortful process; forgetting is generally passive.

Levels of processing (Craik and Lockhart, 1972). Memory depends on the depth of encoding, not the store. Shallow processing attends to physical structure (structural) or sound (phonemic); deep processing attends to meaning (semantic) and yields much stronger recall.

Study: Craik and Tulving (1975). *Aim:* to test whether depth of processing affects recall. *Method:* participants saw words and answered yes/no questions targeting case (structural), rhyme (phonemic) or sentence-fit (semantic), then took a surprise retention test. *Findings:* words processed semantically were recognised far better than those processed for sound or appearance. *Contribution:* reframed memory as an active process and demonstrated the value of deep/semantic encoding for learning. *Limitation:* "depth" is hard to define independently of the recall it predicts, and the extra time/effort of semantic processing may confound the result.

Rehearsal: maintenance rehearsal (repetition to hold material in short-term memory) versus elaborative rehearsal (linking new material to existing knowledge — more effective for long-term retention, and an application of deep processing). **Ebbinghaus's forgetting curve (1885)** shows forgetting is rapid at first then levels off, and that repetition/overlearning slows the rate of forgetting.

Four types of **forgetting**: retrieval failure (stored but inaccessible, often through missing cues); interference (proactive = older learning blocks newer; retroactive = newer learning blocks older); motivated forgetting (blocking recall to avoid discomfort); decay (the memory trace fades over time through disuse).

Theories of learning **HIGH PRIORITY**

Long-running: the most consistently tested cluster — 2020, 2021, 2022, 2024, 2025.

Classical conditioning is learning by association, whereby a reflex response comes to be triggered by a previously neutral stimulus. The elements: a neutral stimulus (NS) produces no relevant response; an unconditioned stimulus (UCS) naturally triggers an unconditioned response (UCR); after repeated pairing, the NS becomes a conditioned stimulus (CS) that triggers a conditioned response (CR). Principles: **acquisition** (forming the association), **stimulus generalisation** (similar stimuli evoke the CR), **discrimination** (only the specific CS does), **extinction** (the CR weakens when the CS is presented repeatedly without the UCS) and **spontaneous recovery** (the extinguished CR briefly reappears after rest).

Study: Pavlov (1902). *Aim:* whether dogs could be conditioned to salivate to a stimulus not naturally linked to food. *Method:* a neutral stimulus (bell/metronome) was repeatedly paired with food (UCS), which produced salivation (UCR). *Findings:* the bell alone (CS) eventually produced salivation (CR). *Contribution:* foundation of behaviourism; showed a reflexive response can be learnt. *Limitation:* animal findings may not fully generalise to complex human learning.

Study: Watson and Rayner (1920) — "Little Albert". *Aim:* whether fear could be conditioned in a human infant. *Method:* a white rat (NS) was paired with a loud, frightening noise (UCS). *Findings:* Albert came to fear the rat (CR) and the fear generalised to other furry objects. *Contribution:* demonstrated classical conditioning of emotion in humans. *Limitation:* serious ethical problems — psychological harm, no extinction of the induced fear.

Operant conditioning explains learning through consequences via the three-phase model: antecedent → behaviour → consequence. **Reinforcement** increases behaviour — *positive* adds a pleasant stimulus, *negative* removes an unpleasant one. **Punishment** decreases behaviour — *positive* adds an unpleasant stimulus, *negative* removes a pleasant one. **Schedules of reinforcement** are continuous (every response) or intermittent — fixed or variable, on an interval (time) or ratio (number of responses) basis; variable schedules produce behaviour most resistant to extinction.

Study: Thorndike (1898) — Law of Effect. Cats in a puzzle box escaped faster over trials; responses followed by satisfying consequences become more likely. **Study: Skinner (1938) — Skinner box.** Systematically demonstrated how reinforcement and punishment schedules shape the behaviour of organisms (e.g. rats pressing levers).

Social learning theory (Bandura, 1977) — a named theorist. Learning occurs by observing models, through four processes: attention (noticing and recognising the behaviour), retention (storing a memory of it), reproduction (the physical capacity to replicate it) and motivation (a reason to perform it, frequently via **vicarious reinforcement** — seeing the model rewarded). **Strength:** explains learning that occurs without direct reinforcement and bridges behaviourist and cognitive views. **Limitation:** does not fully explain why some observed behaviours are imitated and others are not, and underplays biological factors.

Study: Bandura, Ross and Ross (1961) — "Bobo doll". *Aim:* whether children imitate aggression they observe. *Method:* children watched an adult model behave aggressively, non-aggressively, or saw no model, then were observed with the toys. *Findings:* those who saw aggression imitated more of it, and were more likely to imitate a same-sex model. *Contribution:* evidence that behaviour can be learnt purely through observation. *Limitation:* low ecological validity (artificial setting) and ethical concern about teaching aggression.

Behaviour modification. Systematic desensitisation applies classical conditioning to treat phobias: the person learns relaxation, builds a fear hierarchy, then is gradually exposed to the feared stimulus while relaxed, so the fear response is replaced (counter-conditioning). Token economies apply operant conditioning: desired behaviours earn tokens (secondary reinforcers) exchangeable for rewards.

Most common error: negative reinforcement is not punishment. Negative reinforcement *increases* a behaviour by removing something unpleasant; punishment *decreases* a behaviour.

Unit 4 — Motivation, wellbeing and health

Motivation **HIGH PRIORITY**

Motivation is the drive or force giving purpose and direction to behaviour; sources are physiological, cognitive, emotional and social.

Self-determination theory (Deci and Ryan) — a named theorist. Motivation lies on a continuum: amotivation (no intention to act) → extrinsic motivation (acting for external rewards or pressures) → intrinsic motivation (acting for inherent satisfaction). Three **psychological needs** sustain motivation: autonomy (feeling in control of one's behaviours/goals), competence (gaining mastery and feeling effective) and relatedness (feeling connected and belonging). **Application:** a teacher who allows topic choice (autonomy), gives regular feedback (competence) and enables group work (relatedness) raises intrinsic motivation. **Strength:** explains quality (not just quantity) of motivation and is widely applied in education and work. **Limitation:** the relative weight of the three needs may vary across cultures and individuals.

Maslow's hierarchy of needs (1954) — a named theorist. Needs are arranged so that lower ones are generally satisfied before higher ones: **physiological** (survival) → **safety** (security and stability) → **love and belonging** (relationships) → **esteem** (self-worth and recognition) → **self-actualisation** (realising one's potential). The first four are deficiency needs; self-actualisation is a growth need. The **1970 expansion** inserted cognitive (knowledge, understanding) and aesthetic (beauty, order) needs and a higher transcendence need (helping others reach their

potential). **Strength:** intuitive and influential. **Limitation:** the strict order is not always observed, and self-actualisation is hard to define and measure.

Wellbeing **HIGH PRIORITY**

Wellbeing is a state of happiness and contentment with low distress and good overall functioning. **Subjective wellbeing** centres on the person's own evaluation of life satisfaction and emotion; **psychological wellbeing** takes a broader, functioning-based view.

Diener's model of subjective wellbeing (1984) is a tripartite model: life satisfaction (a cognitive judgement of one's circumstances) plus the balance of positive affect and negative affect (the relative frequency of pleasant vs unpleasant emotions). High subjective wellbeing = high life satisfaction, frequent positive affect, infrequent negative affect.

Ryff's six-factor model of psychological wellbeing (1989): autonomy (self-determination), environmental mastery (managing life's demands), personal growth (ongoing development), positive relations with others (warm, trusting relationships), purpose in life (goals and direction) and self-acceptance (a positive attitude to oneself). Each can be targeted with a concrete strategy — e.g. giving people control over their work supports autonomy; bonding opportunities support positive relations.

Stress **HIGH PRIORITY**

Stress is the non-specific response of the body to any demand placed upon it (Selye). Selye (1983) distinguished eustress (a positive response that improves performance and motivation) from distress (a negative response that inhibits performance or overwhelms). **Stressors** may be psychological, environmental, social or cultural, varying by source (internal/external), duration (acute/chronic) and intensity.

Stress as a response — General Adaptation Syndrome (Selye, 1936, 1983). Three stages: alarm (shock then counter-shock; sympathetic "fight or flight" activation, heart rate rises sharply), resistance (the body mobilises to cope; heart rate falls but stays above baseline), and exhaustion (resources deplete with prolonged stress; heart rate falls, potentially below baseline, raising illness risk). On a heart-rate-over-time graph these stages map onto an initial spike, a sustained-but-declining plateau, and a final drop.

Stress as a stimulus — Social Readjustment Scale (Holmes and Rahe, 1967). Ranks life events by how much change or coping (readjustment) they demand; each event, positive or negative, requires adaptation, and higher cumulative scores are associated with greater health risk.

Stress as a transaction — Transactional Theory of Stress and Coping (Lazarus and Folkman, 1984). Stress arises from the interaction between person and environment, mediated by cognitive appraisal: *primary appraisal* (is this a threat/harm/challenge?) and *secondary appraisal* (do I have the resources to cope?). Coping is then **problem-focused** (addressing the stressor) or **emotion-focused** (managing the emotional response).

Sleep

Sleep is a state of altered/reduced consciousness. **Evolutionary** theory explains its purpose as protection and energy conservation during unproductive/dangerous hours; **restorative** theory

as repairing the body and replenishing neurotransmitters. Sleep is a **circadian rhythm** (~24-hour cycle) of three **NREM** stages and one **REM** stage, monitored by EEG. **REM** sleep — where most dreaming occurs — features high brain activity (similar to wakefulness), rapid eye movement, virtual muscle paralysis and variable heart rate; the cycle repeats several times a night.

Sleep deprivation is poor-quality or insufficient sleep to sustain normal functioning — **partial** (insufficient quantity/quality) or **chronic** (sustained over an extended period). Causes: shift work, drugs, sleep environment, stressors. Acute effects: impaired mood, attention, reflex speed, vision. Chronic effects: heart disease, obesity, insomnia, anxiety. **Sleep hygiene** techniques — managing electronic devices, consistent sleep patterns, a healthy sleep environment — improve sleep.

Study: He et al. (2020). *Aim:* to assess the effects of restricting bedtime mobile phone use on sleep, pre-sleep arousal, mood and working memory. *Method:* 38 participants with poor sleep and a bedtime phone habit (convenience sample) were randomly assigned to a restriction group (no phone 30 minutes before bed) or control, over four weeks, with measures before and after. *Findings:* restricting bedtime phone use had positive benefits — improved sleep quality, reduced arousal, better mood and working memory, decreased sleep latency. *Limitations:* short duration, small sample, and reliance on some self-report (subjective) measures.

Science inquiry (Units 3 & 4) **HIGH PRIORITY**

The most durable area — tested in every paper, 2020–2025.

Ethics. Ethical guidelines set the expected conditions for research, ensuring merit, integrity and regard for participant welfare. An **ethics committee** approves research (on grounds of merit and integrity) and monitors conduct. Human-participant guidelines: protection from harm (physical and psychological), informed consent, withdrawal rights, deception (only where justified and followed by debriefing), confidentiality, privacy, voluntary participation, debriefing. Animal research follows the **three Rs**: replacement (use non-animal alternatives where possible), reduction (use the fewest animals necessary), refinement (minimise suffering).

Formulating research. State the aim, identify the variables — **independent** (manipulated), **dependent** (measured), **control** (held constant), **extraneous** (participant/environment/researcher factors that could affect the DV) and **confounding** (extraneous variables that systematically have) — and frame a **hypothesis** (precise, testable; directional or non-directional) or an **inquiry question** (open-ended, exploratory).

Methodology. Designs: experimental (control vs experimental group) and non-experimental (observational, case study, correlational, longitudinal, cross-sectional). Sampling: convenience, snowballing, random (equal chance of selection — best for an unbiased representative sample but hard on large populations), stratified (subgroups in proportion). Sources of error — the placebo effect, experimenter effect and demand characteristics — are

minimised by random allocation, placebos, single- and double-blind procedures, and standardisation of procedures and instructions.

Analysing data. Use appropriate displays (line, scatterplot, column, histogram; summary and frequency tables). Calculate the mean and median. Interpret **Pearson's correlation coefficient (r)** by reporting both **strength** (nearer ± 1 is stronger) and **direction** (positive or negative); correlation does not establish causation.

Evaluating research. Validity = the extent to which a study measures what it intends (internal: free from confounds; external: generalisable). Reliability = consistency of results under similar conditions (test-retest; inter-rater), improved by standardised procedures, experimenter training, better measures and good sampling. Assess generalisability (sample to population), suggest improvements, and weigh ethical implications.

Data types. **Objective** (physiological measures — heart rate, breathing rate, GSR) vs **subjective** (self-report — Likert/rating scales); **quantitative** vs **qualitative** (interviews give rich data and allow follow-up). Mixed-methods designs use both, allowing statistical analysis alongside deeper understanding of meaning.

Highest-yield revision order: (1) the three learning theories with their studies; (2) memory models, brain structures and forgetting; (3) Maslow, Diener and Ryff; (4) stress and the GAS; (5) the Science-inquiry spine. Beyond knowing each concept, practise *applying* it to an unfamiliar scenario and always cite the theorist and year — application and referencing are where marks are most often won and lost.