The Simple AP® Psychology Unit 3 Cheat Sheet

3.1 Themes & Methods in Development

Big Debates

Nature vs. nurture: genes vs. environment; the answer is almost always both, interacting.
Continuity vs. stages: slow, gradual change vs. distinct steps in a set order (Piaget, Erikson).
Stability vs. change: do traits like temperament stay the same, or shift w/ experience?

Research Designs

Design	How	Problem
Cross-sect.	Diff. ages, once	Cohort effects
Longitudinal	Same people, yrs	Dropouts, cost

Cohort effect: differences b/c of the era people grew up in (tech, schooling), not age.
Attrition: people drop out of a long study → the remaining sample may be biased.

Key Ideas

Critical period: window when exposure is needed for normal development (imprinting).
Sensitive period: best time to learn a skill, but later learning is still possible (language).
Maturation: biological growth on a set schedule (walking), mostly unaffected by practice.
Temperament: inborn emotional style (easy, difficult, slow-to-warm-up); fairly stable.

⚠ Cross-sectional shows AGE DIFFERENCES; only longitudinal shows how people CHANGE.

✓ FRQ: name the design, then a limit that fits it (cohort effect ↔ cross-sect.; attrition ↔ long.).

3.2–3.3 Physical Dev. & Gender

Prenatal & Infancy

Stage	Timing	Key event
Zygote	0–2 wks	Cell division
Embryo	2–8 wks	Organs form
Fetus	9 wks–birth	Growth

Teratogens: harmful agents that cross the placenta (alcohol → **FASD**, drugs, viruses).
Reflexes: **rooting** (turn toward a cheek touch), sucking, grasping; fade w/ age.
Synaptic pruning: the brain cuts connections that aren't used (use it or lose it) in childhood.

Adolescence & Adulthood

Puberty: **primary sex traits** (reproductive organs) & **secondary** (voice, body hair).
Menarche = 1st menstrual period; **spermarche** = 1st ejaculation; both mark puberty.
Teen brain: reward system matures before the prefrontal cortex (judgment) → risk-taking.
Aging: menopause (~50), slower reactions & weaker senses; exercise helps.

Gender & Orientation

Sex = biology. **Gender** = cultural roles. **Gender identity** = a person's inner sense of self.
Gender typing: learning a traditional gender role through modeling & reinforcement by others.
Sexual orientation: not chosen or caused by parenting; genes & prenatal hormones play a role.

⚠ Teratogens do the most harm in weeks 2–8 (the embryo stage), when organs are forming.

3.4 Cognitive Development

Piaget's Building Blocks

Schema: mental framework. **Assimilation**: fit new info into a schema you already have.
Accommodation: change the schema to fit new info (cat ≠ dog → new schema).

Stage	Age	Hallmark
Sensorimotor	0–2	Object perm.
Preoperational	2–7	Egocentrism
Concrete op.	7–11	Conservation
Formal op.	12+	Abstract logic

Stage Details

Object permanence: knowing objects still exist when out of sight (~8 months).
Egocentrism: can't see another's view. **Theory of mind**: understanding others' beliefs.
Conservation: amount stays the same when the shape changes (tall vs. wide glass of water).
Formal operations: teens can reason about hypotheticals & abstract ideas (justice, "what if").

Vygotsky & Aging

Zone of proximal development (Vygotsky): what a child can do w/ help but not alone.
Scaffolding: support from an adult that's slowly removed as the child's skill grows.
Aging: **fluid intelligence** (speed, new problems) ↓; **crystallized** (knowledge) stays or ↑.

✓ Assimilation = the schema stays the same; accommodation = the schema itself changes.

3.5 Communication & Language

Building Blocks

Unit	Meaning	Example
Phoneme	Smallest sound	/ch/
Morpheme	Smallest meaning	-ed, dog
Semantics	Word meaning	-ed = past
Syntax	Word order	Adj. + noun

Grammar: a language's rules (semantics + syntax); kids learn it w/o lessons.

Milestones

Babbling (~4 mo): sounds from all languages, then narrows to the home language's sounds.
One-word stage (~1 yr): 1 word stands for a whole idea ("Milk!" = I want some milk now).
Two-word / telegraphic (~2 yr): mostly nouns & verbs, in the right order ("Go car").
Rapid growth (2+ yrs): vocabulary explodes; full sentences & most grammar by ~5.
Overgeneralization: using a grammar rule on exceptions ("I goed") → shows rule learning.

Theories

Chomsky: inborn ability for grammar. **Skinner**: language is learned by imitation & reward.
Sensitive period: 2nd languages learned w/o an accent most easily in childhood.
Interaction: kids need real talk w/ caregivers to learn; biology alone isn't enough.

⚠ "I goed" is a sign of progress, not a problem: the child has learned the -ed rule.

3.6 Social-Emotional Development

Attachment

Harlow: monkeys preferred a soft cloth "mother" over a wire one w/ food → **contact comfort**.
Lorenz: goslings **imprinted** on the 1st moving thing they saw (him), in a critical period.
Stranger anxiety: fear of unfamiliar people, starting ~8 months, as object permanence forms.
Strange situation (Ainsworth): caregiver leaves & returns → reveals the attachment style.

Style	On reunion
Secure	Comforted quickly
Avoidant	Ignores parent
Anxious-ambivalent	Clingy & upset
Disorganized	Confused, fearful

Parenting Styles

Authoritarian: strict rules, little warmth.
Permissive: lots of warmth, few rules.
Authoritative: warmth + clear rules w/ reasons → most confident, capable kids (linked).

Erikson & Beyond

Psychosocial stages (Erikson): 8 life crises, starting w/ trust vs. mistrust in infancy.
Identity vs. role confusion (teens) → who am I?
Integrity vs. despair (old age).
Emerging adulthood: ~18–25, still exploring identity before taking on full adult roles.

⚠ Parenting studies are correlational: they show links between style & outcomes, not causes.

3.7 Classical Conditioning

Pavlov's Model

Term	Pavlov's dog
NS (neutral)	Tone before learning
UCS	Food
UCR	Salivate to food
CS	Tone (after pairing)
CR	Salivate to tone

Learning: a neutral stimulus is paired w/ the UCS again & again → it becomes a CS.

Processes

Acquisition: the CS-UCS link forms; works best when the CS comes just before the UCS.
Extinction: CS shown again & again w/o the UCS → the CR fades (but isn't erased).
Spontaneous recovery: after a rest, an extinguished CR suddenly comes back.
Generalization: CR to similar stimuli.
Discrimination: CR only to the real CS.

Applications

Little Albert (Watson): white rat + loud noise → baby learned to fear the rat & furry things.
Taste aversion (Garcia): 1 pairing, even hours apart, is enough (**biological preparedness**).
Counterconditioning: pair the CS w/ a new response to replace a fear (exposure therapy).

⚠ UCR & CR are often the same behavior. Label them by what triggered the response.

3.8 Operant Conditioning

Consequences

Law of effect (Thorndike): rewarded behaviors are repeated. **Skinner** built on this idea.

	Add (+)	Remove (–)
Behavior ↑	+ Reinforce.	– Reinforce.
Behavior ↓	+ Punish.	– Punish.

+ reinforcement: add something good (praise, a treat, money) → that behavior ↑ in the future.
– reinforcement: take away something bad (buckle up → the beeping stops) → behavior ↑.
– punishment: take away something good (phone taken away) → the behavior ↓ in the future.
Primary reinforcer: meets a need (food).
Secondary: learned value (money, grades).

Schedules

Schedule	Example
Fixed ratio	Punch card
Variable ratio	Slot machine
Fixed interval	Weekly quiz
Variable interval	Pop quiz

Variable ratio: highest response rate & hardest to extinguish (why gambling hooks people).
Shaping: reward small steps that get closer & closer to the target goal behavior.
Partial reinforcement: slower learning than rewarding every time, but lasts longer.

⚠ Negative reinforcement INCREASES behavior by removing something bad. It's not punishment.

3.9 Social, Cognitive & Neuro Factors

Observational Learning

Bobo doll (Bandura): kids who watched an adult hit a doll copied the aggression → **modeling**.
Vicarious reinforcement: seeing a model get rewarded makes you more likely to copy.

Step	Need
Attention	Notice the model
Retention	Remember it
Reproduction	Able to do it
Motivation	Reason to do it

Cognitive Learning

Latent learning (Tolman): rats learned a maze w/o reward → mental **cognitive map**.
Insight (Köhler): sudden "aha" solution, like chimps stacking boxes to reach bananas.
Learned helplessness (Seligman): after bad events you can't control, you stop trying.
Self-efficacy (Bandura): belief that you can succeed at a task → more effort & persistence.
Prosocial models ↑ helping behavior; violent media is linked to ↑ aggression in kids.

Neurological Factors

Mirror neurons: fire both when you act & when you watch someone else do the same act.

⚠ Mirror neurons are a proposed explanation for imitation; human evidence is still debated.

✓ Latent = learned but hidden until needed. Insight = a sudden solution. Don't swap them.