

Unit 3: Development and Learning

Unit 3 covers how people grow, change, and learn from infancy through old age, and how psychologists study that change.

AP Psychology

Unit 3 - Development and Learning

15-25% of the exam

About 14 minutes to read

How to use this guide

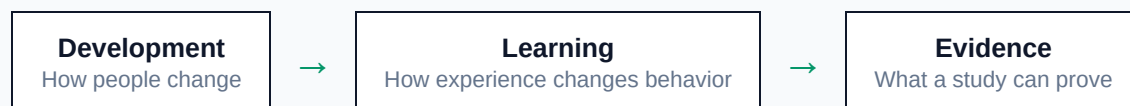
Read one section, cover the page, and say the main idea back in your own words. If you cannot say it back, reread that section only. Finish with the practice questions and the self-check before you open your notes again. The same terms are also on Rycal as flashcards and practice questions, so you can practice them there after you read.

What this unit is worth. Unit 3 carries 15 to 25 percent of the multiple-choice section, the same as every other unit. It tests two different skills. On Section I you will recognize a stage or schedule from a short scenario, and on Section II you will work from research summaries.

What is in this unit

Unit 3 carries 15%-25% of the multiple-choice points, and it tests two different skills. On Section I (75 questions, 90 minutes) you recognize a stage or schedule from a short scenario. On Section II you work from research summaries where the AAQ asks you to analyze one study and the EBQ asks you to build a claim from three sources. Students often lose points here because they memorize names without being able to place them, so this guide starts with how the topics fit together and then adds the names.

- **The three big questions** behind every developmental theory.
- **Research designs.** Longitudinal, cross-sectional, and why they disagree.
- **Physical and cognitive growth.** Prenatal development, Piaget, and Vygotsky.
- **Social and emotional growth.** Attachment, parenting, Erikson, and Kohlberg.
- **Learning.** Classical conditioning, operant conditioning, and observational learning.



When you read a theory in this unit, check both what it claims and what evidence would support it.

This guide matches the current College Board framework for AP Psychology, teaches the concepts in this unit, and is not a copy of any College Board exam.

Three questions run the whole unit

Almost every name in this unit is answering one of three questions, and placing a theory by the question it answers will help you with comparison questions.

QUESTION	WHAT IT ASKS	EXAMPLE
Nature and nurture	How do biology and experience work together?	A child with an easy temperament may pull warmer parenting, which then shapes personality further.
Continuity and stages	Is development gradual, or does it move in distinct steps?	Height grows gradually. Piaget argued thinking changes in stages.
Stability and change	Which traits stay, and which shift across life?	Temperament is fairly stable. Interests and roles change a lot.

How psychologists study development

Longitudinal study

This design follows the same people over time and is the best way to see real change, but it is costly and slow, and people drop out.

Cross-sectional study

This design compares different age groups at one moment. It is fast and less expensive, but cohort effects are a risk because people born in different eras differ for reasons besides age.

Case study, observation, and survey

These methods still appear, just as they did earlier in the course, and exam questions often ask what a design cannot show.

A cross-sectional study cannot prove that aging caused a difference. A case study cannot prove a result applies to everyone. When a question asks for the best criticism, start with the limits of the design.

Common trap. If a question says researchers compared 20-year-olds and 70-year-olds today and found a memory gap, the best criticism is cohort effect, not maturation. The two groups grew up in different eras, and that difference is built into the result.

Physical and cognitive development

Before birth and in infancy

Development begins before birth. A **zygote** becomes an embryo, then a fetus. **Teratogens** are substances that can harm development, including alcohol. Fetal alcohol syndrome is the clearest exam example.

Newborns arrive with reflexes such as rooting and sucking. Those reflexes help survival and fade as the nervous system matures.

Piaget and thinking in stages

STAGE	ROUGH AGE	WHAT CHANGES	KEY TEST
Sensorimotor	0-2	Learns through senses and actions	Object permanence
Preoperational	2-7	Uses symbols and language, still egocentric	Conservation tasks fail
Concrete operational	7-11	Logical thought about concrete things	Conservation, reversibility
Formal operational	12+	Abstract and hypothetical reasoning	Algebra, moral dilemmas

Two terms come up often in this section. A **schema** is a mental framework, **assimilation** fits new information into an old schema, and **accommodation** changes the schema. A child who calls every man Dad is assimilating, while learning that only one person is Dad is accommodation.

Vygotsky and learning with others

Vygotsky argued that children learn through language and interaction. The **zone of proximal development** is the gap between what a child can do alone and what they can do with help, and good teaching works in that gap. On the exam, Piaget is usually shown as a child learning through direct experience, while Vygotsky is shown as a child learning with help from others.

For the AAQ. In the 2024 format an AAQ gives you one study summary and asks about its method, variables, statistic, ethics, and generalizability, plus one application part. For that part, name the stage and cite the specific behavior in the summary that puts the child there, because the label alone does not earn the application point without the behavior to support it.

Social-emotional development, gender, and identity

Attachment comes first

Attachment is the emotional bond between infant and caregiver. Harlow's monkey studies showed contact comfort mattered more than food. Ainsworth's Strange Situation identified secure and insecure attachment patterns. Securely attached infants explore when a caregiver is present and are soothed when they return. Early attachment predicts later social confidence, but it does not determine how a person will do later in life.

Parenting styles

STYLE	RULES	WARMTH	TYPICAL OUTCOME TESTED
Authoritative	High	High	Self-reliant, socially competent
Authoritarian	High	Low	Anxious, less socially skilled
Permissive	Low	High	Impulsive, immature
Neglectful	Low	Low	Poor academic and social outcomes

Erikson and Kohlberg

Erikson described eight psychosocial crises across the lifespan, from trust vs. mistrust in infancy to integrity vs. despair in old age. Adolescence is identity vs. role confusion, and that stage comes up often on the exam.

Kohlberg tracked moral reasoning, not moral behavior. Preconventional morality avoids punishment. Conventional morality seeks approval and follows rules. Postconventional morality appeals to principles. Gilligan criticized Kohlberg for undervaluing an ethic of care.

Gender and sexual orientation

The exam treats gender as a mix of biology, social learning, and culture. **Gender roles** are expectations for how people should behave. **Gender identity** is a person's own sense of gender. Sexual orientation research points to a mix of biological and prenatal influences. No single parenting style or childhood event explains orientation, and the exam will not credit an answer that claims one does.

Classical conditioning

Pavlov did not set out to found a theory of learning. He noticed dogs salivating before food arrived. That accident became the model for learning by association.

TERM	MEANING	PAVLOV EXAMPLE
Unconditioned stimulus (UCS)	Triggers a response naturally	Food
Unconditioned response (UCR)	Natural response to the UCS	Salivation to food
Conditioned stimulus (CS)	Previously neutral, now triggers a response	Bell after pairing
Conditioned response (CR)	Learned response to the CS	Salivation to bell

The five processes the exam rotates

- **Acquisition.** The CS and UCS are paired and the response grows.
- **Extinction.** Present the CS alone, repeatedly, and the CR fades.
- **Spontaneous recovery.** After a rest, the extinguished response briefly returns.
- **Generalization.** Respond to stimuli similar to the CS. Little Albert feared white rats, then other white furry things.
- **Discrimination.** Learn to respond to one stimulus and not to similar others.

Higher-order conditioning builds a new CS on top of an old one. **Conditioned taste aversion** is an exception to the usual pattern because a single pairing can form an association even after a long delay, and the exam asks about it because it shows that biology limits learning.

AAQ move. When a study summary describes a pairing or a consequence, label the method first, then the variables and the conditioning terms exactly as the summary presents them (UCS, UCR, CS, CR, or the reinforcer/punisher). AAQ rubrics award the identification and the link to the study detail separately, so you need to name the term and tie it to the detail in the summary.

Operant conditioning

Skinner asked a different question than Pavlov because he focused on what happens after a behavior instead of what triggers a reflex, and he argued that consequences shape what an animal does next. Thorndike called this the law of effect.

	ADD SOMETHING	REMOVE SOMETHING
Behavior increases	Positive reinforcement	Negative reinforcement
Behavior decreases	Positive punishment	Negative punishment

Positive and negative mean add and remove, not good and bad. Removing an annoying alarm by buckling a seatbelt is negative reinforcement, and it strengthens buckling. Students often miss questions on this distinction because they treat negative as bad instead of removed.

Shaping and schedules

Shaping reinforces closer and closer approximations of a target behavior. A **primary reinforcer** satisfies a biological need. A **conditioned reinforcer** gets its power by association, like money or tokens. You may also see it called a secondary reinforcer.

SCHEDULE	RULE	PATTERN	EXAMPLE
Fixed ratio	After a set number of responses	Fast, with a pause after reward	Paid per 10 items made
Variable ratio	After an unpredictable number	Highest and steadiest rate	Slot machine
Fixed interval	After a set time	Burst near the deadline	Weekly paycheck, studying before a test
Variable interval	After an unpredictable time	Slow, steady checking	Checking for a text reply

Variable ratio schedules produce the most persistent behavior, so if a question describes gambling or a salesperson paid on commission, variable ratio is a good place to start.

Observational, cognitive, and biological factors

Bandura and the Bobo doll

Children who watched an adult beat up a Bobo doll imitated the aggression, especially when the model was rewarded. Bandura called this **observational learning**, which has four steps that include attention, retention, reproduction, and motivation. **Vicarious reinforcement and punishment** change motivation without the learner being rewarded or punished directly, and **self-efficacy**, a person's belief that they can succeed at a task, predicts whether they try at all.

Learning that hides

- **Latent learning (Tolman).** Rats built cognitive maps and showed them only when a reward appeared. Learning happened without performance.
- **Insight learning (Kohler).** A sudden solution after a pause, not gradual trial and error.
- **Learned helplessness (Seligman).** Repeated uncontrollable bad events teach passivity, even when escape later becomes possible.
- **Biological constraints.** Animals learn some associations easily and others barely at all. Instinctive drift pulls trained behavior back toward instinct.

Do not mix these up. Latent learning and learned helplessness are easy to confuse. Latent learning is knowledge that has not appeared in behavior yet, while learned helplessness is a pattern of giving up after repeated events that could not be controlled.

Your 20-minute plan for this unit

- Minutes 0-5. Write out Piaget's four stages and Erikson's adolescent stage from memory.
- Minutes 5-12. Run the flashcards for this unit. Rate honestly.
- Minutes 12-18. Do three practice questions. One classical, one operant, one developmental design.
- Minutes 18-20. Write down the one term you confused and review it first tomorrow.

Where students lose points

Most missed Unit 3 questions are not about missing knowledge. They are about two terms that sound alike and a question written to test whether you can tell them apart, and the pairs below cover the most common cases.

THE TRAP	WHAT STUDENTS PICK	WHAT THE QUESTION ACTUALLY DESCRIBED
Positive vs. negative reinforcement	Negative, for anything unpleasant	Reinforcement always increases behavior. Negative means something was removed.
Reinforcement vs. punishment	Whichever consequence feels harsher	Ask whether behavior increased or decreased. Increase is reinforcement. Decrease is punishment.
Generalization vs. discrimination	They swap them under time pressure	Responding to similar stimuli is generalization. Responding to only one is discrimination.
Extinction vs. spontaneous recovery	Extinction, for any return of a response	A faded response that returns after rest is spontaneous recovery.
Assimilation vs. accommodation	Accommodation, for any new learning	Fitting new input into an old schema is assimilation. Changing the schema is accommodation.
Longitudinal vs. cross-sectional	Longitudinal, for any age comparison	Same people over time is longitudinal. Different ages at one time is cross-sectional.
Latent learning vs. learned helplessness	Whichever sounds more familiar	Hidden knowledge shown later is latent learning. Giving up after uncontrollable events is learned helplessness.

When you read a practice question, underline the detail that separates the pair, because that detail is usually in one clause of the stem.

Those pairs are in the Development and Learning deck as flashcards. If you keep swapping a pair here, drill that pair in Rycal until you can say which detail decides it.

Practice question 1

Every time Sam buckles his seatbelt, the car stops making an annoying chiming sound. Over time, Sam buckles up faster and more consistently. Which process best explains the change in Sam's behavior?

- A. Positive punishment
- B. Negative reinforcement
- C. Negative punishment
- D. Classical extinction

Answer B. Buckling removes the annoying sound, and buckling increases. Removal that increases behavior is negative reinforcement. Positive punishment adds something to decrease behavior, which is the opposite pattern. Negative punishment removes something pleasant to decrease behavior. Classical extinction describes a conditioned response fading when a conditioned stimulus is presented alone, and no Pavlovian pairing is described here.

Practice question 2

A researcher compares memory scores for 25-year-olds and 75-year-olds tested in the same week and concludes that aging caused the difference. Which criticism is strongest?

- A. The study lacks a conditioned stimulus
- B. Cohort effects could explain the difference
- C. The researcher used shaping instead of modeling
- D. The scores show spontaneous recovery

Answer B. Different age groups tested at one time differ in era, schooling, and experience as well as age. That is a cohort effect, and it limits what a cross-sectional comparison can prove. The other choices name learning terms that do not apply to this design question.

The explanations name why the tempting wrong answers are wrong.

If you missed one, make a flashcard for the term you confused and review it spaced out over the next few days. The Development and Learning deck already holds those terms, so a Still Learning rating will bring the card back sooner.

Eight questions to answer without looking

Say each answer out loud or write it down. Peeking first turns this into rereading, which helps you recognize the page but does not build recall of the ideas.

1. Name Piaget's four stages in order and give the key behavior for each one.
2. A child calls every four-legged animal a dog, then learns to separate cats from dogs. Which process came first, assimilation or accommodation? How do you know?
3. Why can a cross-sectional study not prove that aging caused a group difference?
4. Give one classroom example each of positive reinforcement and negative reinforcement. State what was added or removed in each.
5. A slot machine pays after an unpredictable number of pulls. Name the schedule and describe the response pattern it produces.
6. State the difference between generalization and discrimination using the Little Albert example.
7. Which Erikson crisis belongs to adolescence, and what does successful resolution look like in plain words?
8. Explain latent learning with the rat maze example. What had to change before the learning became visible?

Anything you could not say out loud goes on your next review list. On Rycal, rate that card Still Learning in the Development and Learning deck and it will come back sooner. The spacing widens as you get it right over several days.

Where to go next

Turn every missed item above into a flashcard and drill it spaced out over several days rather than in one sitting.

1. **Flashcards.** The Development and Learning deck under AP Psychology covers the terms in this guide. Rate each card Still Learning or Know and the scheduler sets the next review.
2. **Practice questions.** The questions in Rycal work on the same traps named in this guide, including negative reinforcement and cohort effects. Each one explains why the wrong answers are wrong.
3. **Vocabulary Check.** A definition-first pass over the same terms.

rycal.web.app/ap-psychology-flashcards Add your exam date in the Test Planner and pacing adjusts to the time you have.

Questions students ask about Unit 3

How much of the exam is Unit 3?

Unit 3 is 15%-25% of MCQ points. Section I has 75 questions in 90 minutes (66.7%), and Section II is 70 minutes (33.3%) with the AAQ at 25 minutes for 7 points and the EBQ at 45 minutes for 7 points. You will meet Unit 3 most often in the AAQ application part and as evidence for an EBQ claim.

What changed in the 2024 CED?

The old apply-terms FRQ is gone. The 2024 CED (first tested May 2025) uses an AAQ where you analyze one study (method, variables, statistic, ethics, generalizability, application) and an EBQ where you state a claim, support it with evidence from two of three sources, and explain the link with a course concept.

What is the fastest way to separate Piaget from Vygotsky?

Piaget focused on stages and direct experience, while Vygotsky focused on language and help from others inside the zone of proximal development.

Why does negative reinforcement confuse so many students?

Negative means removal, not bad. If behavior increased, it was reinforcement, whether something was added or removed.

Do I need exact ages for Piaget's stages?

Learn order and rough age bands, then anchor each stage to its key behavior, such as object permanence, conservation, and abstract reasoning.

Aligned to the College Board AP Psychology framework, Unit 3. All questions are original Rycal writing. Rycal is independent and not affiliated with or endorsed by the College Board.

Key terms for this unit

Accommodation (Piaget), Acquisition, Adolescent egocentrism, Adolescent growth spurt, Adult attachment, Adverse childhood experiences (ACEs), Animism, Anxious attachment, Assimilation (Piaget), Associative learning, Authoritarian

parenting, Authoritative parenting, Autonomy vs. shame and doubt, Avoidant attachment, Babbling, Behavioral perspective, Biological preparedness, Chronosystem, Classical conditioning, Cognitive maps, Comfort over food in attachment, Communication, Concrete operational stage, Conditioned response (CR), Conditioned stimulus (CS), Conservation, Continuous and discontinuous development, Continuous reinforcement, Cooing, Counterconditioning, Critical or sensitive periods, Cross-sectional research design, Crystallized intelligence, CS–UCS presentation order, Dementia, Developmental psychology, Discrimination and generalization (operant), Disorganized attachment, Ecological systems theory, Egocentrism (childhood), Emerging adulthood, Exosystem, Extinction, Family-like relationships (adulthood), Fine motor skills, Fixed-interval schedule, Fixed-ratio schedule, Fluid intelligence, Formal operational stage, Generativity vs. stagnation, Grammar, Gross motor skills, Habituation, Higher-order conditioning, Identity achievement, Identity diffusion, Identity domains, Identity foreclosure, Identity moratorium, Identity vs. role confusion, Imaginary audience, Imprinting, Industry vs. inferiority, Influences on prenatal development, Initiative vs. guilt, Insight learning, Instinctive drift, Integrity vs. despair, Intimacy vs. isolation, Jean Piaget, Language, Latent learning, Law of Effect, Learned helplessness, Lev Vygotsky, Longitudinal research design, Macrosystem, Menarche, Menopause, Mental symbols, Mesosystem, Microsystem, Modeling, Morphemes, Nature and nurture, Negative punishment, Negative reinforcement, Nonverbal gestures, Object permanence, Observational learning, One-trial conditioning, One-word stage, Operant conditioning, Overgeneralization, Parallel play, Partial reinforcement, Peer relationships, Permissive parenting, Personal fable, Phonemes, Physical changes in adulthood, Positive punishment, Positive reinforcement, Possible selves, Preoperational stage, Pretend play, Primary reinforcers, Primary sex characteristics, Psychosocial conflict, Psychosocial development (stage theory), Puberty, Punishment, Reinforcement, Reinforcement schedules, Reversibility, Rooting reflex, Scaffolding, Scalloped response pattern, Schemas, Secondary reinforcers, Secondary sex characteristics, Secure attachment, Semantics, Sensorimotor stage, Separation anxiety, Sex and gender, Shaping, Social clock, Social learning theory, Socialization, Sociocultural context, Spermatogenesis, Spontaneous recovery, Stability and change, Stimulus discrimination, Stimulus generalization, Successive approximations, Superstitious behavior, Syntax, Taste aversion, Telegraphic speech, Temperament, Teratogens, Theory of mind, Trust vs. mistrust, Unconditioned response (UCR), Unconditioned stimulus (UCS), Maternal Illnesses, Fetal Alcohol Syndrome, Genetic Mutations, Maturation, Adolescence, Sexual Orientation, Gender Role, Gender Identity, Gender Typing, Androgyny, Social Script, Cognition, Universal Grammar (UG), Two-Word Stage, Linguistic Determinism, Linguistic Relativity, Attachment, Neglectful Parenting, Insecure Attachment, Strange Situation, Stranger Anxiety, Identity, Social Identity, Learning, Cognitive Learning, Stimulus, Respondent Behavior, Operant Behavior, Neutral Stimulus (NS), Operant Chamber, Discriminative Stimulus, Mirror Neurons, Prosocial Behavior, Antisocial Behavior, Variable-interval schedule, Variable-ratio schedule, Vicarious conditioning, Visual cliff, Zone of proximal development.