Growing and Learning

How development and experience shape what people do

PS.4 "Describe physical, cognitive, and social development across the lifespan, including processes of human learning. Explain the interaction of environmental and biological factors in human development..."

NAME _____ DATE _____

1 READ AND MARK

Read it twice

YOUR JOB Underline two biological influences and circle two environmental influences in the passage. In the last paragraph, number the four learning examples 1 through 4 in the order they appear.

Nia's Robotics Club

(1) At eight, Nia joins a neighborhood robotics club. Her hands become steadier as her nervous system matures, and practice helps her connect small parts. At sixteen, she can plan a robot's route using hypothetical obstacles rather than only objects in front of her. At forty, she mentors new club members while balancing work and family. Physical coordination, flexible thinking, and social roles change across these years, but not at the same pace for everyone. Genes and brain development shape what becomes possible; access to tools, patient mentors, and time to practice shape which abilities Nia develops.

(2) Piaget's theory describes changes in how children reason. An eight-year-old often uses concrete operations to organize real parts and follow logical steps; an adolescent may use formal operations to test imagined possibilities. Kohlberg's theory focuses on reasoning about right and wrong, not simply on whether someone obeys a rule. A young club member might defend sharing supplies to avoid punishment, while an older member might argue that fair access matters because everyone deserves a chance. Erikson's theory highlights social challenges: children seek competence, adolescents explore identity, and middle-aged adults may seek purpose by guiding others.

(3) Learning also depends on social experience and the brain's changing connections. A club bell rings just before a loud motor starts; after repeated pairings, the bell alone makes Nia tense. This is classical conditioning: a previously neutral sound triggers a learned response. When a mentor praises careful wiring, Nia checks her work more often; operant conditioning links a behavior to its consequence. She watches a teammate tie a neat cable loop and copies it, as social learning theory predicts. Later, after a break, she suddenly sees how to route a cable around a jammed wheel, an example of insight learning.

2 ANSWER WITH EVIDENCE

Use the passage

1. How do biology and environment work together as eight-year-old Nia learns to connect robot parts? Give one influence of each.

2. How would Piaget's theory explain the difference between Nia's thinking at eight and her route planning at sixteen?

3. How do Kohlberg's and Erikson's theories focus on different parts of a club member's development? Use one example from the passage for each.

4. Why does the bell make Nia tense, while the mentor's praise makes her check her work more often? Name the learning theory that explains each change.

3 YOUR TURN

Your own words

Invent an activity outside robotics. In four or five sentences, describe how a person at one life stage learns a skill through one learning process from the passage, explain one brain or biological influence and one environmental influence, and connect the person's social goal to Erikson's theory.

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PART 1 · READ AND MARK

Underline two biological influences and circle two environmental influences in the passage. In the last paragraph, number the four learning examples 1 through 4 in the order they appear. Accept any marking that follows this job and points at the right text.

PART 2 · ANSWERS

#	QUESTION	ANSWER
1	How do biology and environment work together as eight-year-old Nia learns to connect robot parts? Give one influence of each.	**Maturation of Nia's nervous system makes her hands steadier, while practice helps her use that coordination to connect parts.**
2	How would Piaget's theory explain the difference between Nia's thinking at eight and her route planning at sixteen?	**At eight, concrete operations help Nia reason about real parts. At sixteen, formal operations may help her consider hypothetical obstacles.**
3	How do Kohlberg's and Erikson's theories focus on different parts of a club member's development? Use one example from the passage for each.	**Kohlberg focuses on moral reasoning, such as sharing to avoid punishment or because fair access matters. Erikson focuses on social challenges, such as an adult finding purpose by guiding younger members.**
4	Why does the bell make Nia tense, while the mentor's praise makes her check her work more often? Name the learning theory that explains each change.	**Classical conditioning explains Nia's tension: the bell was repeatedly paired with the loud motor. Operant conditioning explains her increased checking: praise followed her careful wiring.**

PART 3 · YOUR TURN (SAMPLE ANSWER)

At fourteen, Jo learns a drum rhythm by watching an older cousin and copying the cousin's hand movements, an example of social learning. Jo's developing brain strengthens connections used for timing through practice, while the cousin provides guidance and a quiet place to rehearse. Jo wants to perform with friends and find out what kind of musician to become. Erikson's theory describes this adolescent social task as exploring identity.

Accept other passage-supported biological and environmental influences in Question 1. For the open task, accept any of the four learning processes if the example fits the theory and clearly connects a life stage to Erikson's theory.