

Trait Detectives

Compare physical traits by asking about their causes and changes.

S5L2.b "Ask questions to compare and contrast inherited and acquired physical traits."

NAME _____

DATE _____

1 READ AND MARK _____ Read it twice

YOUR JOB Underline each physical trait in the passage. Circle the words or phrases that tell whether the trait comes from family DNA or from life experiences.

Where Do Traits Come From?

- ① Many physical traits are inherited. Information in DNA, passed from parents to children, helps guide how a body develops. Natural hair texture, eye color, and the shape of earlobes are examples. A child may share a trait with one parent, both parents, or another relative. Inherited traits can vary, so family members do not look exactly alike.
- ② Other physical traits are acquired during life. An acquired trait can result from an event, a habit, or conditions around a person. A scar after a cut, a tan after time in sunlight, and stronger muscles after regular exercise are acquired traits. These changes do not come from DNA passed down by parents to a child.
- ③ To compare two traits, ask questions about their causes and changes. You might ask, "Did this trait come from family DNA, or did it develop after an experience?" You could also ask, "Can a person's actions or surroundings change this trait?" The answers help you tell how the traits are alike and different. A trait can be physical whether it is inherited or acquired.

2 ANSWER WITH EVIDENCE _____ Use the passage

1 How are inherited traits and acquired traits alike, according to paragraph 3?

2 What is one difference between how inherited traits and acquired traits begin?

3 A student has stronger muscles after regular exercise. What question from paragraph 3 would help show whether this trait is inherited or acquired? What answer would fit?

4 Compare a scar after a cut with natural hair texture. Which trait is acquired, and which trait is inherited? Explain what caused each one.

3 YOUR TURN _____ Your own words

Choose one inherited physical trait and one acquired physical trait that are not named in the passage. Write two questions that compare the traits, then answer each question using what you know about how the traits begin or change.

PART 1 • READ AND MARK

Underline each physical trait in the passage. Circle the words or phrases that tell whether the trait comes from family DNA or from life experiences. Accept any marking that follows this job and points at the right text.

PART 2 • ANSWERS

#	QUESTION	ANSWER
1	How are inherited traits and acquired traits alike, according to paragraph 3?	Both are physical traits.
2	What is one difference between how inherited traits and acquired traits begin?	Inherited traits come from DNA passed from parents to children. Acquired traits develop from events, habits, or conditions during life.
3	A student has stronger muscles after regular exercise. What question from paragraph 3 would help show whether this trait is inherited or acquired? What answer would fit?	"Can a person's actions or surroundings change this trait?" Yes. Regular exercise can make muscles stronger, so the trait is acquired.
4	Compare a scar after a cut with natural hair texture. Which trait is acquired, and which trait is inherited? Explain what caused each one.	A scar after a cut is acquired because it develops after an event. Natural hair texture is inherited because DNA from parents helps guide it.

PART 3 • YOUR TURN (SAMPLE ANSWER)

Question 1: Did either trait come from family DNA? Answer: Natural hair color is influenced by DNA from family members, but a pierced earlobe is not. Question 2: Can a person's actions change either trait? Answer: A person can choose to get an ear piercing, but cannot choose the natural hair color they inherit.

Accept accurate inherited and acquired physical traits that are not named in the passage. Student questions should compare causes, DNA, life events, actions, surroundings, or changes.